

Lesson Exemplars for Human Movement 1 (Basic Anatomy in Sports and Exercise)

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Lesson Exemplar for Human Movement 1

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Lesson Title/Topic	Human Structure and Processes	Lesson Exemplar	1
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I. OBJECTIVES	
A. Content Standard	<i>The learners demonstrate understanding of the basic structure and function of the human body in relation to fitness, exercise, and health for the optimization of human movement performance.</i>
B. Performance Standard	<i>The learners evaluate basic functional movement patterns using anatomical knowledge to optimize performance across different needs and skill levels.</i>
C. Learning Competencies	<i>Explain the basic structure of the human body</i>
II. REFERENCES and MATERIALS (Selecting Resources and Material)	<p>BYJU'S. (2018, January 14). Cells. BYJUS; Byju's. https://byjus.com/biology/cells/</p> <p>Human Biology. (n.d.). Organization of the body. In Human Biology. Pressbooks. https://humanbiology.pressbooks.tru.ca/chapter/9-2/</p> <p>Klavora, P. (2020). Introduction to kinesiology: Studying human movement and health (3rd ed.). Sport Books Publisher. Sport Books Publisher</p> <p>GÜMÜŞ AKAY, 2026. Basic principles of physiology. Ankara University. https://acikders.ankara.edu.tr/pluginfile.php/204276/mod_resource/content/1/Basic%20Principles%20of%20Physiology.pdf</p> <p>Miller, C. (2020). Organization of the Body. Humanbiology.pressbooks.tru.ca. https://humanbiology.pressbooks.tru.ca/chapter/9-2/</p> <p>Haskell, W. L., et al. (2007). Physical Activity and Public Health: Updated Recommendation for Adults from the American College of Sports Medicine and the American Heart Association. Circulation, 116(9), 1081–1093. https://doi.org/10.1161/CIRCULATIONAHA.107.185649</p> <p>Neutral body outline: https://stock.adobe.com/search?k=outline+body</p>

	Teacher-created resources, such as: <ul style="list-style-type: none"> • Body Mapping, Chain of thoughts, Concept connection chart, and Structure in Motion • Assessment 	
III. CONTENT <i>(Sequencing Content)</i>	Human Structure and Processes <ol style="list-style-type: none"> 1. Foundation of Gross Structure / Human Anatomy 2. Foundation of Function / Human Physiology 	
IV. OBJECTIVES <i>(Setting Clear Objectives and Analyzing the Tasks)</i>	<ol style="list-style-type: none"> 1. Identify the major levels of organization in the human body (cells, tissues, organs, organ systems) 2. Describe the basic function of each major organ system (Cardio-respiratory system, Musculoskeletal system, Nervous system) 3. Explain how major levels of organization in the human body are interconnected and contribute to overall body function. 	
IV. PROCEDURES		ANNOTATIONS
A. Activating Prior Knowledge	Activating Prior Knowledge Activity no. 1 - (K-W-L Chart) Directions: <ol style="list-style-type: none"> 1. The teacher will present the lesson topic “Human Anatomy and Physiology.” 2. Learners will create a K-W-L chart in their notebook with three columns: <ul style="list-style-type: none"> ○ K (Know): Learners will write at least three ideas about what they know about Gross structure/ Human Anatomy and Foundation of Function / Human Physiology ○ W (Want to Know): Learners will write two to three questions about Human Anatomy and Physiology 3. Selected learners will share their responses with the class. 	The activity applies the Elicit phase. The K–W–L Chart activates learners’ prior knowledge about Human Anatomy and Physiology by allowing them to write what they already know and what they want to learn. Sharing responses and answering processing questions encourages participation and helps the teacher identify learners’ initial understanding and curiosity about the topic.

4. At the end of the lesson, learners will update the **L (Learned) column** with their key takeaways.

	What I Know	What I want to know	What I have learned
Human Anatomy			
Human Physiology			

Processing questions:

1. What body parts are you familiar with?

2. Why do you think it is important to study the human body?

3. Which part of the body are you most curious about?

Activity no. 2 – Body Mapping

Directions:

1. Each pair will receive sticker labels of different body parts (e.g., heart, lungs, brain, stomach, muscles, bones)
2. One learner will act as the body model, while the other learner will be the labeler.
3. The labeler will place the organ stickers on the correct body location of the model.
4. After placing the organs, the pair will identify what organ system each organ belongs to (e.g., heart → circulatory system, lungs → respiratory system).
5. The teacher will review the placements with the class and correct any misplaced body parts while briefly explaining their function.

Processing questions:

1. Which body parts are easy to locate?
2. Which body parts are difficult to locate?
3. Why do you think it is important to know the location of each body part?

This activity applies the Explore phase. Through Body Mapping, learners actively identify and place body part labels, constructing their understanding collaboratively. The processing questions help them reflect on challenges and on the importance of knowing body-part locations.

The teacher may use a neutral body outline for this activity and provide each group with a copy.



<https://stock.adobe.com/search?k=outline+body>

Activity no. 3 – Word Hunt (Anatomy and Physiology)

Directions:

1. Learners will locate terminologies related to Human anatomy and physiology.
2. Learners must find and circle or highlight the words in the grid. Words may be placed horizontally, vertically, diagonally, or backward.
3. After finding a word, learners write one sentence explaining the function or role of that organ or system.

N	E	S	S	A	B	X	U	B	P	N	B	A	A	S
Y	E	Z	X	C	V	J	H	V	L	E	S	S	V	H
H	S	R	S	X	R	S	C	X	D	R	B	B	X	J
H	E	X	V	M	E	E	A	Z	B	V	R	U	A	B
U	P	X	H	O	M	T	M	A	G	E	A	P	X	R
N	L	Y	B	N	U	B	O	N	E	S	V	L	S	A
O	A	L	A	B	S	S	T	K	H	E	E	Y	D	I
P	S	U	R	D	C	S	S	B	I	L	E	O	F	N
Y	S	N	H	Z	L	B	T	Y	U	P	K	M	U	Q
J	S	G	R	A	E	L	E	G	S	T	L	E	U	W
J	L	S	K	X	S	R	E	R	T	T	V	T	Y	I
R	M	T	R	F	S	A	L	L	I	V	E	R	G	O
T	A	R	E	D	X	I	T	B	J	O	P	M	N	P
T	R	A	E	H	J	U	X	B	M	N	N	I	J	K
C	A	R	E	S	P	I	R	A	T	O	R	Y	S	B

Words they need to locate:

Heart	Bones
Lungs	Nerves
Nervous system	Liver
Brain	Muscles
Stomach	Respiratory

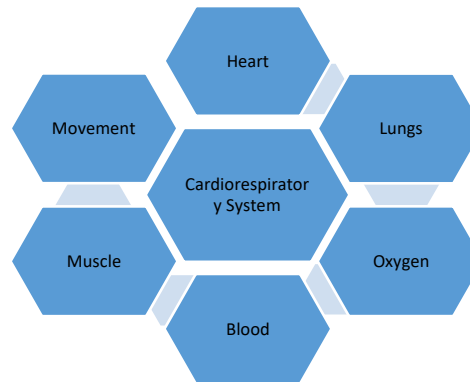
The teacher will prepare a word hunt puzzle that contains key anatomy and physiology terms. The teacher should set a time limit (5–10 minutes).

If the learner is unsure of the function or system, the teacher can prompt hints by asking, “**Which organ system does this belong to?**” or “**What does this organ do?**”

This activity applies the Elaborate phase. Through the word search, learners apply their understanding of human anatomy terms by locating and identifying key vocabulary. Writing a sentence about each term’s function reinforces comprehension and encourages a deeper connection between terminology and its role in the body.

	<p>Processing questions:</p> <ol style="list-style-type: none"> 1. What body parts or systems did you find in the word hunt? 2. What is the function of the body of the organ or body system you find? 3. How does this organ or body system help the body to perform movement? <p>Establishing the Purpose of the Lesson</p> <p>Activity no. 1 – Chain of Thoughts (Group Activity)</p> <p>Directions:</p> <ol style="list-style-type: none"> 1. The learners will be divided into small groups of 4-5 learners. 2. Each group will be assigned a specific body part (e.g., heart, lungs, muscles, bones). 3. The teacher will begin the activity by presenting a starting body part to initiate the chain of ideas. 4. Each member of the group will add a related anatomical concept connected to their assigned body part 5. Each group must briefly explain the connection between the concepts. 6. The process continues until a complete chain of related ideas about body structure and function is formed. 	<p>The Chain of Thoughts activity applies the Explain, Elaborate, and Evaluate phase. Learners connect body parts and functions, explain relationships to the class, and reflect on their understanding to identify errors and analyze connections, deepening their comprehension of human anatomy.</p>
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Example chain of thoughts:



Expected responses from the learners:

Heart → Pumps blood to circulate oxygen and nutrients.

Lungs → Oxygen enters blood; carbon dioxide is expelled.

Oxygen → Delivered by blood to cells for energy production.

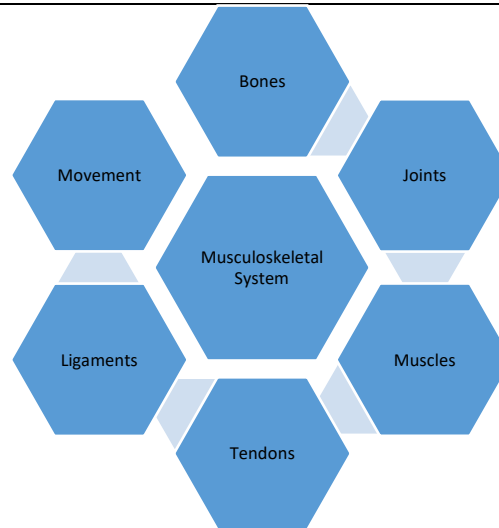
Blood → Transports oxygen and nutrients to tissues

Muscles → Use oxygen to generate energy for movement.

Movement → Physical activity supported by oxygen delivery and muscle function.

The teacher guides the connections and ensures accuracy of anatomical relationships. Justify their explanations and make links to real-life scenarios.

The teacher will conclude that understanding human anatomy and physiology helps us understand how the body works during everyday activities.



Expected responses from the learners:

Bones → Provide structural support and protect organs.

Joints → Allow flexible movement between bones.

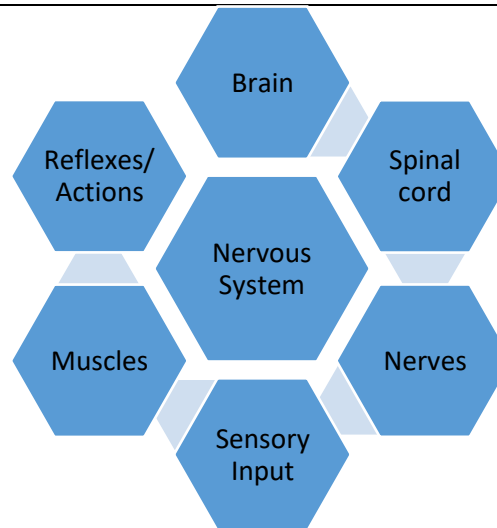
Muscles → Contract to produce force for motion.

Tendons → Transmit force from muscles to bones.

Ligaments → Stabilize joints and prevent excessive movement.

Movement → Coordinated body motions enabled by bones, muscles, and connective tissues.

This activity allows learners to explain and evaluate how different body systems work together during everyday situations. Through scenario-based discussion, learners analyze the body parts and functions involved in actions such as running and breathing. By relating the scenario to their own experiences and sharing insights with the class, learners will develop a deeper understanding of the interdependence of body systems and the importance of these processes in maintaining normal body function.



Expected responses from the learners:

Brain → Processes information and sends commands.

Spinal Cord → Transmits signals between the brain and the body.

Nerves → Carry messages to muscles and sensory organs

Sensory Input → Provides information from the environment and the body.

Muscles → Respond to signals to perform actions.

Reflexes/Actions → Immediate or voluntary responses to stimuli

Processing questions:

1. Which organ system is central in your chain?
2. How do the concepts in your chain work together?
3. How does the function of one part affect others?
4. How does understanding these connections help in daily life or health decisions?

Activity no. 2 – “Why does it matter?” (Scenario-based activity)

Directions:

1. The teacher emphasizes that body parts do not work alone but function together to maintain life processes.
2. The teacher will present short scenarios related to body functions (e.g., breathing, running, heartbeat).
3. Each group will discuss the following questions:
 - a. What body parts are involved in this situation?
 - b. What body functions are happening?
 - c. Why are these body parts important for the activity?
 - d. Have you ever experienced something like this? What do you think is happening inside your body when you run and start breathing heavily?
4. Each group will briefly share its answers with the class.

Example scenarios:

Imagine one day you are running late for school. As you walk quickly down the street, you suddenly see your school bus about to leave the stop. What would you do? Of course, you will start running as fast as you can, so you won't miss it. Your legs move quickly, your arms swing back and forth, and you rush toward the bus with all your energy.

When you finally reach the bus, you step inside and find a seat. But then you notice something—your breathing becomes fast and heavy. Your chest moves up and down quickly as you try to catch your breath. Your heart is beating faster, too. You take a few deep breaths, and after a short while, your breathing slowly turns to normal.

	<p>Activity no. 3 – Think Pair Share</p> <p>Directions:</p> <ol style="list-style-type: none"> 1. The teacher will present a question related to body structure and function. 2. Learners will think individually for 1 minute. 3. Learners will pair with a partner and discuss their ideas. 4. Selected pairs will share their answers with the class. <p>Processing question:</p> <p>Why is it important to understand how the parts of the human body work together?</p>	
<p>B. Instituting New Knowledge</p>	<p>Presenting Examples</p> <p>Have you ever accidentally touched a hot pot on the stove? Think about what happens the moment your hand comes into contact with the hot surface.</p> <p>Follow-up questions:</p> <ol style="list-style-type: none"> 1. What was your immediate reaction? 2. Why did your hand quickly pull away? 3. What body parts helped you respond quickly? <p>Most likely, you immediately pull your hand away without even thinking.</p> <p>This quick reaction is called a reflex, and it shows how your body systems work together to protect you. Here's how it happened:</p> <p>When your skin senses the heat, your special sensory receptor in your skin detects the high temperature. Then your nerves send signals to the brain that travel instantly through your nerves, and when the signals reach your brain, it processes the</p>	<p>This shows that our body parts are connected and work together to protect us. Today, we will learn how the structure and function of the human body work together to keep us alive and active.</p> <p>Students must understand the terms used to describe the structure and function of different regions of anatomy.</p>

information and decides the fastest response. That is why your muscles pull your hand away because of the instruction coming from your brain to move your hand, to protect it from a burn.

Discussing New Concept

Human anatomy and physiology are the twin foundations of understanding how the body is built (structure) and how it works (function). Anatomy focuses on gross structures like bones, muscles, and organs, while physiology explains the processes that allow these structures to operate together to sustain life.

Foundation of Gross Structure / Human Anatomy

Anatomy is the study of the physical structures of the human body.

Levels of Organization

Human body: From Cells to Organ systems

The human body resembles a highly intricate machine that functions as one unit while comprising various interdependent body parts. Every component has its distinct function but collaborates to sustain life and facilitate activity. Inside the body, there exist various tiers of structural organization and complexity. Let's dig deeper for each part.

Cells: Building blocks of life

"A cell is defined as the smallest, basic unit of life that is responsible for all of life's processes."

	<p>Cells are the smallest independent units of living matter, and there are millions inside our bodies. Each cell carries out a particular function that contributes to the body's needs. Some cells carry oxygen, some fight infections, and others send signals to our brain.</p> <p>For example, your red blood cells carry oxygen to muscles so you can run, while your nerve cells send signals to your brain, so you know you are running.</p> <p>So, when cells of the same type function together, they form a tissue. Tissues have a shared structure and function, allowing them to perform tasks more efficiently than a single cell could. For example, the muscle tissue in your legs works together to help you walk, jump, or run.</p> <p>Organ:</p> <p>Tissues combine to form organs, each with a specific function that contributes to your survival. It combines several tissues to carry out complex tasks that a single tissue couldn't manage alone.</p> <p>Organ system:</p> <p>An organ system is a group of organs that work together to perform each vital function. Each system has a specific role, but none of them works alone. Instead, they interact continuously to support movement, breathing, thinking, and other vital processes. There are three important systems that we will discuss:</p> <ul style="list-style-type: none"> ● Branches of Anatomy: <ul style="list-style-type: none"> ○ Gross Anatomy: Study of structures visible to the naked eye (bones, muscles, organs). ○ Microscopic Anatomy: Study of cells and tissues using microscopes (histology, cytology). 	
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	<ul style="list-style-type: none"> ○ Developmental Anatomy: Study of changes from conception to adulthood. ● Examples of Gross Structures: <ul style="list-style-type: none"> ○ Cardio-respiratory system ○ Musculoskeletal system ○ Nervous system (brain, spinal cord, nerves) <p>Cardio-respiratory system</p> <p>The cardio-respiratory system combines the functions of the cardiovascular and respiratory systems. Its main role is to supply oxygen to the body's cells and remove carbon dioxide (a waste product of cellular activity).</p> <p>The heart pumps blood throughout the body, while the lungs allow oxygen from the air to enter the bloodstream. Blood vessels then carry this oxygen-rich blood to different tissues and organs.</p> <p>The cardio-respiratory system is especially active during physical activities such as running, climbing stairs, or playing sports. When the body needs more energy, the heart beats faster, and breathing becomes deeper and quicker to deliver more oxygen to the muscles.</p> <p>Musculoskeletal system:</p> <p>The musculoskeletal system provides the body with structure, support, and the ability to move. It is composed mainly of bones, muscles, joints, ligaments, and tendons. Bones act as the body's framework to protect vital organs, while muscles are attached to the bones through the tendons to move, and joints allow the bones to move in different directions.</p>	
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	<p>Nervous system</p> <p>It serves as the body's control and communication network. It includes the brain, spinal cord, and nerves. This system is responsible for receiving information from the environment, processing it, and sending signals that direct how the body responds. Sensory organs such as the eyes, ears, skin, nose, and tongue detect changes in the surroundings.</p> <p>Although each organ system has its own function, they work closely together to maintain the body's overall health and performance.</p> <p>Physiology is the study of how body structure's function and interact.</p> <p>A. Core Principles:</p> <ol style="list-style-type: none"> Homeostasis: The body's ability to maintain stable internal conditions (temperature, pH, blood pressure). Cellular Function: Cells carry out metabolism, energy production, and communication. Organ Function: Organs perform specialized tasks (lungs exchange gases, kidneys filter blood). System Integration: Systems work together (respiratory and circulatory systems deliver oxygen). <p>B. Branches of Physiology:</p> <ol style="list-style-type: none"> Cell Physiology: How cells function and communicate. Systemic Physiology: How organ systems operate (e.g., cardiovascular physiology). 	
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- c. **Pathophysiology:** How the disease alters normal function.

C. Examples of Physiological Processes:

- a. Muscle contraction (interaction of actin and myosin filaments).
- b. Nerve impulse transmission (electrical signals across neurons).
- c. Digestion (enzymes breaking down food into nutrients).
- d. Circulation (heart pumping blood through vessels).

3. Developing Mastery

Activity: Concept Connection Chart

Directions:

1. The learners will be divided into small groups of 4-5 learners.
2. Each group will receive a chart containing body structures (e.g., heart, lungs, muscles, brain).]
3. Learners will write the function of each structure and identify how it works with other body parts.
4. Learners need to incorporate the findings into real-life scenarios.
5. Groups will present their answers in front of the class.

Example:

Body structure	Function	Works with
Heart	Pumps blood	Blood vessels
Lungs	Exchange oxygen	Circulatory system
Muscles	Produce movement	Bones and joints
Brain	Controls body activities	Nervous system

<p>D. Demonstrating Knowledge and Skills</p>	<p>Finding Practical Application Activity: Fitness in Action (Team Body Action Challenge)</p> <p>Directions:</p> <ol style="list-style-type: none"> 1. Learners form groups of 4–5 members. 2. The teacher assigns each group a fitness-based movement (instead of just simple motions). Examples: <ul style="list-style-type: none"> ○ Jumping jacks ○ Squats ○ Lunges ○ Push-ups (modified if needed) ○ Plank with shoulder taps ○ High knees in place 3. Each group performs the assigned activity for 20–30 seconds. 4. After performing, learners discuss: 5. What body parts were involved? (Arms, legs, core, etc.) 6. What body structures helped them perform the movement? (Muscles, bones, joints) 7. How did these structures work together? (e.g., “The quadriceps contracted while the knee joint bent to allow squatting.”) 8. One member explains the teamwork of body structures, while others demonstrate the action again. <p>Example responses of the student:</p> <p><i>When we jump, the muscles of the legs contract, the bones support the body, and the joints allow movement.</i></p> <p>Rubrics for the activity:</p>	<p>Learners will collaborate to perform movements and identify the body structures responsible for those movements, explaining how each structure contributes to the action</p> <p>Enhancements for Fitness Integration</p> <ul style="list-style-type: none"> ● Warm-up & Cool-down: Begin with 2 minutes of stretching and end with breathing exercises to emphasize safe fitness habits. ● Progressive Challenge: Increase the duration or intensity (e.g., from 20 seconds to 30 seconds, or add repetitions). ● Variation: Groups can rotate activities so they experience different movements targeting different muscle groups. ● Reflection: After all activities, learners share which exercise felt easiest or hardest and why, connecting it to muscle
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	Criteria	4 - Excellent	3 - Proficient	2 - Developing	1 - Beginning	<p>strength, endurance, or flexibility.</p> <p>(This will give opportunities for learner reflection and self-assessment)</p> <p>Guide questions:</p> <ul style="list-style-type: none"> • Which muscles worked the hardest during your activity? • How did your bones and joints support the movement? • What fitness component (strength, endurance, flexibility, coordination) was developed in this activity? • How can you apply this movement in daily life (e.g., squats when picking up objects, lunges when climbing stairs)?
	Performance of Assigned Movement	Performs the movement correctly, confidently, and with proper form for the full duration	Performs the movement correctly with minor lapses in form or consistency	Performs the movement with noticeable errors or lacks consistency	Unable to perform the movement correctly or does not complete the task	
	Identification of Body Parts Involved	Clearly identifies all relevant body parts involved in the movement	Identifies most body parts with minor omissions	Identifies only a few body parts; lacks completeness	Unable to identify body parts correctly	
	Understanding of Body Structures (Muscles, Bones, Joints)	Demonstrates a clear and accurate explanation of how muscles, bones, and joints work together	Shows good understanding with minor inaccuracies	Shows limited understanding; explanation is partially correct	Shows little to no understanding of body structures	
	Explanation and Communication	Explanation is clear, organized, confident, and easy to understand; uses correct terms	Explanation is understandable with slight hesitation or minor errors	Explanation is unclear, lacks organization, or uses incorrect terms	Unable to explain or communicate ideas effectively	

	<table><tr><td>Teamwork and Participation</td><td>All members actively participate and collaborate effectively</td><td>Most members participate with good cooperation</td><td>Some members participate; teamwork is inconsistent</td><td>Little to no teamwork; few members participate</td></tr></table> <p>After all activities, learners share which exercise felt easiest or hardest and why, connecting it to muscle strength, endurance, or flexibility.</p> <p>Making Generalization</p> <p>Sentence Completion</p> <p>Directions:</p> <p>Learners will need to complete the following statements:</p> <ol style="list-style-type: none">1. Human anatomy is the study of _____.2. Physiology focuses on _____.3. Body structures work together because _____.4. Understanding the human body is important because _____.5. The coordinated work of body structures ensures that the human body can _____.	Teamwork and Participation	All members actively participate and collaborate effectively	Most members participate with good cooperation	Some members participate; teamwork is inconsistent	Little to no teamwork; few members participate	
Teamwork and Participation	All members actively participate and collaborate effectively	Most members participate with good cooperation	Some members participate; teamwork is inconsistent	Little to no teamwork; few members participate			
V. ASSESSMENT (Assessing Learnings)	<p>Directions: Read each question carefully and shade the letter of your answer on the answer sheet provided.</p> <ol style="list-style-type: none">1. Which of the following is the study of the structure of the human body?<ol style="list-style-type: none">A. AnatomyB. BiologyC. PhysiologyD. Kinesiology						

2. Which body part is responsible for pumping blood throughout the body?
 - A. Brain
 - B. Heart
 - C. Lungs
 - D. Stomach
3. The main function of the lungs is:
 - A. Controlling movement
 - B. Exchanging oxygen and carbon dioxide
 - C. Pumping blood
 - D. Sending signals to muscles
4. Why is it important to know how muscles, bones, and joints work together during movement?
 - A. To identify the organs
 - B. To perform physical activities safely
 - C. To memorize the body parts
 - D. To increase body size
5. A person accidentally touches a hot pot and pulls their hand away. Which body parts work together to perform this action?
 - A. Skin, nerves, brain, muscles
 - B. Lungs, heart, stomach, brain
 - C. Muscles, bones, lungs, skin
 - D. Heart, brain, stomach, liver
6. Which of the following shows a correct chain of related body structures and function?
 - A. Brain → interprets signals → nerves → muscles
 - B. Muscle → bone → heart → lungs
 - C. Heart → pumps blood → blood → carries oxygen
 - D. Skin → brain → heart → bones
7. If the heart stops pumping blood, which body process will be most immediately affected?
 - A. Digestion
 - B. Oxygen transport
 - C. Nerve signaling
 - D. Bone growth

	<p>8. Which combination of body parts is required for running fast?</p> <p>A. Brain, muscles, joints, bones B. Heart, stomach, skin, liver C. Lungs, kidneys, intestines, brain D. Bones, heart, liver, eyes</p> <p>9. Why is it important for body structures to work together in a coordinated way?</p> <p>A. To make learning easier B. To maintain life processes and respond to the environment C. To make the body heavier D. To memorize terms faster</p> <p>10. During jumping, the muscles of the legs contract, bones support the body, and joints allow movement. This example demonstrates:</p> <p>A. Anatomy only B. Physiology only C. The integration of anatomy and physiology D. The study of nutrition</p> <p>Key to correction:</p> <p>1. A 2. B 3. B 4. B 5. A 6. C 7. B 8. A 9. B 10. C</p>
<p>VI. REFLECTION <i>(Feedback and Continuous Improvement)</i></p>	<p>Learner Engagement:</p> <p>The K-W-L chart, body mapping, and word hunt activities successfully activated prior knowledge and engaged learners in exploring human anatomy and physiology. Students were enthusiastic in identifying body parts, asking questions, and locating terms in the word hunt grid.</p>

Collaborative Learning:

Group activities like “Chain of Thoughts,” “Why does it matter?” scenarios, and the Structure in Motion relay fostered teamwork, discussion, and practical understanding of how body structures work together. Peer teaching during label placements and chain-building encouraged communication and reinforced concepts.

Practical Application:

Activities integrating movement, such as jumping or bending, effectively connect theory to daily life. Learners could identify the muscles, bones, and joints involved, demonstrating an understanding of the interaction between anatomy and physiology.

Conceptual Understanding:

Through concept charts and scenario-based discussions, learners were able to explain functions of organs and their interconnections, linking abstract concepts to concrete actions and situations.

Suggested Intervention Program:

Sentence completion: “My Body in Action.”

Instruction: Read each sentence carefully and fill in the blank with the word or phrase that best completes its meaning.

1. I used my _____ (arms/legs/core) to perform lunges.
2. My _____ (muscles/bones/joints) helped me move by _____ (e.g., contracting, supporting, allowing movement).
3. My heart _____ (beat faster/slower) because my body needed more _____ (oxygen/energy).
4. My lungs _____ (breathed faster/slower/deeper) to help supply _____ to my body.
5. My brain and nerves helped me _____ (control movement/respond quickly) by sending signals to my _____.

Suggested Enrichment activity:

“Anatomy in Action – Pathways to the Future”

	<p>Instructions:</p> <p>Perform & Observe:</p> <ol style="list-style-type: none"> 1. Choose one fitness-based activity (e.g., squats, lunges, push-ups, planks, or jumping jacks). Perform it for 20–30 seconds. 2. Analyze Anatomy & Physiology: <ul style="list-style-type: none"> ○ Identify the muscles, bones, and joints involved. ○ Explain the physiological processes (muscle contraction, endurance, coordination). <p>Connect to Pathways:</p> <ol style="list-style-type: none"> 3. Write a short reflection (1–2 paragraphs) connecting your activity to one of the curriculum exit pathways: <ul style="list-style-type: none"> ○ College Readiness: How does this knowledge prepare you for higher education in health sciences, sports, or medicine? ○ Entrepreneurship: What product, service, or business idea could you design based on this knowledge (e.g., fitness innovation, ergonomic tools)? ○ Middle Skills Training: How can this knowledge be applied in vocational careers (e.g., caregiving, fitness instruction, massage therapy)? ○ Employment Readiness: How does body awareness and fitness contribute to workplace safety, productivity, or wellness? 4. Submit: <ul style="list-style-type: none"> ○ A written reflection (minimum 300 words). ○ A diagram or sketch labeling the body structures involved in your chosen activity. ○ A career connection paragraph explaining how anatomy and physiology knowledge support your chosen pathway. <p>**Note to the teachers</p> <p><i>The teacher may choose to implement the other recommended activities for enrichment to support students who are experiencing difficulty in understanding the lesson.</i></p>
<p>VII. USE OF GENERATIVE AI</p>	<p>In preparing this Learning Exemplar (LE), the author(s) used ChatGPT in order to refine the original idea of the author for the activity “Chain of Thoughts”. https://chatgpt.com/c/69b29e30-f050-8321-a1df-51e21a68a33c</p> <p>The author reviewed and finalized the writing of the content. The author takes full responsibility for the content of this LE.</p>

Lesson Title/Topic	Major Components and Functions of the Human Movement Systems and Body Responses and Adaptations to Exercise	Lesson Exemplar	2
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I. OBJECTIVES	
A. Content Standard	<i>The learners demonstrate understanding of the basic structure and function of the human body in relation to fitness, exercise, and health for the optimization of human movement performance.</i>
B. Performance Standard	<i>The learners evaluate basic functional movement patterns using anatomical knowledge to optimize performance across different needs and skill levels.</i>
C. Learning Competencies	<i>Describe the function and interaction of body systems in relation to fitness and exercise</i>
II. REFERENCES and MATERIALS (Selecting Resources and Material)	<p>Betts, J Gordon, Kelly A Young, James A Wise, Eddie Johnson, Brandon Poe, Dean H Kruse, Oksana Korol, Jody E Johnson, Mark Womble, and Peter DeSaix. 2022. "Ch. 10 Chapter Review - Anatomy and Physiology 2e OpenStax." Openstax.org. OpenStax. 2022. https://openstax.org/books/anatomy-and-physiology-2e/pages/10-chapter-review.</p> <p>Cleveland Clinic. 2022a. "Parasympathetic Nervous System (PSNS): What It Is & Function." Cleveland Clinic. Cleveland Clinic. June 6, 2022. https://my.clevelandclinic.org/health/body/23266-parasympathetic-nervous-system-psns.</p> <p>———. 2022b. "Sympathetic Nervous System (SNS)." Cleveland Clinic. June 6, 2022. https://my.clevelandclinic.org/health/body/23262-sympathetic-nervous-system-sns-fight-or-flight.</p> <p>Farrell, Connor, and Douglas R. Turgeon. 2023. "Normal versus Chronic Adaptations to Aerobic Exercise." PubMed. Treasure Island (FL): StatPearls Publishing. May 29, 2023. https://www.ncbi.nlm.nih.gov/books/NBK572066/.</p> <p>Hargreaves, Mark, and Lawrence L. Spriet. 2018. "Exercise Metabolism: Fuels for the Fire." Cold Spring Harbor Perspectives in Medicine 8 (8): a029744. https://doi.org/10.1101/cshperspect.a029744.</p> <p>Hong, A Ram, and Sang Wan Kim. 2018. "Effects of Resistance Exercise on Bone Health." Endocrinology and Metabolism 33 (4): 435. https://doi.org/10.3803/enm.2018.33.4.435.</p> <p>Hughes, David C., Stian Ellefsen, and Keith Baar. 2018. "Adaptations to Endurance and Strength Training." Cold Spring Harbor Perspectives in Medicine 8 (6). https://doi.org/10.1101/cshperspect.a029769.</p> <p>LeBouef, Tyler, and Lacey Whited. 2023. "Physiology, Autonomic Nervous System." Nih.gov. StatPearls Publishing. 2023. https://www.ncbi.nlm.nih.gov/books/NBK538516/.</p> <p>Patel, Parth , Hallie Zwibel, and Maria Horenstein. 2024. "Exercise Physiology." PubMed. Treasure Island (FL): StatPearls Publishing. October 6, 2024. https://www.ncbi.nlm.nih.gov/books/NBK482280/.</p>
III. CONTENT (Sequencing Content)	<p>Major Components and Functions of the Human Movement Systems</p> <ul style="list-style-type: none"> ● Nervous System ● Musculoskeletal system

	<ul style="list-style-type: none"> • Cardiorespiratory system <p style="text-align: center;">Body Responses and Adaptations to Exercise</p> <ul style="list-style-type: none"> • Balance, Stability, and Coordination • Heart rate • Fatigue • Energy System • Structure, Types, and Muscle groups • Growth and maturation
IV. OBJECTIVES <i>(Setting Clear Objectives and Analyzing the Tasks)</i>	<ul style="list-style-type: none"> • Identify the major components and Functions of the Human Movement System such as The Nervous System, The Cardio-Respiratory System, and The Musculoskeletal System. • Define the basic structure and processes of the human body in relation to fitness, exercise, and health to optimize human movement. • Explain the primary function of each body systems in relation to movement and exercise.
IV. PROCEDURES	
(Each part shall have 2-3 varied activities)	
A. Activating Prior Knowledge	<p>1. Activating Prior Knowledge "Stress Response Breakdown: How Does Your Body React?" <i>The teacher will prompt learners to recall a stressful experience and reflect on how their bodies responded—such as an increased heart rate, fatigue, or low energy. Learners will then be guided to explain the physiological changes that occurred in their bodies during that situation.</i></p> <p>2. Establishing the Purpose of the Lesson "Body Systems Showdown: Unlocking Fitness through Structure & Function" <i>Learners will identify the major components and functions of the nervous, cardio-respiratory, and musculoskeletal systems, and explain how the body's structures and processes relate to fitness, exercise, and overall health in order to optimize movement and physical performance..</i></p>
	<i>The teacher links learners' real-life experiences—such as stress, rapid heartbeat, and fatigue—to the functions of the body systems. This approach makes the lesson more relevant and meaningful while actively engaging learners and strengthening their understanding of how the body responds to physical and emotional demands.</i>

<p>B. Instituting New Knowledge</p>	<p>1. Presenting Examples <i>The teacher will present a scenario, such as a person sustaining a head injury, and ask learners how they would respond when providing first aid. As learners share their ideas, the teacher will guide them in evaluating and refining their responses. For example, if a learner suggests, “The person must stay awake,” the teacher will clarify that while close monitoring is important, it is not always necessary to keep the person awake unless specifically instructed by medical professionals..</i></p> <p>2. Discussing New Concept <i>The teacher explains that the body’s systems work together to enable movement and physical activity. The nervous system transmits signals from the brain to the muscles, allowing the body to respond quickly and coordinate movement. The cardiorespiratory system—composed of the heart and lungs—becomes more active during exercise to deliver oxygen throughout the body, which learners can observe through changes in their pulse rate and breathing. The musculoskeletal system, which includes the muscles, bones, and joints, provides support for posture, movement, and balance during various physical activities.</i></p> <p><i>The teacher further explains that the body requires energy to perform these movements, which is supplied in the form of ATP (adenosine triphosphate). This energy is produced through different energy systems, depending on the intensity and duration of the activity.</i></p> <p>1. Nervous System <i>The teacher will set up two activity stations representing the sympathetic and parasympathetic nervous systems. At the sympathetic station, learners will perform a vigorous activity, such as 20 repetitions of jumping jacks, to simulate an increased physiological response. At the parasympathetic station, learners will transition to a calming activity, such as deep breathing exercises or slow walking, for 20 seconds to promote relaxation and recovery.</i></p> <p><i>The class will be divided into teams, and each learner will participate in a relay sequence, moving through both stations. After completing the activity,</i></p>	<p>https://martinhelms.com/blog/common-misconceptions-about-traumatic-brain-injuries/#:~:text=Misconception%20%231:%20You%20must%20lose,does%20indicate%20a%20serious%20TBI.</p> <p>Through guided scenarios and interactive activities—such as the Reaction Time Challenge and Pulse Rate Check—the teacher facilitates learners’ understanding of how body systems respond to and adapt during physical activity. Misconceptions are addressed through clear explanations, guided questioning, and collaborative discussion, promoting accurate understanding and deeper conceptual learning.</p> <p>Note: The teacher is encouraged to check the capability of the learners’ body by providing PAR-Q.</p>
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learners will reflect on and describe how their bodies responded during each phase.

Guided Questions:

1. What changes did you observe in your heart rate and breathing when comparing the vigorous and calming activities? How do these responses reflect the roles of the sympathetic and parasympathetic nervous systems?
2. Which activity helped you feel more relaxed? How does deep breathing support the activation of the parasympathetic nervous system?

The sympathetic and parasympathetic nervous systems are both components of the autonomic nervous system (ANS), which regulates involuntary body functions such as heart rate, breathing, and digestion. These two systems work in a coordinated balance—often in opposition—to help the body respond appropriately to different situations and maintain internal stability, a process known as homeostasis.

A. Sympathetic Nervous System (SNS):

- **Role:** Often referred to as the “fight or flight” system, the sympathetic nervous system prepares the body to respond to stress, danger, or emergency situations. It is activated when a quick response is needed..
- **Key Functions:**
 - Increases heart rate to deliver more blood and oxygen to the muscles
 - Dilates pupils to enhance vision and allow more light into the eyes
 - Inhibits digestion to conserve energy for immediate survival needs
 - Redirects blood flow to skeletal muscles to support rapid movement and action
 - Increases breathing rate to supply more oxygen to the body
 - Triggers the release of adrenaline, increasing energy, alertness, and focus

When it is activated:

- During high-stress or emergency situations, such as being chased or performing intense physical activity

- Examples include feeling nervous before a test, running to catch a bus, or engaging in vigorous exercise

B. Parasympathetic Nervous System (PNS):

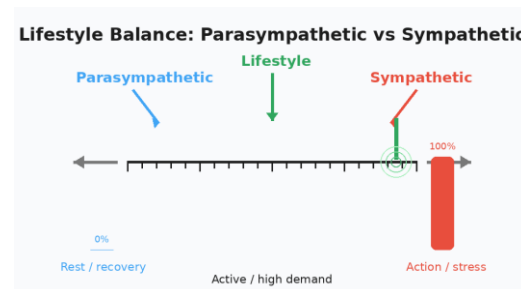
- **Role:** Known as the “rest and digest” system, the parasympathetic nervous system helps calm the body, conserve energy, and restore balance after stress. It works to return the body to a relaxed, resting state following activation of the sympathetic nervous system.

Key Functions:

- **Decreases heart rate:** Slows the heart to support rest and recovery
- **Constricts pupils:** Reduces light intake when the body is not in a threat situation
- **Stimulates digestion:** Promotes efficient digestion and nutrient absorption
- **Promotes relaxation:** Helps the body transition into a calm and restful state
- **Reduces respiration rate:** Returns breathing to normal, steady levels

When it is activated:

- After stress or physical activity, when the body needs to recover and restore energy balance
- Examples include relaxing after a stressful event, taking a nap, practicing meditation, or resting after eating



The animated graph may be used to further illustrate the responses of the sympathetic and parasympathetic nervous systems as the body transitions from resting state to vigorous activity and vice versa. These responses highlight how the autonomic nervous system adapts to changes in physical demand. It is important to note that the balance and efficiency of these responses may also be influenced by an

	<p>C. The effect of Parasympathetic and Sympathetic on different organs:</p> <p>Heart (Cardiac Muscle)</p> <p>Sympathetic Nervous System (SNS):</p> <ul style="list-style-type: none"> • Effect: Increases heart rate and the force of contraction • Reason: Prepares the body for physical activity or stress (fight-or-flight response) • Outcome: A faster, stronger heartbeat pumps more blood and oxygen to the muscles and vital organs <p>Parasympathetic Nervous System (PNS):</p> <ul style="list-style-type: none"> • Effect: Decreases heart rate • Reason: Promotes relaxation and conserves energy • Outcome: A slower heart rate supports rest, recovery, and energy conservation <p>Lungs (Respiratory System)</p> <p>Sympathetic Nervous System (SNS):</p> <ul style="list-style-type: none"> • Effect: Dilates (widens) the airways (bronchodilation) • Reason: Allows increased oxygen intake to support higher energy demands • Outcome: Faster and deeper breathing, improving oxygen supply during physical exertion <p>Parasympathetic Nervous System (PNS):</p> <ul style="list-style-type: none"> • Effect: Constricts the airways (bronchoconstriction) • Reason: Helps the body return to a calm, resting state • Outcome: Slower, more regular breathing that supports relaxation and recovery 	<p><i>individual's lifestyle, particularly their level of physical activity.</i></p> <p><i>Link of the animated graph:</i></p> <p><i>https://drive.google.com/file/d/1iDZrhMexC6wmcmoAOAvehzC0puXcQXfA/view?usp=sharing</i></p>
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The Liver

Sympathetic Nervous System (SNS) and the Liver:

- **Effect:** Stimulates the liver to release glucose into the bloodstream
- **Reason:** During stress, physical exertion, or emergencies, the body requires a rapid supply of energy to support muscles and vital organs
- **Outcome:** The liver activates glycogenolysis, the process of breaking down stored glycogen into glucose, which is then released into the bloodstream to provide immediate energy for the fight-or-flight response

Comparison of Sympathetic vs. Parasympathetic Nervous Systems

Function	Sympathetic Nervous System (SNS)	Parasympathetic Nervous System (PNS)
Primary Role	"Fight or flight" – prepares for action	"Rest and digest" – conserves and restores energy
Heart Rate	Increases	Decreases
Pupils	Dilates (enlarges)	Constricts (shrinks)
Breathing	Increases (faster, deeper)	Slows down
Digestive Activity	Inhibits (slows down digestion)	Stimulates (promotes digestion)
Blood Flow	Redirects blood to muscles	Blood flow returns to digestive organs
Energy Usage	Increases energy expenditure	Conserves energy
Example Situations	Stress, physical activity, emergencies	Rest, recovery, relaxation, after eating

2. The Cardiorespiratory System

Activity: *"Pulse in Motion – Cardiorespiratory Fitness Check"*

learners will work in pairs. One student will measure their resting pulse rate. Then the learners will perform 30 seconds of jumping jacks. After the activity, the partner will measure the pulse rate for 15 seconds then multiply by 4 to get the BPM (Beats per minute)

Guided Questions:

1. *What happened to your heart rate after exercise?*
2. *Why does the heart and lungs work harder during physical activity?*
3. *How long did it take for your pulse to return closer to resting rate?*
4. *What does this tell you about your cardiorespiratory fitness?*

A. Heart (Cardiac Response):

- **Response:** During exercise, heart rate increases to pump more oxygenated blood to working muscles, supporting higher endurance and improved physical performance.
- **Adaptation:** With consistent training, the heart becomes more efficient. Resting heart rate decreases, while stroke volume (the amount of blood pumped per beat) increases, allowing more oxygen to be delivered with each heartbeat..

B. Lungs (Respiratory Response):

- **Response:** During exercise, the lungs work harder to increase oxygen intake and remove carbon dioxide. Breathing rate and depth increase to meet the body's higher oxygen demand
- **Adaptation:** Regular physical activity improves respiratory efficiency and endurance. The respiratory muscles become stronger, allowing for better control of breathing and more effective oxygen exchange during.

C. Blood Vessels (Circulatory Response):

- **Response:** Blood vessels dilate during exercise to increase blood flow to active muscles, ensuring an adequate supply of oxygen and nutrients..
- **Adaptation:** Over time, blood vessels become more elastic and efficient, improving overall circulation, enhancing oxygen delivery, and supporting faster recovery during and after physical activity.

3. The Musculoskeletal System

Activity Title: “Stand Strong – Muscles in Motion”

Directions:

1. Learners sit on a chair with feet flat on the floor, back straight, and arms relaxed.
2. On the teacher’s signal, learners **stand up and sit down slowly five times**.
 - Encourage controlled movement (no rushing).
 - Learners may use their hands for support if needed.
3. After completing, learners pause and reflect on which muscles and joints were active.
4. Repeat the activity with a variation:
 - **Arms crossed over chest** (to challenge balance).
 - **Hold the standing position for 5 seconds** before sitting down (to engage endurance).

Add light weights or a school bag for resistance (optional, for advanced learners).

Guided Questions:

1. Which muscles and joints helped you stand up and sit down?
2. How did your body maintain balance throughout the movement?
3. How does adding resistance (such as holding a bag) affect the amount of effort required to perform the activity?
4. In what ways can regular exercise help strengthen your muscles and bones?

A. Muscles (Muscular Response):

- **Response:** During exercise, muscles contract to generate force and produce movement. The intensity and frequency of muscle contractions increase to meet the demands of physical activity.
- **Adaptation:** With regular training, muscles undergo hypertrophy (increase in size) and become stronger and more efficient in producing force. Endurance training, such as running, enhances muscular

stamina, allowing muscles to sustain activity for longer periods with reduced fatigue.

B. Bones (Skeletal Response):

- **Response:** Bones provide structural support during physical activity, act as levers for movement, and help absorb impact forces generated during exercise.
- **Adaptation:** With consistent weight-bearing activity, bones adapt by becoming denser and stronger. Exercises such as strength training and running stimulate bone remodeling, increase bone mineral density, and help reduce the risk of fractures and bone-related injuries..

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C. Joints and Ligaments (Joint Response):

- **Response:** Joints enable movement and flexibility during physical activity, while ligaments provide stability by holding bones together and preventing excessive or harmful movement that may lead to injury.
- **Adaptation:** With regular physical activity, joints become more flexible and efficient in movement, while ligaments gradually strengthen, improving joint stability and range of motion. These adaptations help reduce the risk of injuries such as sprains and strains and support long-term mobility and functional movement as the body ages.

4. Energy System

Exercise Classification:

Activity Title: “Fuel for Movement – Energy Systems in Action”

Directions

1. Learners create a chart listing different physical activities (e.g., sprinting, yoga, cycling, weightlifting, basketball, marathon).
2. For each activity, classify which **energy system** is most active:
 - **ATP-PC System (Phosphagen):** Immediate energy for short, explosive movements (0–10 seconds).

- **Anaerobic Glycolysis (Lactic Acid System):** Moderate, high-intensity activity (30 seconds–2 minutes).
 - **Aerobic System:** Long-duration, lower-intensity activity (beyond 2 minutes).
3. Learners explain why that energy system is dominant for the activity.
 4. Extension: Learners act out short versions of the activities (e.g., 10-second sprint in place, 1-minute wall sit, 2-minute jog) and then classify the energy system based on their experience.
 5. Reflection: Learners answer guided questions and connect the activity to fitness and exercise

Guided Questions:

1. What is the role of ATP (Adenosine Triphosphate) in the human body?
2. What are the three main energy systems in the human body?
3. How does the body decide which energy system to use during different activities?
4. Why is recovery important for replenishing energy stores?
5. How can understanding energy systems help athletes, workers, or health professionals?

Key Components of Human Energy Systems

- **Phosphagen (ATP-CP) System:** The most immediate source, using stored creatine phosphate to generate energy instantly without oxygen. Used for activities like sprinting or lifting heavy weights.
- **Glycolytic (Anaerobic) System:** Breaks down carbohydrates (glucose/glycogen) without oxygen to produce ATP quickly, suitable for high-intensity, short-to-medium duration tasks.

	<ul style="list-style-type: none"> ● Oxidative (Aerobic) System: The primary system for endurance, using oxygen to break down carbohydrates and fats for long-term energy production. <p>Key Concepts</p> <ul style="list-style-type: none"> ● Energy Continuum: All three systems work together simultaneously to ensure a constant supply of energy, rather than functioning in isolation. ● Intensity and Duration: The dominant system depends on the intensity and duration of the activity. ● Training Implications: Training specific systems (e.g., strength training for phosphagen, distance running for oxidative) is crucial for performance. <p>3. Developing Mastery <i>Activity: "Race to Adapt: The Ultimate Body Challenge!"</i> <i>The teacher will divide the class into 4 (depending on the number of learners). The learners should run to different stations — prepared by the teacher and answer different questions in the respective areas.</i></p> <p>Station 1: Nervous System – Sympathetic vs. Parasympathetic <i>Guided Questions:</i> <i>How did your heart rate and breathing change between the two activities? How do the sympathetic and parasympathetic nervous systems influence these changes?</i></p> <p>Station 2: Cardiorespiratory System – Pulse Rate Check <i>Guided Questions:</i> <i>Why do the heart and lungs work harder during exercise?</i> <i>How does this support oxygen delivery to the body?</i></p>	<p><i>Learners collaboratively apply their knowledge through problem-based tasks, such as the “Race to Adapt” station activity. These tasks reinforce conceptual understanding while promoting critical thinking and the practical application of learning.</i></p>
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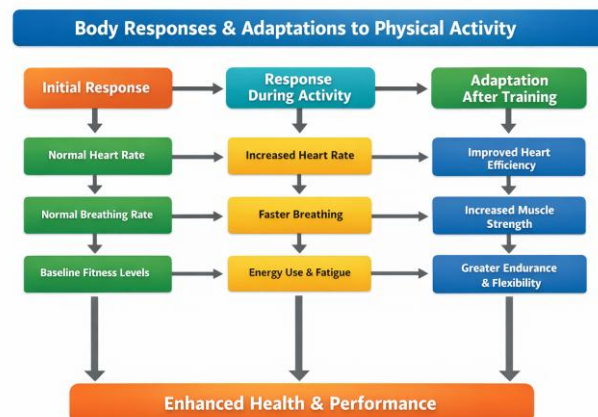
	<p>Station 3: Musculoskeletal System – Chair Sit-to-Stand Guided Questions: Which muscles and joints are involved in performing the sit-to-stand movement? How does regular exercise contribute to stronger muscles and bones?</p> <p>Station 4: Energy Systems – Exercise Classification Guided Questions: What are the three main energy systems used by the body during physical activity? How do these systems support different types and intensities of exercise?</p>													
<div>C. Demonstrating Knowledge and Skills</div>	<p>1. Finding Practical Application</p> <p>The teacher will divide the class into 4 groups (depending on the number of learners). Each group will select a different scenario, which may involve a physical activity or a sports context, that illustrates the body’s responses and adaptations to exercise and movement.</p> <p>Rubrics:</p> <table><tr><th>Criteria</th><th>Excellent (5 pts)</th><th>Good (4 pts)</th><th>Acceptable (3 pts)</th><th>Partial (2 pts)</th><th>Minimal (1 pt)</th></tr><tr><td>Understanding of Body Systems</td><td>Clearly and accurately explains the body systems involved in the activity.</td><td>Explains the body systems with minor errors.</td><td>Shows basic understanding of the body systems.</td><td>Shows limited understanding of the body systems.</td><td>Shows little or no understanding of the body systems.</td></tr></table>	Criteria	Excellent (5 pts)	Good (4 pts)	Acceptable (3 pts)	Partial (2 pts)	Minimal (1 pt)	Understanding of Body Systems	Clearly and accurately explains the body systems involved in the activity.	Explains the body systems with minor errors.	Shows basic understanding of the body systems.	Shows limited understanding of the body systems.	Shows little or no understanding of the body systems.	<p>Learners engage in role-play and group performance tasks to demonstrate how body systems interact during physical activity. Assessment rubrics are used to evaluate their understanding, creativity, teamwork, and overall performance.</p>
Criteria	Excellent (5 pts)	Good (4 pts)	Acceptable (3 pts)	Partial (2 pts)	Minimal (1 pt)									
Understanding of Body Systems	Clearly and accurately explains the body systems involved in the activity.	Explains the body systems with minor errors.	Shows basic understanding of the body systems.	Shows limited understanding of the body systems.	Shows little or no understanding of the body systems.									

	<i>Application to the Activity</i>	Role play clearly shows how body systems work together during the activity.	Role play mostly shows the connection of body systems to the activity	Role play shows some connection to the body systems.	Role play shows limited connection to the body systems.	Role play does not show the connection to body systems.
	<i>Creativity</i>	Role play is very creative, engaging, and well presented	Role play is creative and organized.	Role play shows some creativity but is simple.	Role play is basic with limited creativity.	Role play lacks creativity and preparation.
	<i>Teamwork and Participation</i>	All members actively participate and cooperate well	Most members participate and cooperate.	Some members participate in the activity.	Few members participate.	Very little participation from the group.

<i>Presentation/Performance</i>	Performance is confident, clear, and engaging for the class.	Performance is confident with good effort.	Performance shows little confidence and preparation.	Performance is understandable but lacks energy.	Performance is unclear and lacks effort.
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2. Making Generalization

The teacher will show this flow chart to the class.



1. **Scenario:** After a few days of starting a new fitness routine, you notice that you become winded more quickly than usual during your runs.

- **Question:** How do your baseline fitness levels influence your initial response to exercise? What changes do you expect to observe after several weeks of consistent training?

2. **Scenario:** Imagine you are running to catch a bus, and you feel your heart rate increase and your breathing become faster. Afterward, you feel tired and need a short rest.

- **Question:** How is the sympathetic nervous system involved in increasing your heart rate and breathing during this situation? How

The teacher uses a flow chart and real-life scenarios, supported by guided questions, to help learners synthesize the lesson, connect concepts to real-life fitness activities, and understand how the body adapts to meet the demands of physical activity.

	<p>does this physiological response help the body during stress or physical exertion?</p> <p>3. Scenario: After a month of regular strength training, you are able to lift heavier weights with less fatigue.</p> <ul style="list-style-type: none"> • Question: What physiological changes may have occurred in your muscles and cardiovascular system that contributed to increased strength and improved efficiency? How do these adaptations enhance your overall performance during workouts? 	
V. ASSESSMENT <i>(Assessing Learnings)</i>	<p><i>"Body Systems in Action: Responses and Adaptations in Daily Activities"</i></p> <p><i>The learners will respond to the questions regarding the corresponding responses and adaptations of the body systems during various day-to-day activities. Grading will follow the provided rubric.</i></p> <p>1. Running for the Bus Body System: <u>Cardiovascular</u> Explanation of Response and Adaptation: Response: Adaptation:</p> <p>2. Weightlifting in the Gym Body System: <u>Muscular</u> Explanation of Response and Adaptation: Response: Adaptation:</p> <p>3. Carrying Groceries Upstairs Body System: <u>Muscular</u> Explanation of Response and Adaptation: Response: Adaptation:</p> <p>4. Climbing a Staircase Body System: <u>Muscular</u> Explanation of Response and Adaptation: Response: Adaptation:</p> <p>5. Walking After a Meal Body System: <u>Muscular</u> Explanation of Response and Adaptation: Response: Adaptation:</p>	

6. Dancing at a PartyBody System: Cardiovascular and Muscular

Explanation of Response and Adaptation:

Response:

Adaptation:

7. Cycling to SchoolBody System: Cardiovascular and Respiratory

Explanation of Response and Adaptation:

Response:

Adaptation:

8. Playing a Game of BasketballBody System: Cardiovascular, Muscular, and Respiratory

Explanation of Response and Adaptation:

Response:

Adaptation:

9. Walking for ExerciseBody System: Cardiovascular

Explanation of Response and Adaptation:

Response:

Adaptation:

10. Lifting Heavy ObjectsBody System: Muscular

Explanation of Response and Adaptation:

Response:

Adaptation:

Rubric for Body Systems Match-Up: Responses and Adaptations (Individual Activity)

Criteria	5 – Excellent	4 – Very Good	3 – Good	2 – Fair	1 – Needs Improvement
Identification of Body Systems	Correctly identifies all body systems involved in the activities.	Identifies most body systems with minimal errors.	Identifies several body systems but with some errors.	Identifies few body systems correctly.	Unable to identify the correct body systems.
Explanation of Body Responses	Clearly and accurately explains how the body responds during the activity.	Explanation is correct with minor missing details.	Explanation is partially correct but lacks clarity.	Explanation shows limited understanding.	Explanation is incorrect or missing.
Explanation of Body Adaptations	Clearly explains long-term adaptations of the body due to repeated physical activity.	Explains adaptation correctly but with limited detail.	Shows basic understanding of adaptation.	Shows minimal understanding of adaptation.	Adaptation is incorrect or not explained.
Clarity and Organization of Answers	Answers are very clear, well-organized, and easy to understand.	Answers are clear with minor organization issues.	Answers are understandable but somewhat unclear.	Answers are poorly organized.	Answers are unclear and difficult to understand.

VI. REFLECTION
(Feedback and
Continuous
Improvement)

The teaching process is designed in a scaffolded manner that supports learners' varying capabilities while encouraging exploration and collaboration. It fosters a safe and inclusive learning environment where students can actively participate, share ideas, and express personal experiences that make the lesson more meaningful and relatable. This approach helps learners better connect prior knowledge with new concepts, enhancing their understanding of the content.

In addition, the integration of the elaborative interrogation strategy strengthens the learning process by guiding students through a series of purposeful questions. This approach helps learners clarify what they know, deepen their reasoning, and develop a more critical understanding of the concepts being studied.

ENRICHMENT ACTIVITY

Activity: Reflective Exercise Journal

Instructions

1. Choose **one physical activity** (e.g., walking, jogging, jumping rope, or bodyweight exercises).
 2. Perform the activity for **10–15 minutes daily** for **3–5 days**.
 3. After each session, write a short journal entry including:
 - **Activity and duration**
 - **Perception on exercise variables (Critical thinking questions)**
 - How did your body's recovery, muscle fatigue, and breathing change as you repeated the activity over time—cite concept that bridging your experience to the lesson.
 - What difficulties did you experience during the activity? What explains these difficulties?
 - What would you do next time to improve your performance in your next physical activity session? Provide specific strategies anchored to establish concepts
1. After finishing the activity, how quickly did your body calm down (e.g., heart rate slows, feeling relaxed), and did your recovery improve over the days as your parasympathetic system became more active?
 2. Did your muscles feel sorer or fatigued at the beginning compared to later sessions, and is the activity starting to feel easier on your muscles?
 3. Are you able to perform the activity better in terms of duration or exercise technique? How come?

How have your heart rate and breathing changed over time—are they more controlled and do you recover faster? Why does this affect your performance?

Output

- Submit **3–5 journal entries**
- Include a **short summary (1 paragraph)** of what you learned

Criteria	Outstanding (25 pts)	Very Satisfactory (20 pts)	Satisfactory (15 pts)	Needs Improvement (10 pts)	Points
Completeness (25%)	All 3–5 journal entries are complete with full required details (activity, duration, systems, reflection).	Most entries are complete with minor missing details.	Some entries are incomplete or lack required parts.	Many entries missing or incomplete.	/25
Understanding of Human Movement Systems (25%)	Demonstrates accurate and clear understanding of all 5 systems in relation to activity.	Shows good understanding with minor errors.	Basic understanding with some misconceptions.	Shows little or incorrect understanding of systems.	/25

Depth of Reflection (25%)	Highly reflective; shows clear insights, comparisons, and personal improvement over time.	Good reflection with some analysis of changes.	Simple reflection with limited insight.	Minimal or no meaningful reflection.	/25
Clarity & Organization (25%)	Well-organized, neat, easy to read, and logically written.	Generally clear with minor organization issues.	Somewhat unclear or inconsistently organized.	Poorly organized and difficult to understand.	/25

INTERVENTION ACTIVITY

A. Personal Activity Recall

Think of a recent physical activity (e.g., walking, jogging, dancing, carrying objects, sports).

Activity performed: _____

Duration (approx.): _____

Brief response (2–3 sentences):

Guided Question: If you were going to train yourself, what factors or variables should you take into account in order to facilitate safe and productive exercise session?

B. Guided Body Systems Reflection

Complete the table below. You may **check (✓)** provided answers or **add your own idea**.

Body System	What I Observed	What I Want to Understand
Nervous System (Sympathetic & Parasympathetic)	☐ I felt more alert during activity ☐ My body reacted quickly ☐ I relaxed after stopping	☐ Why does my body become alert during exercise? ☐ How does my body return to a calm state after activity?
Cardiorespiratory System	☐ Heart rate increased ☐ Breathing became faster ☐ I felt tired	☐ Why does my heart rate increase? ☐ How do my lungs adjust during exercise?
Musculoskeletal System	☐ Muscles felt tired ☐ Some soreness occurred ☐ Body movements became easier	☐ Why do muscles fatigue? ☐ How do bones and joints support movement?
Energy Systems	☐ I lost energy quickly ☐ I needed rest ☐ Energy improved over time	☐ Where does energy for movement come from? ☐ Why does fatigue happen during activity?

Criteria for Assessment: Guided Body Systems Reflection (Senior High School)

Criteria	Excellent (4)	Good (3)	Developing (2)	Beginning (1)
Accuracy of Observations	Observations are accurate, specific, and clearly linked to each body system.	Observations are generally correct with minor gaps in detail.	Some observations are unclear or only partially	Observations are inaccurate or not related to the activity.

				related to the body systems.	
	Understanding of Body Systems	Shows clear understanding of how all body systems respond during exercise.	Shows adequate understanding with some minor misconceptions.	Limited understanding; responses are vague or incomplete.	Shows little to no understanding of body system responses.
	Quality of Questions (“What I Want to Understand”)	Questions are thoughtful, relevant, and show deep curiosity about body systems.	Questions are relevant but somewhat simple or general.	Questions are basic and lack depth or clarity.	Questions are missing, irrelevant, or unclear.
	Completeness of Task	All sections are fully completed with thoughtful responses and checkmarks/additions.	Most sections are completed with minor omissions.	Several sections are incomplete or partially filled.	Task is mostly incomplete or not attempted.
	<p>**Note to the teachers</p> <p><i>The teacher may choose to implement the other recommended activities for enrichment to support students who are experience difficulty in understanding the lesson.</i></p>				
VII. USE OF GENERATIVE AI	OpenAI. (2023). <i>ChatGPT</i> [Large language model] OpenAI. (2023). <i>Generative AI for Educational Content Development</i> [Tool]				

Lesson Title/Topic	Anatomical Terms	Lesson Exemplar	3
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I. OBJECTIVES	
A. Content Standard	<i>The learners demonstrate understanding of the basic structure and function of the human body in relation to fitness, exercise, and health for the optimization of human movement performance.</i>
B. Performance Standard	<i>The learners evaluate basic functional movement patterns using anatomical knowledge to optimize performance across different needs and skill levels.</i>
C. Learning Competencies	<i>Execute basic movement patterns using different anatomical terms and movement descriptors</i>
II. REFERENCES and MATERIALS (Selecting Resources and Material)	<p>Kenhub. "Anatomical Terminology: Planes, Directions and Regions." Accessed March 11, 2026. https://www.kenhub.com/en/library/anatomy/anatomical-terminology</p> <p>Brigham Young University. "Anatomical Terms." Accessed March 11, 2026. https://exsc.byu.edu/biomechanics/seeley/anatomical-terms</p> <p>LibreTexts. "Introduction to Anatomy." Accessed March 11, 2026. https://med.libretexts.org/Bookshelves/Anatomy_and_Physiology/Human_Anatomy_Lab_Manual_(Stamm_and_Hills-Meyer)/01%3A_Thorax_Abdomen_and_Pelvis/1.01%3A_Course_Introduction_Introduction_to_Anatomy</p> <p>Department of Education (Philippines). Human Movement 1: Basic Anatomy in Sports and Exercise. Accessed March 11, 2026. https://www.deped.gov.ph/wp-content/uploads/Human-Movement-1-Basic-Anatomy-in-Sports-and-Exercise-1.pdf</p>
III. CONTENT (Sequencing Content)	<p>Anatomical Terms</p> <ul style="list-style-type: none"> • Definition and Importance of Anatomical Terms • Standard Anatomical Position • Planes of Motion (Sagittal, Frontal, Transverse) • Axes of Rotation (Mediolateral, Anteroposterior, Longitudinal)

IV. OBJECTIVES <i>(Setting Clear Objectives and Analyzing the Tasks)</i>	<ol style="list-style-type: none"> 1. Describe the anatomical term. 2. Explain the importance of anatomical terms 3. Distinguish the Standard Anatomical Position, Planes of Motion, and Axes of Rotation 4. Demonstrate basic movement patterns using Standard Anatomical Position, Planes of Motion, and Axes of Rotation
IV. PROCEDURES	ANNOTATIONS
A. Activating Prior Knowledge	<p>1. Activating Prior Knowledge</p> <p>ACTIVITY 1: KINETIC CONNECTIONS <u>DIRECTIONS:</u> Phase 1: The "K" (Activating Prior Knowledge) Before any reading or instruction, the Teacher will ask students to list everything they think they know about how the body moves or how the body responds and adapts to exercise. Students fill out the K column individually or in small groups.</p> <p>Phase 2: The "W" (Setting the Purpose) Ask learners what puzzles them about the anatomical term in human movement. Learners write these as questions in the W column. This creates a "roadmap" for the upcoming lesson.</p> <p>Phase 3: The Investigation (The Lesson) The learners observe their own range of knowledge about the picture given below.</p> <div data-bbox="712 1157 1288 1358"> </div>

Source: <https://www.freepik.com/free-photos-vectors/people-exercising>

K (What I Know)	W (What I Want to know)

Processing Questions:

1. What movements do you notice your body doing during different exercises?
2. How do your muscles and joints work together when you move?
3. What puzzles you about how the body moves or adapts to exercise?

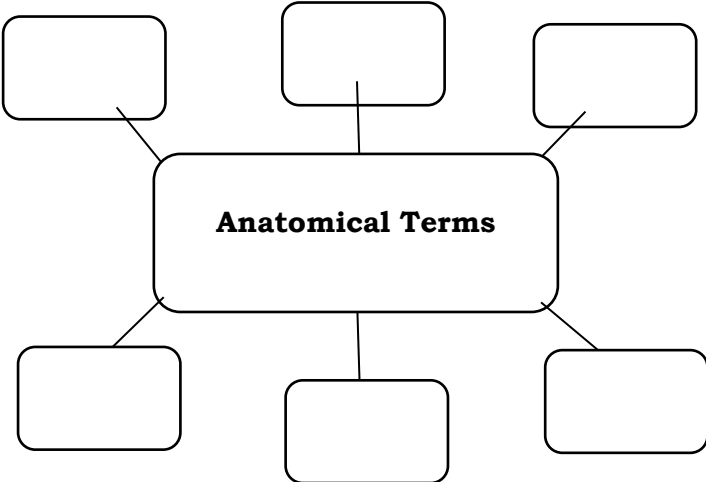
ACTIVITY 2: "SIMON SAYS" REFRESHER

DIRECTIONS: The class will be divided into 5 groups. Each group must have a representative to play in every round. Play a quick round of "Simon Says." Use common terms first, then the teacher asks the representative of the group to guess the dynamic movement situations.

PROCEDURE:

- The teacher acts as "Simon" and gives commands using common movements first.
- Commands can be static (simple poses) or dynamic (movements in motion).

	<ul style="list-style-type: none"> • Only perform movements when the phrase ‘Simon says’ is said. • If the representative moves without hearing ‘Simon says’, the team loses a point. • After performing the movement, the teacher may ask the representative to identify the plane of motion or type of movement. <p><i>Example: “Simon says wave your right hand” (students will demonstrate it)</i></p> <p>Static:</p> <ul style="list-style-type: none"> • “Simon says raise your right arm.” • “Simon says stand on your left foot.” <p>Dynamic:</p> <ul style="list-style-type: none"> • “Simon says do a circular motion with your right hand.” • “Simon says bend forward and touch your toes.” • “Simon says twist your torso to the left.” <p>Processing Questions:</p> <ol style="list-style-type: none"> 1. What type of movement was demonstrated? 2. Which movement felt easiest or most natural? Why? 3. Were there any movements that were confusing? How could you identify them correctly next time? 4. Can you think of a real-life situation where this movement occurs? <p>2. Establishing the Purpose of the Lesson</p> <p>ACTIVITY 1: THINK PAIR SHARE</p> <p><u>DIRECTIONS:</u> The teacher will give an essential question to the learners, and the learners will be working in pairs to think and share their ideas about the essential questions. After which the learners will share their thoughts/ideas in the class. They were given 5 minutes to brainstorm and work in pairs.</p>	<p><i>The teacher will choose one activity from the two options. After the chosen activity is completed by the learners, they will answer the processing questions. Learners may first respond individually during the discussion, and afterward, the teacher may ask selected students to share their answers how they can describe/explain anatomical terms.</i></p>
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	<p>Essential Questions:</p> <ol style="list-style-type: none"> 1. When you describe a body movement to a friend, what words do you usually use? Do you think everyone understands those movements the same way? 2. Imagine you're teaching someone how to perform a push up without demonstrating it. How would you do it? <p>ACTIVITY 2: THE ANATOMICAL CONCEPT MAP</p> <p><u>DIRECTIONS:</u> Using a concept map provided by the teacher, learners will brainstorm and identify key concepts related to anatomical terms.</p>  <p>Processing Questions:</p> <ol style="list-style-type: none"> 1. Describe the anatomical terms based on the given ideas/phases in the concept map. 2. In what ways can using this anatomical concept map improve your ability to observe and explain human movements in real-life or sports activities?" 	
<p>B. Instituting New Knowledge</p>	<p>1. Presenting Examples</p> <p>ACTIVITY 1.1 WORD DETECTIVE</p>	<p><i>The teacher will select one activity from the two available options. Learners will give their responses individually during the activity by distinguishing</i></p>

DIRECTIONS: Find the 6 (six) words in the grid below. These words are related to anatomical terms. Words can go in any direction. Words and share letters as they cross over each other. After finding the words, students will proceed to **Activity 1.2** to find the definition of each of the words that they found. Then, the learners will proceed to **Activity 1.3** perform a movement that constitutes to the planes of motion and axes of Rotation

S	F	A	N	T	E	R	O	P	O	S	T	E	R	I	O	R
Z	T	R	A	N	S	V	E	R	S	A	O	I	N	S	V	J
G	M	L	O	K	K	N	H	I	O	H	N	K	G	A	V	F
I	P	O	N	N	B	T	U	I	M	B	Y	B	J	G	K	B
H	P	O	M	K	T	N	H	I	N	B	H	K	N	I	V	Y
T	O	M	N	B	N	A	K	L	O	K	J	N	B	T	I	K
A	O	O	I	K	U	G	L	I	J	Y	I	H	Y	A	I	J
L	M	E	D	I	O	L	A	T	E	R	A	L	N	L	K	U
L	O	N	G	I	T	I	D	U	N	A	L	K	L	M	J	O

ACTIVITY 1.2: FIND THE MEANING

1. _____ is the plane that divides the body or an organ vertically into right and left sides.
2. _____ is the plane that divides the body or an organ into an anterior (front) portion and a posterior (rear) portion
3. _____ is the plane that divides the body or organ horizontally into upper and lower portions.
4. _____ Runs horizontally from side-to-side, passing through the joint from medial to lateral.
5. _____ Runs horizontally from front-to-back, passing through the joint from anterior to posterior.
6. _____ Runs vertically from top-to-bottom, passing through the joint from superior to inferior.

the Standard Anatomical Position, Planes of Motion, and Axes of Rotation
Afterward, the teacher will check the answers of the learners. The teacher will call selected learners to share their answers in the processing questions.

PROCESSING QUESTIONS:

1. What do you think is the importance of these anatomical terms concept in relation to planes of **motion** and axes of **rotation**? Provide an example

ACTIVITY 2: CRYPTOGRAM

DIRECTIONS:

1. Locate the Key: Look at the symbol chart provided at the bottom of the page. Each letter of the alphabet has a matching symbol or number.
2. Translate: Find the symbol in the Key, identify the letter it represents, and write that letter in the box.
3. Read the Message: Once all the boxes are filled, read from left to right to reveal the hidden message!

Codes

A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	1 2	13
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1 4	1 5	1 6	1 7	1 8	1 9	2 0	2 1	2 2	23	24	2 5	26

S	A	G	I	T	T	A	L
19	1	P	9	20	20	1	12

1. The plane that divides the body or an organ vertically into right and left sides.

F	R	O	N	T	A	L
6	18	15	14	20	1	12

2. The plane that divides the body or an organ into an anterior (front) portion and a posterior (rear) portion.

T	R	A	N	S	V	E	R	S
20	18	1	14	19	22	5	18	19

3. The plane that divides the body or organ horizontally into upper and lower portions.

M	E	D	I	O	L	A	T	E	R	A	L
1	5	4	9	1	1	A	2	E	1	1	1
3				5	2		0		8		2

4. Runs horizontally from side-to-side, passing through the joint from medial to lateral.

A	N	T	E	R	O	P	O	S	T	E	R	I	O
1	1	2	5	1	1	1	1	1	2	5	1	9	1
	4	0		8	5	6	5	9	0		8		5

5. Runs horizontally from front-to-back, passing through the joint from anterior to posterior

L	O	N	G	I	T	U	D	I	N	A	L
1	1	1	7	9	2	2	4	9	1	1	1
2	5	4			0	1			4		2

6. Runs vertically from top-to-bottom, passing through the joint from superior to inferior.

Processing Questions:

1. What are the words that you have found?
2. What do you think is the importance of these anatomical terms concept in relation to planes of Motion and axes of Rotation? Provide example

	<p>2. Discussing New Concept</p> <p>Definition and Importance of Anatomical Terms</p> <ul style="list-style-type: none"> • Definition: A standardized, universal language used to describe the human body's structure, locations, and motions. • Importance: Provides a common language for anatomy, medicine, and kinesiology, allowing for accurate description of body parts, injuries, and movements regardless of the person's actual orientation. • Key Terms: Superior/Inferior, Anterior/Posterior, Medial/Lateral, Proximal/Distal <p>Planes of Motion</p> <p>Imaginary, 2D surfaces that divide the body to describe movements.</p> <ol style="list-style-type: none"> 1. Sagittal Plane: Divides the body into left and right sides. <ul style="list-style-type: none"> ➤ Movements: Flexion and extension (e.g., bicep curls, walking). 2. Frontal (Coronal) Plane: Divides the body into front (anterior) and back (posterior) parts. <ul style="list-style-type: none"> ➤ Movements: Abduction and adduction (e.g., jumping jacks, side raises). 3. Transverse (Horizontal) Plane: Divides the body into upper (superior) and lower (inferior) parts. <ul style="list-style-type: none"> ➤ Movements: Rotation (e.g., twisting at the waist). <p>Standard Anatomical Position</p> <ul style="list-style-type: none"> • Description: The body stands erect, facing forward, with arms at the sides and palms facing forward. • Purpose: It acts as the universal, consistent starting point for all descriptions of movement and location 	<p><i>The teacher will select one activity from the two available options. Learners will give their responses individually in the activity. In today's lesson, students engaged in activities designed to introduce and reinforce their understanding of anatomical movement principles, specifically the planes of motion (sagittal, frontal, transverse) and axes of rotation (mediolateral, anteroposterior, longitudinal). The activities were structured to combine both conceptual classification and practical visualization, catering to different learning styles.</i></p>
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Axes of Rotation

Joint movement occurs in planes, but rotation occurs around specific axes perpendicular to those planes:

1. **Mediolateral (Frontal) Axis:** Runs side-to-side; perpendicular to the Sagittal plane (e.g., hinge joints for flexion/extension).
2. **Anteroposterior (Sagittal) Axis:** Runs from front-to-back; perpendicular to the Frontal plane (e.g., for abduction/adduction).
3. **Longitudinal (Vertical) Axis:** Runs from top-to-bottom; perpendicular to the Transverse plane (e.g., for rotational movements).

Distinguishing the Standard Anatomical Position, Planes of Motion, and Axes of Rotation based on the table:

Plane	Body division	Axis of Rotation	Typical Movements
Sagittal	Left & Right	Mediolateral	Flexion, Extension
Frontal	Front & Back	Anteroposterior	Abduction, Adduction
Transverse	Upper & Lower	Longitudinal	Rotation

ACTIVITY 1: THE HUMAN COMPASS

DIRECTIONS: Classify the terms into their correct categories based on anatomical movement principles.

Frontal Anteroposterior	Sagittal Transverse	Mediolateral, Longitudinal
Planes of Motion	Axes of Rotation	

Processing Questions:

1. What daily movement encompasses planes of motions and axes of rotation

ACTIVITY 2: THE HUMAN MACHINE

DIRECTIONS: The class will be divided into 4 (four) groups. Each group will correctly pair the anatomical planes with their axes of rotation and identify the types of movement that occur within them. For the **PART 1** learners will fill the mapping table using the terms given and for the **PART 2** learners will visualize the concept based on the given situation.

PART 1: THE MASTER MAPPING TABLE

Fill in the missing "Partner" for each plane. Think of the axis as a "skewer" that the body rotates around.

Sagittal	Transverse	Frontal
Longitudinal	Mediolateral	Anteroposterior
Jumping jacks, side-leaning	Bicep curls, walking, squats	Twisting the torso, spinning

Plane of Motion	Corresponding Axes	Common Movement Example

PART 2: VISUALIZE THE "SKEWER"

To help visualize the concept each group representative will imagine a rod (the axis) piercing through the body. First to execute the situation will have the chance to suggest what plane is presented in the situation

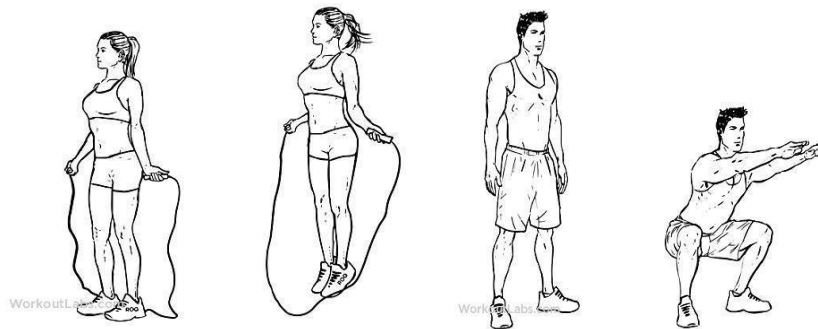
During this part of the lesson, the teacher will guide learners in exploring the planes of motion and axes of rotation through interactive and collaborative activities. The activities aim to strengthen students' understanding of how the human body moves in different planes and around different axis.

1. Imagine a rod piercing through your hips from one side to the other.
 - Execution: Swing your leg forward and backward or perform a bicep curl.
 - Result: You are moving in the Sagittal Plane.
2. Imagine a rod piercing through your belly button and coming out your spine.
 - Execution: Tilt your torso side-to-side (lateral flexion) or do a jumping jack.
 - Result: You are moving in the Frontal Plane.
3. Imagine a rod going straight down through the crown of your head to your feet.
 - Execution: Twist your hips or turn your head to look behind you.
 - Result: You are moving in the Transverse Plane.

3. Developing Mastery

ACTIVITY 1: MOVEMENT DETECTIVE

DIRECTIONS: The learners develop analysis skills through a picture that includes exercise or sports.



Source:

<https://ph.pinterest.com/pin/362891682459008402/>

<https://ph.pinterest.com/pin/419538521539669821/>

FOR ILLUSTRATION: IMITATE THE PICTURES PRESENTED ABOVE

Processing questions:

	<ol style="list-style-type: none"> 1. Which plane of motion is primarily used during the jump rope and squat exercise? 2. Which axis of rotation corresponds to the arm movements during rope rotation? 3. How does the coordination between upper and lower body contribute to performing the jump efficiently? 4. How does maintaining proper posture affect the efficiency and safety of this movement? <p>ACTIVITY 2: HUMAN MOVEMENT DEMONSTRATION</p> <p><u>DIRECTIONS:</u> Apply knowledge of planes and axes in real movement. Students perform a series of movements (like lunges, twists, arm circles). The learners will identify the plane of motion and axes of rotation after they perform the series of movements.</p> <ul style="list-style-type: none"> • Lunges • Twist • Arm circle • Jumps <p>Processing Questions:</p> <ol style="list-style-type: none"> 1. How do understanding planes of motion and axes of rotation help you perform these movements more effectively? 2. If you wanted to increase the range of motion in a twist, which axis or plane would you focus on? Why? 	
<p>C. Demonstrating Knowledge and Skills</p>	<p>1. Finding Practical Application</p> <p>ACTIVITY 1: THE WORKERS IN THE FIELD</p> <p>Directions: To help bridge the gap between classroom anatomy and real-world application, here are three (3) situational scenarios tailored to the different Senior High School (SHS) exits. Each question requires using specific anatomical</p>	<p><i>During the discussion of the new concepts and the practical application activities, learners actively participated in identifying planes of motion, axes of rotation, and anatomical terms through real-life body movements. The teacher will select one activity from the two available options.</i></p>

directional terms (e.g., proximal, distal, medial, lateral, superior, inferior) and body planes.

The Fitness Instructor

Scenario: You are working as a Floor Instructor at a local gym. a client is performing a "Lateral Dumbbell Raise" but complains of a pinching sensation. You notice their hand is rising higher than their shoulder.

Question: Using anatomical terminology, how would you describe the position of the hand relative to the elbow when the arm is fully extended to the side? If you want the client to keep their weights below shoulder level to avoid impingement, are you asking them to keep the weights more superior or inferior to the acromial region?

The Massage Therapist

Scenario: You have completed a certification in sports massage and are working at a wellness center. A marathon runner comes in with "plantar fasciitis" and tightness in their calves (gastrocnemius).

Question: While the client is lying prone (face down) on the table, you begin working on the calf. Is the calf located on the anterior or posterior aspect of the lower leg? When you move your hands from the calf down toward the heel, in which direction is you moving?

*In **Activity 1: THE WORKERS IN THE FIELD** learners will have to engage in the three (3) different situational scenarios tailored to the different Senior High School (SHS) exits. They will be applying practical applications of their knowledge in the subject matter.*

The Sports Science Student

Scenario: During a university internship with a varsity football team, the head athletic trainer asks you to document a player's injury. The player was hit on the outside of the knee, causing the knee to buckle inward.

Question: You need to record that the impact occurred on the side furthest from the midline of the leg and caused a stress on the inner ligament. What are the formal anatomical terms for "outside" and "inside" in this context? Additionally, which anatomical plane does the knee move through during a standard leg extension?

ACTIVITY 2: HUMAN MOVEMENT

DIRECTIONS: Learners answer and execute the following scenarios.

1. When you walk or run, which plane of motion is mostly used?
2. When you jump and spread your arms and legs, which plane is involved?
3. When you turn your head left and right, which axis of rotation is used?

Processing Question:

1. Why is it important to understand anatomical terms when studying body movement or physical activities?

ACTIVITY 3: ANATOMY IN ACTION

DIRECTIONS: The learners will be divided into 5 groups. The learners will apply their understanding of anatomical terms, planes, and axes by identifying how they are used in real-life body movements and daily activities.

*In **Activity 2: Human Movement**, learners were able to connect simple daily actions such as walking, jumping, and turning the head with the correct planes and axes of movement. Most learners demonstrated a basic understanding of how body movements occur in different directions and positions.*

*In **Activity 3: Anatomy in Action**, group collaboration allowed learners to apply their knowledge by analyzing pictures or scenarios involving human movement. The activity encouraged critical thinking, teamwork, and communication as students identified the anatomical terms, planes, and axes involved in the given situations. Learners were able to relate anatomical concepts to practical and*

	<p>1. Each group will receive 1 picture or scenarios showing human movement such as:</p> <ul style="list-style-type: none"> • Bending to pick up a bag • Raising arms during exercise • Turning the head while driving • Jumping or running • Stretching sideways <p>Example Scenario: A person nodding their head. Students may answer:</p> <ul style="list-style-type: none"> • Anatomical Terms: Superior (head above neck), Inferior (neck below head) • Plane: Sagittal plane • Axis: Frontal axis • Practical Application: Saying yes, greeting someone politely <p>Processing Questions:</p> <ol style="list-style-type: none"> 1. Why is it important to understand anatomical planes and axes when studying body movements? 2. How can this knowledge help in sports or exercise, 3. What daily activities involve movements in more than one plane? <p>2. Making Generalization</p> <p>ACTIVITY 1: REFLECTIVE QUESTIONS: <u>DIRECTIONS:</u> Answer the questions below and draw conclusions or summarize the key takeaways from the lesson</p> <ol style="list-style-type: none"> 1. Most daily movements happen in the sagittal plane (forward and back). Can you identify a specific sport or drill where you had to move in the frontal plane (side to side)? Why is it harder for many athletes to remain stable when moving laterally? 	<p><i>everyday activities, which helped deepen their understanding of the lesson.</i></p> <p><i>Some learners initially had difficulty distinguishing between the planes of motion and axes of rotation, but through guided questioning and group discussion, they were able to clarify their ideas. Overall, the activities successfully promoted active learning and helped learners understand the importance of anatomical terms in studying body movement and physical activities.</i></p> <p><i>The teacher will select one activity from the two available options. During this part of the lesson, the teacher facilitates reflective thinking and helps students connect their physical experiences with anatomical concepts.</i></p> <p><i>The teacher should guide students to recognize that many athletic movements occur not only forward and backward but also side-to-side, and that stability and balance become more challenging in lateral movements. This reflection helps students deepen their understanding by linking theory to real-life movement situations.</i></p>
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	<p>2. Which anatomical term did you find the most difficult to grasp during class, and how did physically performing a movement help clarify its meaning for you?</p> <p>ACTIVITY 2: FILL-IN-THE-LOGIC</p> <p><u>DIRECTIONS:</u> Fill out the blank in each of the item below to draw conclusions or summarize the key takeaways from the lesson</p> <ul style="list-style-type: none">• If we did not have a Standard Anatomical Position, then terms like "left," "right," "up," and "down" would be _____ because the body is constantly changing its orientation in space.• A movement cannot exist in a Plane of Motion without rotating around its corresponding Axis; therefore, these two concepts are _____ rather than independent of each other.• The primary reason we use specific Greek and Latin-based anatomical terms in PE is to move from subjective descriptions (how it feels) to objective descriptions (what is happening), which ultimately ensures _____.	
<p>V. ASSESSMENT <i>(Assessing Learnings)</i></p>	<p>ACTIVITY: THE 3D DANCE STUDIO</p> <p><u>DIRECTIONS:</u> The class will be divided into 5 groups. Each group will create a 32-count dance routine (four sets of 8 counts). Students will apply the concepts of planes of motion and axes of rotation by choreographing a short dance sequence that demonstrates specific movement patterns in all three dimensions. Be guided on the different counts below.</p> <ul style="list-style-type: none">• Counts 1-8: Must stay entirely in the Sagittal Plane (think linear, marching, or lunging).• Counts 9-16: Must stay entirely in the Frontal Plane (think lateral reaches or side-steps).• Counts 17-24: Must focus on the Transverse Plane (twists and turns).• Counts 25-32: "Freestyle" where you must transition fluidly between all three planes.	

	Rubrics:				
	Criteria	Exceptional (4)	Proficient (3)	Developing (2)	Beginning (1)
	Anatomical Accuracy	Movements perfectly match the designated planes for all 32 counts.	Minor errors in plane alignment (e.g., a slight twist during a frontal move).	Frequent confusion between planes of motion.	Movements do not correspond to assigned planes.
	Axis Control	Rotational movements clearly revolve around the correct vertical or medial axes.	Rotation is present but occasionally lacks a clear center or axis.	Rotation is sloppy or uses the wrong axis for the move.	No clear rotation or axis control demonstrated.
	Choreography & Flow	Creative transitions; moves flow seamlessly from one plane to the next.	Good effort at flow; transitions are clear but slightly mechanical.	Transitions are choppy; movement stops between planes.	No flow: movements are disconnected or static.
	Performance Energy	High engagement, synchronized, and confident execution.	Mostly synchronized with good energy.	Lacks confidence or synchronization in several sections.	Disengaged or unable to complete the sequence.
VI. REFLECTION <i>(Feedback and Continuous Improvement)</i>	ENRICHMENT ACTIVITY				
	HUMAN BODY MAPPING CHALLENGE Objective: Learners will accurately apply anatomical directional terms (anterior, posterior, superior, inferior, medial, lateral, proximal, distal) by designing and explaining a human body map in real-life and simulated contexts. <ol style="list-style-type: none"> Students work in 4-5 groups to create a life-sized body map and demonstrate understanding of anatomical relationships through labeling, scenarios, and movement. Materials Needed <ul style="list-style-type: none"> Manila paper or cartolina (life-sized if possible) Markers / pens 				

- Masking tape
- Printed or written directional term cards
- Scenario cards (teacher-prepared)

Procedure:

Phase 1: Body Mapping (Creation)

1. One group member lies down on the paper while others trace the body outline.
2. Students label body parts (e.g., head, shoulders, knees, feet).
3. Using arrows, they illustrate at least 8 directional terms correctly.

Phase 2: Scenario Application (Analysis)

Each group draws scenario cards such as:

- “The elbow is _____ to the wrist.”
- “The nose is _____ to the ears.”
- “The knee is _____ to the hip.”

Students must:

- Place labels on the body map
- Justify their answers orally

Phase 3: Movement Challenge (Application)

Teacher calls out instructions like:

- “Move your hand superior to your chest!”
- “Step lateral to your partner!”
- Groups demonstrate the movement correctly.

Phase 4: Mini Presentation (Synthesis)

Each group explains:

- Their labeled diagram

- At least 3 examples of directional relationships
- Real-life relevance (e.g., sports, medicine, daily movement)

Rubrics:

Criteria	4 (Excellent)	3 (Good)	2 (Developing)	1 (Beginning)
Accuracy of Terms (8 pts)	All terms used correctly and precisely	Minor errors (1-2)	Several errors (3-4)	Many incorrect uses
Application of Concepts (4 pts)	Applies terms correctly in all scenarios	Mostly correct application	Limited correct application	Incorrect application
Creativity & Presentation (4 pts)	Very clear, creative, and engaging	Clear and organized	Somewhat organized	Disorganized/unclear
Collaboration (2 pts)	All members actively participated	Most participated	Few participated	Minimal participation
Explanation/Justification (2 pts)	Clear, confident, and accurate	Mostly clear	Some unclear reasoning	Unable to explain

Processing Questions:

1. What are anatomical directional terms, and why are they important?
2. Why is it important to have a standard way of describing body positions?
3. Which part of the activity helped you understand the terms the most? Why?

	<p>4. How can this knowledge help you in your daily life or future career?</p> <p>INTERVENTION ACTIVITY</p> <p>ACTIVITY 1: REAL-LIFE APPLICATION Directions: Complete the statements using correct directional terms.</p> <ol style="list-style-type: none"> 1. The lungs are _____ to the stomach. 2. The fingers are _____ to the wrist. 3. The skin is _____ to the bones. 4. The nose is _____ to the mouth. 5. The knees are _____ to the hips. <p>ACTIVITY 2: MOVEMENT AND POSITION SIMULATION] Directions: Perform or imagine the following movements. Identify the correct directional term.</p> <ol style="list-style-type: none"> 1. Raise your hand above your head → This movement shows _____ direction. 2. Touch your knee → Your hand moves _____ to your shoulder. 3. Turn your face backward → You are facing the _____ direction. 4. Move your arm away from your body → This is _____ movement. 5. Bring your arms closer to your chest → This is _____ movement. <p><i>Note to the teachers:</i></p> <p><i>The teacher may choose to implement the other recommended activities for enrichment or intervention to support students who are experiencing difficulty in understanding the lesson.</i></p>
<p>VII. USE OF GENERATIVE AI</p>	<p>Gemini 3 Flash (Web Version) December 17, 2025, version. https://gemini.google.com/app/ded0015568b48f06. Used Gemini 3 AI to generate possible activities or recommendation regarding the topic Anatomical Terms</p>

Lesson Title/Topic	Directional Terms in Anatomy	Lesson Exemplar	4
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I. OBJECTIVES	
A. Content Standard	<i>The learners demonstrate understanding of the basic structure and function of the human body in relation to fitness, exercise, and health for the optimization of human movement performance.</i>
B. Performance Standard	<i>The learners evaluate basic functional movement patterns using anatomical knowledge to optimize performance across different needs and skill levels.</i>
C. Learning Competencies	<i>Execute basic movement patterns using different anatomical terms and movement descriptors</i>
II. REFERENCES and MATERIALS (Selecting Resources and Material)	<p>Joe, Natalie, and Dimitrios Mytilinaios. "Directional Terms and Body Planes." Kenhub, October 30, 2023. https://www.kenhub.com/en/library/anatomy/directional-terms-and-body-planes.</p> <p>"Anatomical Terminology – Anatomy & Physiology 2e." Open Oregon State, accessed March 2026. https://open.oregonstate.education/anatomy2e/chapter/anatomical-terminology/.</p> <p>Marieb, E. N., and K. Hoehn. Anatomy & Physiology Online. "Anterior (or Ventral) ... Superior (or Cranial) ... Inferior (or Caudal)." USQ Pressbooks, accessed March 2026. https://usq.pressbooks.pub/anatomy/chapter/1-4-anatomical-terminology/.</p> <p>Joe, Natalie, and Dimitrios Mytilinaios. "Directional Terms and Body Planes." Kenhub, October 30, 2023. https://www.kenhub.com/en/library/anatomy/directional-terms-and-body-planes.</p>
III. CONTENT (Sequencing Content)	<p>Directional Terms in Anatomy</p> <ul style="list-style-type: none"> ● Superior vs. Inferior ● Anterior (Ventral) vs. Posterior (Dorsal) ● Medial vs. Lateral ● Proximal vs. Distal ● Superficial vs. Deep
IV. OBJECTIVES (Setting Clear Objectives and Analyzing the Tasks)	<ol style="list-style-type: none"> 1. Identify the directional terms (Superior vs. Inferior, Anterior (Ventral) vs. Posterior (Dorsal), Medial vs. Lateral, Proximal vs. Distal, Superficial vs. Deep) 2. Interpret anatomical relationships using standard directional terms of the human body. 3. Demonstrate basic movements using directional terms (Superior vs. Inferior, Anterior (Ventral) vs. Posterior (Dorsal), Medial vs. Lateral, Proximal vs. Distal, Superficial vs. Deep)

IV. PROCEDURES		ANNOTATIONS
A. Activating Prior Knowledge	<p>1. Activating Prior Knowledge</p> <p>ACTIVITY 1: BODY BINGO</p> <p><u>DIRECTIONS</u></p> <ol style="list-style-type: none"> 1. Examine the diagram or visualize the human body in the standard anatomical position (standing upright, facing forward, with arms at the sides and palms facing forward). <p>Answer the following questions to assess your prior knowledge of directional terms:</p> <ol style="list-style-type: none"> 1. Which part of the body is superior to the knees? 2. Which part is inferior to the shoulders? 3. If you touch your anterior chest, which side of the body are you on? 4. If you tap the posterior of your elbow, where are you touching? 5. Is your medial side closer to the midline or farther away? 6. Where is the lateral side of your arm in relation to your body's midline? 7. Which part of your leg is proximal to the hip? 8. Which part is distal to the knee? <p>Processing Questions:</p> <ol style="list-style-type: none"> 1. Which body part had a description that surprised you the most? 2. Why was it different from what you imagined? 3. Based on our activity, why do you think some organs are protected by bone while others are made mostly of muscle? 	<p><i>The teacher may select the most appropriate activity to activate learners' prior knowledge, depending on their level of readiness, engagement, and classroom dynamics.</i></p> <p>Activity 1: "Where's That Body Part?" may be used if the teacher prefers a thinking-based and discussion-oriented approach. In this activity, students analyze body positions using the standard anatomical position and answer guide questions about directional terms. This is suitable for learners who are comfortable with verbal reasoning and conceptual thinking.</p> <p>On the other hand, the teacher may choose Activity 2: "Body Talk: Move It, Name It!" if the class responds better to kinesthetic and movement-based learning. In this activity, students physically perform simple actions to recall their knowledge of body parts and positions. This option helps energize the class and strengthens the connection between body movements and anatomical directions.</p>

	<p>ACTIVITY 2: BODY TALK: MOVE IT, NAME IT! <u>DIRECTIONS:</u> This activity activates learners' prior knowledge about body parts, body position, and movement in physical activity. It prepares the learners to understand and apply directional anatomical terms in describing human movement.</p> <p>Ask learners to perform simple movements such as:</p> <ul style="list-style-type: none"> ➤ Raise your hands above your head ➤ Touch your knees ➤ Move your arms to the sides ➤ Touch your shoulder, then extend your arm and point to your fingertips. <p>Processing questions:</p> <ol style="list-style-type: none"> 1. Which body part is higher? 2. Which body part is closer to the body? 3. Which part is farther from the body? <p>2. Establishing the Purpose of the Lesson</p> <p>ACTIVITY 1: ANATOMY DIRECTIONS RELAY <u>DIRECTIONS:</u></p> <ol style="list-style-type: none"> 1. Form Teams: Divide into 4–5 groups and line up. 2. Step Up: For each round, one representative from each group comes to the front. 3. Listen & React: The teacher will shout a body part and a directional term (e.g., "Lateral to the nose!"). 4. Race to Point: The first student to correctly point to or touch that location wins a point for their team. 5. Rotate: The representatives to the back of the line so a new teammate can play the next round. <ul style="list-style-type: none"> ○ "Point to the superior part of your knee." ○ "Touch your posterior shoulder." ○ "Raise your lateral arm." ○ "Point to the distal part of your hand." 	<p><i>The teacher may also modify, combine, or simplify the activities to suit the learners' capacity, level of participation, and learning needs, while ensuring that the main objective—activating prior knowledge of directional anatomical terms—is achieved.</i></p> <p><i>The teacher may select the activity that best suits the learners' abilities, class size, and available time. The activities provided are designed with flexibility, allowing adjustments in the level of participation and complexity based on students' readiness and learning needs.</i></p> <p><i>If the class responds well to physical and interactive tasks, the teacher may implement Activity 1: Anatomy Directions Relay, which promotes movement, teamwork, and quick recognition of anatomical directional terms through a game-based approach. This activity is ideal for energizing learners and reinforcing concepts through kinesthetic learning. Alternatively, if the teacher wishes to emphasize real-life application and critical thinking, Activity 2: Move Smart, Stay Safe: Body Directions Matter may be used. This activity focuses on situational understanding, enabling learners to connect anatomical directional terms</i></p>
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	<p>Variation for More Challenge:</p> <ul style="list-style-type: none"> • Use pairs or small teams and have one student give the directional command while the other executes it. • Combine terms: "Touch the medial distal part of your arm" to increase difficulty. <p>Processing Questions:</p> <ol style="list-style-type: none"> 1. How do you find the activity? Is it easy? hard? 2. Are you familiar with the terms that you encountered? 3. Do you have any idea about the anatomical directional term? <p>Activity 2: MOVE SMART, STAY SAFE: BODY DIRECTIONS MATTER</p> <p><u>DIRECTIONS:</u></p> <ol style="list-style-type: none"> 1. The teacher will give a scenario/situation. 2. The students will be given 3–5 minutes to act out the scenario/situation. 3. After the activity, answer the processing questions. <p>"Think of yourselves as pro trainers or physical therapists for a second. In those jobs, you can't just say, 'Move that way; you have to be super specific so your athlete stays safe and performs their best. Your goal today is to give those same clear, professional cues."</p> <p>Processing Questions:</p> <ol style="list-style-type: none"> 1. When you were the one creating the scenario, did you find yourself 'visualizing' the body map differently than when you were just listening? 2. What happened if the coach used a term that was too vague? How did the 'athletes' react? 	<p><i>with practical contexts such as sports, fitness, and health-related professions.</i></p> <p><i>The teacher may also use the processing questions after each activity to guide reflection, assess understanding, and encourage learners to explain how directional terms help describe body position and movement. By selecting the most appropriate activity, the teacher ensures that the lesson remains engaging, meaningful, and aligned with learners' level of comprehension.</i></p>
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	3. In a real emergency, like on a sports field, why is it better to use these specific terms instead of just saying 'it hurts right here'?	
B. Instituting New Knowledge	<p>1. Presenting Examples</p> <p>ACTIVITY 1: THE "POST-IT NOTE" ANATOMY CHALLENGE</p> <p><u>DIRECTIONS:</u></p> <ol style="list-style-type: none"> 1. The class will be divided into 5 groups. 2. Each group will be given a sticky note, a marker, and either a full-body skeleton model or a willing partner. 3. Students must write one term from each of the five opposing pairs on separate sticky notes. 4. The task is to place each note on or near a body part that fits that description relative to another part. 5. After which the partner will switch or remove them and try placing the opposite term (Inferior, Posterior, Lateral, Distal, Deep). <ul style="list-style-type: none"> • Sticky 1: Superior • Sticky 2: Anterior • Sticky 3: Medial • Sticky 4: Proximal • Sticky 5: Superficial <p>Examples:</p> <ul style="list-style-type: none"> • Place "Superior" on the forehead (superior to the chin). • Place "Anterior" on the sternum (anterior to the spine). • Place "Proximal" on the shoulder (proximal to the elbow). <p>Processing Questions:</p> <ol style="list-style-type: none"> 1. How did physically placing the sticky notes on a body or model help you visualize these directional terms differently than just reading about them? 2. Which pair of terms was the easiest to apply, and why? Which pair was the most challenging, and why? 	<p><i>The teacher may choose the activity that best suits the learners' level of understanding, engagement, and learning capacity. For classes that benefit from hands-on and kinesthetic learning, the teacher may implement Activity 1: The "Post-It Note" Anatomy Challenge, where students physically place directional terms on a body model or a partner to better visualize anatomical relationships. This activity is ideal for learners who understand concepts more effectively through movement, collaboration, and visual interaction. This activity is ideal for learners who understand concepts more effectively through movement, collaboration, and visual interaction.</i></p> <p><i>On the other hand, the teacher may opt for Activity 2: Once Upon a Time if the class demonstrates stronger reading comprehension and analytical skills. In this activity, learners analyze a short narrative containing anatomical directional terms and answer guide questions that reinforce their understanding of the concepts within context.</i></p>

	<p>ACTIVITY 2: ONCE UPON A TIME</p> <p><u>DIRECTIONS:</u> The learners will read and analyze the story, after which the learners will answer the processing questions.</p> <p style="text-align: center;">Mark's Match Day</p> <p>The sun was superior to the horizon as Mark, the star soccer player, arrived at the stadium. He adjusted his jersey, which was anterior to his body. Feeling a bit nervous, he tapped his chest, just medial to his heart.</p> <p>He spotted his teammate, Sarah, standing lateral to the water station. She gave him an encouraging thumbs-up with her right hand, which was proximal to her wrist. Mark stretched his legs, kicking his right leg distal to his hip. He felt a satisfying pull in his hamstrings.</p> <p>A teammate noticed a scratch on Mark's arm. "It's just superficial," Mark brushed it off, knowing it wasn't deep. Deep inferior to his skin, his muscles were ready for action. He glanced at the back of his calves, on the posterior side of his legs, ready to sprint. The whistle blew, and Mark charged forward, focused and prepared.</p> <p>Processing Questions:</p> <ol style="list-style-type: none"> 1. What is the story all about? 2. Describe the relative positions of the sun and the horizon using an anatomical term. 3. Using a directional term, describe the location of Mark's jersey on his body. 4. Where did Mark tap his chest relative to his heart, using a directional term? 5. In relation to Sarah's wrist, where was her right hand located? Use a directional term. 6. On which specific side of his legs did Mark check his calves before sprinting? Use anatomical terms. 	<p><i>The teacher is encouraged to select, modify, or combine these activities depending on the learners' readiness, participation level, and available time to ensure that the lesson objectives on directional terms in anatomy are effectively achieved.</i></p>
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	<p>2. Discussing New Concept</p> <p>DISCUSSION: In anatomy, specific directional terms are crucial for precisely describing the location of body structures relative to one another. Understanding these terms is fundamental to studying anatomy and physiology, as they provide a standard language for communication.</p> <p>1. Superior vs. Inferior</p> <ul style="list-style-type: none"> • Superior (Cranial/Cephalad): Towards the head end or upper part of a structure or the body; above. Example: The head is superior to the neck. • Inferior (Caudal): Away from the head end or toward the lower part of a structure or the body; below. Example: The navel is inferior to the chin. <p>2. Anterior (Ventral) vs. Posterior (Dorsal)</p> <ul style="list-style-type: none"> • Anterior (Ventral): Toward or at the front of the body; in front of. (In humans, ventral and anterior are synonymous, referring to the belly side). • Posterior (Dorsal): Toward or at the back of the body; behind. (In humans, dorsal and posterior are synonymous, referring to the back side). <p>3. Medial vs. Lateral</p> <ul style="list-style-type: none"> • Medial: Toward or at the midline of the body; on the inner side of. The midline is an imaginary vertical line that divides the body into equal left and right halves. • Lateral: Away from the midline of the body; on the outer side of. <p>4. Proximal vs. Distal</p> <ul style="list-style-type: none"> • Proximal: Closer to the origin of the body part or the point of attachment of a limb to the body trunk. • Distal: Farther from the origin of a body part or the point of attachment of a limb to the body trunk. 	
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5. Superficial vs. Deep

- Superficial (External): Toward or at the body surface.
- Deep (Internal): Away from the body surface; more internal.

Video link here: <https://www.youtube.com/watch?v=t6-ueqFK1IE>

ACTIVITY 1: MATCHING TYPE

DIRECTIONS: Match column A to B. The Column A is for the directional terms, and the Column B is for the Examples of the directional terms.

NO.	COLUMN A	COLUMN B
1.	Superficial	A. The lungs are profound to the ribs.
2.	Lateral	B. The breastbone is forward to the spine.
3.	Distal	C. The skin is apparent to the skeletal muscles
4.	Medial	D. The shoulder blades are latter to the ribs.
5.	Deep	E. The thumb is lateral to the pinky finger."
6	Posterior	F. The joint below the thigh, farther down the leg.
7.	Proximal	G. The heart lies medial to the lungs.
8.	Anterior	H. The elbow is closer to the shoulder than the wrist
9.	Superior	I. The navel is lower to the chin
10.	Inferior	J. The head is greater to the neck

	<p>KEY TO CORRECTION:</p> <ol style="list-style-type: none"> 1. C 2. E 3. F 4. G 5. A 6. D 7. H 8. B 9. J 10. I <p>3. Developing Mastery</p> <p>ACTIVITY 1: DIMENSIONAL SCAVENGER HUNT</p> <p>This activity focuses on contextual application. Instead of looking at pictures, students must find real-world objects that satisfy specific dimensional relationships.</p> <ul style="list-style-type: none"> • The Setup: Provide students with a "Measurement Mission" card. • The Task: Students must find three objects in the room. <ul style="list-style-type: none"> • Object A must be thicker than a pencil. • Object B must be shorter than Object A. • Object C must be the widest of the three. • The Mastery Hook: Ask students to explain their reasoning using the sentence frame: "I know Object B is 	<p><i>Teachers have the flexibility to select the activity that best aligns with the learners' capacity and readiness.</i></p> <p>Activity 1: Dimensional Scavenger Hunt is ideal for students who benefit from contextual, hands-on exploration, as it allows them to apply dimensional concepts to real-world objects while practicing reasoning through structured sentence frames.</p> <p>Activity 2: Seriation Stations is suited for learners who are ready to deepen their understanding through comparative thinking and sequencing. This activity challenges students to arrange objects according to dimension and extend their learning through</p>
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	<p><i>shorter than Object A because when I align their bases, Object A extends further."</i></p> <p>ACTIVITY 2: SERIATION STATIONS</p> <p>Mastery is often demonstrated through seriation—the ability to arrange objects in a series based on a specific dimension. This moves the student from binary comparisons (big vs. small) to relative comparisons.</p> <ul style="list-style-type: none"> • The Setup: Provide sets of 5–7 items that vary in only one dimension (e.g., sticks of different lengths, canisters of different widths, or blocks of different sizes). • The Task: 1. Ascending/Descending Order: Students must arrange the items from <i>thinnest to thickest</i> or <i>shortest to longest</i>. 2. The "Bridge" Insertion: Give the student a new object that was not in the original set. They must determine exactly where it fits in the sequence. • The Mastery Hook: Blindfold a student (or have them reach into a "mystery bag") and ask them to order three items by feel alone. This reinforces the physical property of the dimension without visual bias. 	<p><i>problem-solving tasks such as inserting new items into a sequence or identifying objects through tactile exploration.</i></p> <p><i>Educators may choose either activity—or integrate elements of both—depending on student engagement, skill level, and available classroom resources to maximize learning outcomes.</i></p>
C. Demonstrating Knowledge and Skills	<p>1. Finding Practical Application</p> <p>ACTIVITY 1: ANATOMICAL SIMON SAYS</p> <p>This activity allows learners to apply directional terms to real movements involving both the upper and lower extremities. Through active physical engagement and the use of anatomical language, students enhance body awareness, coordination, and their real-time understanding of directional concepts.</p> <p>Instructions:</p>	<p><i>Introduce the activity by saying something like:</i></p> <p><i>"We're going to play a special version of Simon Says using directional terms. As we move, pay attention to your body and the terms we are using. This will help you understand where and how your body parts move."</i></p>

	<p>Material/s Needed:</p> <ul style="list-style-type: none"> • Cones, chairs, or masking tape to mark boundaries and obstacles • Small cards with directional instructions (optional) <p>Instructions:</p> <ol style="list-style-type: none"> 1. Arrange a simple obstacle course using cones, chairs, or tape lines, ensuring there is enough space for learners to move safely between obstacles. Optionally, place cards with directional instructions at specific points along the course. 2. Students will take turns navigating the course based on directional instructions given by the teacher or a peer. Emphasize that the goal is accurate execution of movements rather than speed. 3. Learners may complete the course individually or in teams, depending on available space. If done in teams, each member completes a designated part of the course before the next teammate continues. 4. The teacher or assigned peer will provide feedback on the accuracy of movements and assist students in correcting errors when necessary. <p>Processing Questions:</p> <ol style="list-style-type: none"> 1. Which directional term/s is easiest or hardest to apply in the activity? 2. Do you think that learning the directional terms will help you in your everyday activities? Why or why not? <p>2. Making Generalization</p> <p>ACTIVITY 1: DIRECTIONAL TERM POSTER CHALLENGE</p> <p>This activity enables students to summarize and consolidate their learning on directional terms through a visual and hands-on representation. It enhances their understanding of the relationships between anatomical terms and body parts while</p>	<p><i>Encourage the creativity of the learners through:</i></p> <ol style="list-style-type: none"> 1. <i>Draw a full body or parts of the body</i> 2. <i>Label body parts</i> 3. <i>Use arrows to indicate directions of movement</i>
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	<p>reinforcing retention through drawing, labeling, and demonstration.</p> <p>Materials Needed:</p> <ul style="list-style-type: none"> • Large sheets of paper or cardboard • Markers, pens, or crayons • Optional: printed images of the human body for reference <p>Instruction:</p> <ol style="list-style-type: none"> 1. Divide the class into small groups of 3–4 students. Explain that the goal is to create a storyline that clearly shows directional terms and their relationship to different parts of the body. 2. Provide each group with a sheet of paper or cardboard and drawing materials. 3. Assign or allow students to choose from the following directional terms: Anterior, Posterior, Superior, Inferior, Medial, Lateral, Proximal, Distal 4. Once the posters are completed, each group will present and explain their work to the class.. <p>Processing Questions:</p> <ol style="list-style-type: none"> 1. How did you use the directional terms in your comics/storyline? 2. Did you find it difficult to include the directional terms in your comics/storyline? <p>ACTIVITY 2: DIRECTIONAL TERM “QUIZ SHOW”</p> <p>This activity enables students to summarize and reinforce their learning of anatomical directional terms through an engaging and competitive approach. By answering questions and performing movements, they develop the ability to explain concepts clearly and apply them to real-life body movements.</p> <p>Materials Needed</p> <ul style="list-style-type: none"> • Prepared quiz questions about directional terms • Whiteboard, chalkboard, or paper for keeping score 	<p>4. <i>Use colors or symbols to make the poster visually clear</i></p> <p><i>During the presentation:</i></p> <p><i>Learners explain their choices for placement and labeling and demonstrate selected movements or positions using their own bodies to reinforce understanding.</i></p>
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- Timer or stopwatch (optional)
Optional: simple buzzers or students raising their hands

Instruction:

1. Divide the class into two or more teams, depending on the class size. Ask each team to choose a team name to make the activity more engaging and enjoyable. Explain that the class will participate in a quiz show-style game where they will answer questions and, at times, demonstrate movements related to anatomical directional terms.
2. The teacher will read a question or give an instruction. Teams must listen carefully and respond quickly. A team may answer by raising their hand or using a buzzer, if available. Correct answers earn corresponding points. Some questions may require students to demonstrate movements using their bodies to show their understanding of directional terms
3. Ask a series of questions to assess students' understanding of directional terms.. Examples include:
Knowledge Question:
"Which directional term describes a body part that is farther away from the torso?"
Demonstration Question:
"Show me a movement that is medial relative to your shoulder."
Application Question:
"Which directional term would describe your feet in relation to your knees?"
4. Teams earn points for correct answers or accurate demonstrations. If a team answers incorrectly, other teams may have the opportunity to steal the question. Continue the game until all questions have been answered.

V. ASSESSMENT
(Assessing Learnings)

Activity I: SAY MO, SHOW MO! (Group Activity)

In this activity, learners will demonstrate a short movement routine and describe the movements using anatomical directional terms. This allows them to show their understanding of anatomical language while performing basic body movements.

Learners are expected to present a 60–90 second movement sequence that incorporates at least four to six directional terms. During the performance, one or more group members must clearly describe the movements using appropriate anatomical terminology

(see the rubric below for evaluating learners' output)

Criteria	4 – Excellent	3 – Proficient	2 – Developing	1 – Beginning
Use of Directional Terms	Uses 4 or more directional terms accurately and consistently throughout the routine.	Uses at least 4 directional terms with minor errors.	Uses 2–3 directional terms or some terms are used incorrectly.	Uses 1 or no directional terms, or most terms are incorrect.
Clarity of Explanation	Movements are clearly explained using correct anatomical language; explanations are confident and easy to understand.	Explanations are mostly clear with minor confusion in wording.	Explanations are sometimes unclear or incomplete.	Explanations are unclear or missing.
Movement Demonstration	Movements are accurate, well-coordinated, and clearly show the directional terms.	Movements are mostly correct with minor mistakes.	Movements partially demonstrate the directional terms or lack coordination.	Movements do not clearly demonstrate the directional terms.
Teamwork and Participation	All group members actively participate and contribute to the routine.	Most members participate in the routine.	Some members participate, while others are less involved.	One or two members dominate, minimal group participation.

	Creativity and Organization	Routine is very creative, well-organized, and engaging.	Routine is organized and somewhat creative.	Routine shows limited creativity or organization.	Routine appears unplanned or disorganized.									
VI. REFLECTION <i>(Feedback and Continuous Improvement)</i>	ENRICHMENT ACTIVITY													
	ACTIVITY: THE HUMAN ANATOMY													
	<div>1. Group Formation: Divide the class into small groups (4–6 members).</div> <div>2. Body Tracing: One member lies on the paper while others trace the body outline.</div> <div>3. Directional Labeling: Groups label the body using arrows and explanations: Example: “The nose is anterior to the ears” Include at least 2 examples per directional term</div> <div>4. Creative Representation: Add symbols, colors, or drawings to make the map engaging and easy to understand.</div> <div>5. Presentation: Each group presents their work and explains at least 3 directional relationships.</div> <div>6. Students work in groups to trace a human body outline on manila paper (or bond paper if space is limited). They will label and illustrate directional terms using arrows, symbols, and real-life examples.</div> <div>7. Materials Needed:<ul style="list-style-type: none">Manila paper / cartolina / bond paperMarkers / pens / crayonsMasking tapePrinted list of directional terms (optional)</div>													
	Rubrics:													
	<table><tr><th>Criteria</th><th>5 (Excellent)</th><th>4 (Good)</th><th>3 (Fair)</th><th>2 (Needs Improvement)</th></tr><tr><td>Accuracy of Directional Terms</td><td>All terms are correctly used and clearly explained</td><td>Minor errors in usage</td><td>Minor errors in usage</td><td>Mostly incorrect</td></tr></table>					Criteria	5 (Excellent)	4 (Good)	3 (Fair)	2 (Needs Improvement)	Accuracy of Directional Terms	All terms are correctly used and clearly explained	Minor errors in usage	Minor errors in usage
Criteria	5 (Excellent)	4 (Good)	3 (Fair)	2 (Needs Improvement)										
Accuracy of Directional Terms	All terms are correctly used and clearly explained	Minor errors in usage	Minor errors in usage	Mostly incorrect										

	Completeness of Output	All required terms with multiple examples	Most terms included	Some terms missing	Many terms missing
	Creativity and Presentation)	Highly creative, visually appealing, organized	Some creativity and organization	Limited creativity	Disorganized/unclear
	Collaboration/Participation	All members actively participated	Most members participated	Few members participated	One or two members only.
<p>PROCESSING QUESTIONS:</p> <ol style="list-style-type: none"> 1. What directional term was easiest for you to understand? Why? 2. Which directional term was the most challenging? Explain. 3. How do directional terms help in describing body positions accurately? 4. Can you give real-life situations where directional terms are useful? 5. How did your group work together to complete the activity? 6. What did you learn from other groups' presentations? <p>INTERVENTION ACTIVITY:</p> <p>ACTIVITY: BODY MAPPING RESCUE</p> <p>Objectives: Help learners accurately identify and apply anatomical directional terms (anterior, posterior, superior, inferior, medial, lateral, proximal, distal) through guided, scaffolded, and interactive tasks.</p>					

Materials Needed:

- Printed human body outline (front and back views)
- Sticky notes or labels
- Marker/pen
- Flashcards with directional terms
- Tape or chalk (for floor activity)

Procedure:

Phase 1: Guided Review (10 minutes)

- Teacher briefly reintroduces directional terms using simple language and gestures.
- Example:
 - “Anterior = front (touch your chest)”
 - “Posterior = back (touch your back)”
- Show visual aids and model each term clearly.

Phase 2: Body Mapping (15 minutes)

- Learners work in pairs.
- One learner lies on paper or stands while the partner labels using sticky notes.
- Teacher gives **guided prompts**:
 - “Place the word *superior* near the head.”
 - “Where is *distal* from the shoulder?”
- Learners correct and adjust labels with teacher support.

Phase 3: “Follow the Direction” Drill (10 minutes)

- Teacher gives simple commands:
 - “Move your hand to a position *lateral* to your nose.”
 - “Step *posterior* two steps.”
- Learners physically respond to reinforce understanding.

	<p>Phase 4: Quick Check (5–10 minutes)</p> <ul style="list-style-type: none"> • Short oral or written quiz: <ul style="list-style-type: none"> ○ Identify correct term ○ Fill-in-the-blank ○ Match terms with descriptions <p>PROCESSING QUESTIONS:</p> <ol style="list-style-type: none"> 1. Which part of the body is superior? 2. Why is the hand distal to the elbow? 3. If your nose is anterior to your ears, what does that mean? 4. Which directional term was easiest for you to understand? Why? <p><i>Note to the teachers:</i></p> <p><i>The teacher may choose to implement the other recommended activities for enrichment or intervention to support students who are experiencing difficulty in understanding the lesson.</i></p>
<p>VII. USE OF GENERATIVE AI</p>	<p>Gemini 3 Flash (Web Version) December 17, 2025, version. https://gemini.google.com/app/4c34064bc86fd4d1. Used Gemini 3 AI to generate possible activities or recommendation regarding the topic Anatomical Terms</p>

Lesson Title/Topic	Movement Descriptors and Joint Actions	Lesson Exemplar	5
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I. OBJECTIVES	
A. Content Standard	<i>The learners demonstrate understanding of the basic structure and function of the human body in relation to fitness, exercise, and health for the optimization of human movement performance.</i>
B. Performance Standard	<i>The learners evaluate basic functional movement patterns using anatomical knowledge to optimize performance across different needs and skill levels.</i>
C. Learning Competencies	<i>Execute basic movement patterns using different anatomical terms and movement descriptors</i>
II. REFERENCES and MATERIALS (Selecting Resources and Material)	Klavora, P. (2020). <i>Introduction to kinesiology: Studying human movement and health</i> (3rd ed.). Sport Books Publisher. TeachMeAnatomy. (2025, December 22). Anatomical terms of movement. https://teachmeanatomy.info/the-basics/anatomical-terminology/terms-of-movement/
III. CONTENT (Sequencing Content)	<i>Movement Descriptors and Joint Actions</i> <ul style="list-style-type: none"> • <i>Linear and Angular Movements</i> • <i>Primary Movements</i> <ul style="list-style-type: none"> ○ <i>Flexion vs. Extension</i> ○ <i>Abduction vs. Adduction</i> ○ <i>Rotation (Internal & External)</i>
IV. OBJECTIVES (Setting Clear Objectives and Analyzing the Tasks)	<ol style="list-style-type: none"> 1. <i>Describe the Linear and Angular and Primary movements thru the use of appropriate anatomical terms;</i> 2. <i>Differentiate the Linear and Angular and Primary movements thru examples and demonstration; and</i> 3. <i>Perform the different Movement Descriptors and Joint Actions (Linear and Angular and Primary movements)</i>
IV. PROCEDURES (Selecting Strategies, Making Meaningful Content, Delivering Lesson and Assessing Learning)	ANNOTATIONS <i>*Instruction to the teacher on how to facilitate the activities.</i>

<p>This section focuses on selecting learner-centered, evidence-based instructional approaches such as problem-based learning, collaborative tasks, interdisciplinary integration, and technology-enhanced instruction. These strategies are intended to foster active engagement, critical thinking, and adaptability across diverse learning pathways. The chosen approaches and methodologies will be reflected through varied and relevant activities and assessments that emphasize real-world relevance and application, thereby enhancing learner engagement and comprehension.</p> <p>(Each part shall have 2-3 varied activities)</p>		<p><i>*In the Annotation, explicitly explain how the IDF is applied in each part of the lesson</i></p>
<p>A. Activating Prior Knowledge</p>	<p>1. Activating Prior Knowledge</p> <p><i>This involves activities in which the learners can recall or connect what they already know that is relevant to the new lesson. It serves as a cognitive bridge between previous learning and new concepts. This can be done through questioning, short activities, visual prompts, or discussions.</i></p> <p>ACTIVITY 1: Pass, Move and Identify</p> <ul style="list-style-type: none"> ● Prepare 7 pieces of paper and write one movement on each paper: <ul style="list-style-type: none"> ○ Squats ○ Push-up ○ Jumping Jack ○ Cycling ○ Backstroke Swimming ○ Bicep Curl ○ Walking ● Crumple the first paper into a ball. Wrap the next paper around it and continue wrapping until all papers form one layered paper ball. ● Procedure ● Play music while students pass the paper ball around the class. ● When the music stops, the student holding the paper ball will unwrap one layer. 	<p>The teacher will choose a task from the two options. After giving the task to the students, they will answer the processing questions.</p> <p>The component of IDF that we could see in this section is Connection because of the interrelatedness of the learners' experiences and learning to the new concept that will be introduced.</p> <p>The responses will lead to the introduction of movement, such as flexion, extension, abduction, adduction, rotation, linear movement, and angular movement.</p>

	<ul style="list-style-type: none"> • The student will read the movement written on the paper. • The student must demonstrate the movement in front of the class. • The student will then describe the movement using movement descriptors (such as body parts used, speed, direction, level, or force). • Continue playing the music and repeating the process until all movements are demonstrated. <p>ACTIVITY 2: What's with the moves!</p> <ul style="list-style-type: none"> • The teacher begins by asking students simple questions related to their daily movements' experiences. <p>Guide Questions:</p> <ul style="list-style-type: none"> • What physical reactions do you have when someone you admire walks into the room? • When you bend your arm to carry the bag of your friend, what happens to your elbow? • When you raise your arms sideways, how does your body move? • When you turn your head to look for someone, what happens to your neck? <p>Processing questions:</p> <ul style="list-style-type: none"> • Do you think those daily activities have specific terms used to describe the movements in anatomy? • What are those movement terms? <p>2. Establishing the Purpose of the Lesson</p> <p><i>This part the learners will know the learning goals, relevance, and real-life applications of the lesson. It sets expectations and</i></p>	<p>Students may respond with ideas such as:</p> <ul style="list-style-type: none"> • "Waving my hand and say Hi" • "Flexion" • "Abduction" • "Rotation" <p>The teacher will choose a task from two options. After assigning a task to the students, they will answer the processing questions.</p>
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	<p><i>provides motivation by answering the question: "Why are we learning this?"</i></p> <p>This phase helps learners understand the goals of the lesson, its importance, and how it is connected to real-life activities, fitness, and exercise. It motivates learners by showing how understanding movement descriptors and joint actions can help them perform movements correctly and safely. For us to learn more about it, let us do this activity (teachers may choose which activity).</p> <p>ACTIVITY 1: "The Robot vs. The Compass"</p> <p>To introduce the difference between Linear and Angular movements:</p> <ul style="list-style-type: none"> • Ask them to slide a book across the desk. (Point A to Point B in a straight line). • Ask them to swing their arm like a clock pendulum. (Movement around an axis/joint). • Ask them to stand up and perform a small jump straight up (a "squat jump" without leaning). • Ask students to keep their arm straight and "draw" a circle in the air using only their shoulder joint. <p>Processing Questions:</p> <ol style="list-style-type: none"> 1. What movement did you observe? 2. Did you move the same distance in a straight line or in circular motion? 3. Why is it important to know how our body moves? <p>ACTIVITY 2: Why Do Movements Matter?</p> <ul style="list-style-type: none"> • The teacher asks the learners to imagine themselves doing common physical activities such as: <ul style="list-style-type: none"> ○ Exercising at the gym ○ Playing basketball or volleyball ○ Lifting objects 	<p>This knowledge is important for careers in sports coaching, physical therapy, and fitness training</p>
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	<ul style="list-style-type: none"> ○ Performing stretching activities <p>Guide questions:</p> <ol style="list-style-type: none"> 1. Why is it important to know how our body moves during exercise? 2. What might happen if we perform movements incorrectly? 3. How can understanding body movements help improve our performance in sports or physical activities? 	
B. Instituting New Knowledge	<p>1. Presenting Examples</p> <p><i>This step involves showing a relatable, concrete, or real-life example that illustrates the new concept. Examples can be visual, situational, or experiential and are used to spark interest and provide context.</i></p> <p>This step introduces the new lesson by providing clear and relatable examples of body movements that learners commonly perform in daily activities, sports, and exercise. Through these examples, learners begin to understand how movement descriptors and joint actions are used to describe body movements. Now that we understand why body movements are important, let us explore the different movement descriptors and joint actions, starting with linear and angular movements and the primary movements of the body.</p> <p>ACTIVITY 1: LAB (Linear, Angular, Both) this!</p> <ul style="list-style-type: none"> ○ The teacher will divide the class into four groups. ○ The teacher calls out a specific physical action like soccer player kicking a ball, walking, jumping jack, shoulder rotation and doing push ups. ○ One representative from each team must run to the correct side of the room (Linear Zone or Angular Zone) based on the primary motion being described. 	<p>The teacher will choose a task from two activities. After assigning a task to the students, they will answer the processing questions.</p> <p>The component of IDP that we could see in this component is Context because of the situation/background/experiences of the learner that they could bring as a foundation to learning.</p> <p>The activity performs different types of movements and the different types of movement descriptors and joint actions, Linear and Angular and how to distinguish them from one another.</p>

	<ul style="list-style-type: none"> ○ Once they reach the zone, they must perform the specific joint action involved (Flexion of the knee) to earn a bonus point. ○ If the movement involves both like a sprinter running, the student must stand in the Center and explain why. <p>ACTIVITY 2: Freeze Dance Movement (5-10 mins)</p> <ul style="list-style-type: none"> ● Students form small groups (3–4 members). ● When the music stops, they must create the movement together as a group. (e.g., walking, dancing, or light movements). ● Count 3 seconds after stopping the music. ● Students must freeze correctly before the count ends. ● Check students' positions briefly, then resume the music. ● Repeat the process using different movements such as: <ul style="list-style-type: none"> ○ Flexion – left leg ○ Hip rotation (inward) ○ Extension – right arm ○ Abduction – right leg ○ Cycling – left leg ● The teacher will give feedback and clarify correct movements <p>You can observe and rate students using this:</p> <ul style="list-style-type: none"> ☒ Correct movement demonstrated ☒ Correct body part used ☒ Quick response (freezes immediately) ☒ Body control and balance while freezing <p>Guide Questions:</p> <ul style="list-style-type: none"> ○ What are the movement terms used? ○ What are the primary movements you do? ○ Give a real-life example of that movement. 	<p>The teachers will assist the learners in performing the activity and process the task using the provided questions. This phase will allow the learners to reflect on their thoughts and experiences.</p>
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	<p>2. Discussing New Concept</p> <p><i>This is the explicit teaching or guided exploration of the lesson's key ideas. It includes defining terms, explaining relationships, using models or analogies, and encouraging learner interaction.</i></p> <p><i>In this phase, the teacher explains the key ideas and concepts related to Movement Descriptors and Joint Actions and Primary movements. Learners will understand the definitions, characteristics, and relationships of different types of body movements. The discussion will also allow learners to interact by sharing observations and performing simple demonstrations.</i></p> <p>ACTIVITY 1: Body Letters</p> <ul style="list-style-type: none"> ○ Divide the class into four groups. Assign each group one letter to form using only their bodies (T, Y, A, P, or O). ○ Each group will collaborate to create the shape of their assigned letter. ○ Once the letter is formed, the group will identify and explain the body movements involved (e.g., bending, stretching, extending). ○ Groups will present their formation and explanation to the class. ○ The teacher will give feedback. 	<p>Example: To make a "Y", they must use shoulder abduction and elbow extension. To make a "T", they use horizontal abduction.</p> <p>This activity forces creative, physical application of joint actions to achieve a static shape.</p> <p>The IDF that could be used here is Connection and Context, which allows the learners to connect the concept of what they have learned in their own context</p>
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Rubrics:

Criteria	3 – Good	2 – Okay	1 – Needs Improvement
Letter Formation	Letter is clear and correct	Letter is somewhat clear	Letter is unclear
Movement Used	Movements are correct and varied	Some correct movements	Movements are unclear
Explanation	Clear explanation using correct terms	Some explanation given	Explanation is unclear
Teamwork	All members participated	Some members participated	Few members participated

ACTIVITY 2: Kinesiology Brainstorming (5 mins)

- Divide class into three groups. The teacher will provide a manila paper and marker for each group.
- In the manila paper, each group will describe the Linear and Angular movements and cite examples.
- After the brainstorming, each group will select representatives to present their outputs.
- After the presentation, the teacher will give feedback.

Concept	Definition / Explanation	Examples
Linear Movement	Movement where the whole body or an object moves in a straight	Walking forward, running straight, sliding in sports

The teacher will conduct a lecture or directly teach the concepts on Linear and angular movements. The teacher may give specific examples to expound on the discussion.

		line (path) from one place to another. All body parts move in the same direction.	
	Angular Movement	Movement that occurs when a body part moves around a joint , (axis) forming an angle between bones. Most body movements in exercise are angular.	Bending the elbow during a bicep curl, kicking a ball, swinging the arm
	Flexion	A movement that decreases the angle between two bones , commonly known as bending a joint.	Bending the elbow, bending the knee, bending the neck forward
	Extension	A movement that increases the angle between two bones or straightens a joint. It is the opposite of flexion.	Straightening the elbow, standing up from a squat, straightening the knee
	Abduction	Movement of a body part away from the midline of the body .	Raising the arms sideways, spreading the legs in jumping jacks
	Adduction	Movement of a body part toward the midline of the body .	Bringing the arms back to the sides, bringing the legs together
	Rotation (Internal)	Turning a body part toward the center of the body around its axis.	Rotating the shoulder inward
	Rotation (External)	Turning a body part away from the center of the body around its axis.	Rotating the shoulder outward

	<p>Now that we understand the different movement descriptors and joint actions, let us practice identifying and performing these movements through guided activities.</p> <p>3. Developing Mastery</p> <p><i>In this part learners will engage in guided and independent practice activities to reinforce the concept. This may include drills, problem-solving, application tasks, or peer collaboration. This is the explicit teaching or guided exploration of the lesson's key ideas. It includes defining terms, explaining relationships, using models or analogies, and encouraging learner interaction.</i></p> <p><i>*this pertains to formative assessment</i></p> <p>In this phase, learners will practice and apply their understanding of movement descriptors and joint actions through guided and independent activities. These activities help reinforce the concepts of linear movement, angular movement, flexion, extension, abduction, adduction, and rotation while encouraging collaboration and active participation.</p> <p>ACTIVITY 1: Memory Game (5-10 mins)</p> <ul style="list-style-type: none"> • Divide the class into small groups (3–5 members each). • Provide each group with a manila paper and marker. • The teacher will present guide questions about daily movement experiences. • Each group will discuss and write their answers on the manila paper. • Encourage students to describe the body movements clearly (e.g., body parts involved and type of movement). • After the given time, each group will present their answers briefly. • The teacher will give feedback. 	
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Guide Questions:

- What movements is use when someone you admire walks into your room? Give at least two.
- When you carry the bag of your friend, what happens to your elbow?
- When you reach your book on top of your cabinet, how does your body move? Describe the movements involved of the upper and lower extremities.

ACTIVITY 2: Identifying Movement (5 mins)

- Divide the class into three groups. Provide each group with a cartolina and a marker.
- The teacher will present a table of different movements. Each group will analyze and write their answers on the cartolina.
- Groups will collaborate to identify and describe the movements shown.
- Each group will present their answers and demonstrate the identified movements.
- The teacher will give immediate feedback and corrections after each presentation.

Action	Movement Type	Joint Action
Pushing a heavy box across the floor		Shoulder joint: Wrist joint:
Waving 'Goodbye'		Wrist Joint:
Doing a 'Snow Angel'		Hip joint: Shoulder joint:
Walking Lunges with a trunk twist		Hip Joint: Knee joint:

Action	Movement Type	Joint Action
Pushing a heavy box across the floor	Linear	Shoulder joint: Flexion Wrist joint: Extension
Waving 'Goodbye'	Angular	Wrist joint: Abduction, Adduction
Doing a 'Snow Angel'	Angular	Hip joint: Abduction, Adduction

	Doing a Bicep Curl		Elbow Joint:			Shoulder joint: Abduction, Adduction
	Sliding into home base (Baseball)		Knee Joint:			
	Turning a doorknob		Wrist Joint:			Hip Joint: Rotation
	Scoring:					Knee joint: Flexion, Extension
	Criteria		Points			
	Correct Identification of Movements		4 points			
	Demonstration of Movements		3 points			
	Group Participation		2 points			
	Clarity of Presentation		1 point			
				High jump approach	Linear/Angular	
	Doing a Bicep Curl		Angular			Elbow Joint: Flexion, Extension
	Sliding into home base (Baseball)		Linear			Knee joint: Flexion, Extension
	Turning a doorknob		Angular			Wrist joint: Rotation
C. Demonstrating Knowledge and Skills	1. Finding Practical Application <i>In this stage learners apply what they have learned to real-life or simulated scenarios, problems, or tasks. This involves transferring knowledge and skills to authentic contexts and this will serve as scaffolding for the performance task.</i>					
	ACTIVITY 1: Capture me This activity lets learners actively apply movement terms through video presentation. It helps them distinguish linear to angular movements, flexion and extension, abduction and adduction, and rotation in a real-life context.					
	The teacher will show a short video and let the students observe.					

Guide Questions:

1. What are the movements that you observed?
2. What scenarios can you see linear and angular movements?

Video link: <https://www.istockphoto.com/video/collage-of-attractive-sport-action-gm468084272-61513432>

ACTIVITY 2: Fitness Station

This activity lets learners actively apply movement descriptors through real exercise stations. The students understand how different joint actions occur simultaneously during exercise.

Procedure:

1. The teacher sets up specific movement descriptor stations.
2. Students rotate through the stations every 1–2 minutes.
3. At each station, students perform the exercises according to the designated movement descriptor.
4. The teacher observes and provides immediate feedback to ensure correct form and understanding.

Station	Exercise	Movement Descriptor
Station 1		Abduction and Adduction
Station 2		Flexion and Extension
Station 3		Rotation
Station 4		Linear Movement
Station 5		Flexion and Extension

Station	Exercise	Movement Descriptor
Station 1	Jumping Jacks	Abduction and Adduction
Station 2	Bicep Curl	Flexion and Extension
Station 3	Arm Circles	Rotation
Station 4	Walking Line	Linear Movement
Station 5	Squats	Flexion and Extension

Rubrics:

Criteria	3 – Good	2 – Okay	1 – Needs Improvement
Accuracy of Movements	Performs exercises correctly with proper form	Performs exercises somewhat correctly	Movements are incorrect or sloppy
Application of Movement Descriptors	Clearly applies the correct movement descriptor	Sometimes applies the correct descriptor	Does not apply the descriptor correctly
Participation	Actively participates in all stations	Participates in most stations	Rarely participates
Effort & Engagement	Shows full effort and focus	Shows some effort	Minimal effort or focus

2. Making Generalization

This phase the learners will draw conclusions or summarize the key takeaways from the lesson. It can be done through discussions, reflective questions, or concept mapping

ACTIVITY 2: The 5-Question "3-2-1" Exit Ticket

This is a quick way to assess if they can apply the generalizations.

	<p>3 Specific Actions: List 3 joint actions you performed today.</p> <p>1. _____ 2. _____ 3. _____</p>	
	<p>2 Comparisons:</p> <p>What is the main difference between Linear and Angular motion?</p> <p>_____</p> <p>_____.</p> <p>How does Abduction differ from Adduction?</p> <p>_____</p> <p>_____.</p>	
	<p>1 "Why": In one sentence, why is it better for the coach or trainer to know the Movement descriptors and Joint actions?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____.</p>	

ACTIVITY 2: Movement Quiz

1. A professional sprinter running in a straight line from the start to the finish demonstrates which type of movement?
A. angular Movement
B. lateral Adduction
C. linear Movement
D. rotational Movement
2. What is the primary difference between Linear and Angular movement?
A. linear movement occurs in a straight path, while Angular movement occurs in a circular path around an axis
B. linear movement only happens in the arms, while Angular movement happens in the legs
C. linear movement stays in one place, while Angular movement travels
D. there is no difference; they are the same thing
3. When a person performs a "Bicep Curl," the angle of the elbow joint decreases. This specific joint action is known as:
A. abduction
B. extension
C. flexion
D. external Rotation
4. If a dancer moves their leg sideways, away from the center of their body, what movement is use?
A. abduction
B. adduction
C. extension
D. internal Rotation

	<p>5. Why is rotation considered a unique movement descriptor compared to flexion or abduction?</p> <p>A. it only happens in the fingers</p> <p>B. it is a linear movement that does not involve a joint</p> <p>C. it always moves the limb toward the midline of the body</p> <p>D. it involves a bone spinning around its own longitudinal axis</p> <p>Answer Key:</p> <p>1. C (Linear Movement)</p> <p>2. A (Path vs. Axis)</p> <p>3. C (Flexion - decreasing the angle)</p> <p>4. A (Abduction - "abducting" or taking away from the center)</p> <p>5. D (Spinning on an axis)</p>												
<p>V. ASSESSMENT <i>(Assessing Learnings)</i></p>	<p><i>This section will serve as a culminating assessment intended to evaluate the entire unit, including both the Content Standard and the Performance Standard.</i></p> <p>ACTIVITY 1: Lights! Camera! Action!</p> <p>This performance task allows learners to demonstrate their understanding of movement descriptors and joint actions by creating and performing a short exercise routine. It aligns with the performance standard, where learners perform basic functional movement patterns in relation to fitness, exercise, and health.</p> <p>Direction: Learners will work in small groups (3–5 members) to create a 1–2 minute mini exercise routine that includes the movement descriptors, Linear Movement, Angular Movement, Flexion, Extension, Abduction, Adduction and Rotation (Internal or External). Each group must demonstrate the movements clearly and identify them while performing the routine. <i>see the rubric below for evaluating learners’ output)</i></p> <p>Performance Task Rubric</p> <table><tr><th>Criteria</th><th>4 – Excellent</th><th>3 – Good</th><th>2 – Developing</th><th>1 – Beginning</th></tr><tr><td>Accuracy of Movement</td><td>All movements are correctly demonstrated and clearly identified</td><td>Most movements are correct with minor errors</td><td>Some movements are incorrect or unclear</td><td>Movements are mostly incorrect</td></tr></table>			Criteria	4 – Excellent	3 – Good	2 – Developing	1 – Beginning	Accuracy of Movement	All movements are correctly demonstrated and clearly identified	Most movements are correct with minor errors	Some movements are incorrect or unclear	Movements are mostly incorrect
Criteria	4 – Excellent	3 – Good	2 – Developing	1 – Beginning									
Accuracy of Movement	All movements are correctly demonstrated and clearly identified	Most movements are correct with minor errors	Some movements are incorrect or unclear	Movements are mostly incorrect									

	Use of Movement Descriptors	Uses many correct movement descriptors and explains them clearly	Uses correct descriptors but explanation is limited	Uses few descriptors or some are incorrect	Movement descriptors are not used correctly
	Group Participation	All members actively participate and cooperate	Most members participate	Some members participate	Very limited participation
	Creativity and Organization	Routine is well-organized, creative, and engaging	Routine is organized with some creativity	Routine is somewhat organized	Routine lacks organization
VI. REFLECTION (Feedback and Continuous Improvement)	<p><i>This section presents the key highlights and challenges encountered by both teachers and learners during the teaching-learning process throughout the unit. It also includes the adjustments made by the teacher to improve instruction.</i></p> <p><i>Guide questions:</i></p> <p><i>Which activity was most effective?</i></p> <p><i>What difficulties did learners encounter?</i></p> <p>The Pass, Move, Identify, what's with the move activities successfully activated prior knowledge and engaged learners in exploring linear and angular movements. Students increase interest and motivation by connecting lessons to their experiences.</p> <p>Collaborative Learning:</p> <p>Group activities like "Freeze Dance Movement," "Body Letter?", "Kinesiology Brainstorming" fostered teamwork, discussion, and practical understanding of linear and angular movement. It encouraged communication and reinforced concepts. Buddy system activity allows children with special needs to practice turn-taking, sharing, and nonverbal communication in a safe setting. It fosters social confidence, boosts self-confidence, and helps build coping strategies for emotional regulation.</p>				

Practical Application:

Activities integrating movement, such as squats or bending, effectively connected theory to daily life. Learners could identify the movements and joints involved, demonstrating an understanding of the interaction between linear and angular movement.

Conceptual Understanding:

Through scenario-based discussions, video analysis, fitness station, learners were able to demonstrate and explain linear and angular movements, linking abstract concepts to concrete actions and situations.

Enrichment Activity

Create-a-Routine Task

Objective:

Integrate linear and angular movements with joint actions.

Directions:

1. Form groups of 3–5 members.
2. Create a 1–2 minute exercise or dance routine.
3. Your routine must include:
 - At least 1 linear movement
 - At least 1 angular movement
 - At least 3 joint actions (flexion, extension, abduction, adduction, or rotation)
4. Practice and prepare for presentation.
5. Perform your routine in front of the class.
6. After your performance, briefly explain the movements and joint actions shown in your routine.

Criteria	Excellent (4)	Good (3)	Fair (2)	Needs Improvement (1)
Accuracy of Movements	Correctly demonstrates required linear, angular movements, and 3 joint actions with no errors.	Minor errors in 1 component but mostly correct.	Some incorrect or missing movements/joint actions.	Most movements/joint actions are incorrect or missing.

	Completeness of Requirements	All requirements are fully met and clearly shown in the routine.	One requirement is missing or unclear.	Two requirements are missing or incomplete.	Many requirements are not followed.																								
	Execution/Performance	Movements are well-executed, clear, and well-coordinated.	Movements are mostly clear with slight lack of coordination.	Movements are somewhat unclear or uncoordinated.	Movements are unclear and poorly executed.																								
	Creativity & Presentation	Routine is highly creative, engaging, and well-organized.	Routine shows some creativity and organization.	Routine is simple with limited creativity.	Routine lacks creativity and organization.																								
	Explanation of Science Concepts	Clear and accurate explanation of all movements and joint actions.	Mostly correct explanation with minor errors.	Basic explanation with limited understanding.	Explanation is unclear or missing.																								
<p>Intervention Activity</p> <p>Directions: Look at each movement below. Identify if it is Linear or Angular movement and the joint action(s) involved</p> <p>Part A: Identify the Movement</p> <table> <tr> <th></th><th>Movement Description</th><th>Linear Angular?</th><th>or</th><th>Joint Involved</th><th>Action(s)</th></tr> <tr> <td>1</td><td>Bending your elbow to lift a book</td><td></td><td></td><td></td><td></td></tr> <tr> <td>2</td><td>Jumping forward</td><td></td><td></td><td></td><td></td></tr> <tr> <td>3</td><td>Raising your arms sideways</td><td></td><td></td><td></td><td></td></tr> </table>							Movement Description	Linear Angular?	or	Joint Involved	Action(s)	1	Bending your elbow to lift a book					2	Jumping forward					3	Raising your arms sideways				
	Movement Description	Linear Angular?	or	Joint Involved	Action(s)																								
1	Bending your elbow to lift a book																												
2	Jumping forward																												
3	Raising your arms sideways																												

	4	Straightening your knee while kicking a ball		
	5	Rotating your head to look left		
<p>Part B: Quick Check (Demonstration)</p> <p>Direction: Choose any 2 movements above. Perform and demonstrate them.</p> <p>Selected Movements:</p> <p>1.</p> <p>2.</p> <p>Part C: Reflection (1–2 sentences)</p> <p>What helps you identify whether a movement is linear or angular?</p> <p>_____</p> <p>_____</p> <p>_____.</p> <p>**Note to the teachers</p> <p>The teacher may choose to implement the other recommended activities for enrichment to support students who are experience difficulty in understanding the lesson.</p>				
VII. USE OF GENERATIVE AI	<p>In preparing this Learning Exemplar (LE), the author(s) used https://chatgpt.com/c/69b18514-083c-8320-ba93-490e58867727 in order to generate possible activities or recommendation regarding the topic on Movement descriptors and Joint Actions. The author(s) reviewed and finalized the writing of the content. The author(s) take(s) full responsibility for the content of this LE.</p>			

Lesson Title/Topic	Movement Analysis of the Upper Extremities	Lesson Exemplar	6
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I. OBJECTIVES	
A. Content Standard	<i>The learners demonstrate understanding of the basic structure and function of the human body in relation to fitness, exercise, and health for the optimization of human movement performance.</i>
B. Performance Standard	<i>The learners evaluate basic functional movement patterns using anatomical knowledge to optimize performance across different needs and skill levels.</i>
C. Learning Competencies	<i>The learners will analyze the various movement patterns of the upper extremity segments</i>
II. REFERENCES and MATERIALS (Selecting Resources and Material)	<ul style="list-style-type: none"> Anatomy and Physiology resources for movement analysis https://med.libretexts.org/Bookshelves/Anatomy_and_Physiology/Anatomy_and_Physiology_(Boundless)/8%3A_Joints/8.4%3A_Synovial_Joints/8.4E%3A_Synovial_Joint_Movements Active Range of Motion: Shoulder https://youtu.be/cP4LLJie9kw?si=NivXIfTIW2cs0Ljq Elbow Flexion and Extension Range of Motion https://youtu.be/WFuSCvtEdq0?si=NFCITz5TB3Y86zx8 AI-generated response on “Basic Muscles involved in the movement of shoulder and elbow” to provide context for the teacher/learners or reviewer - Google. "Gemini." Accessed March 12, 2026. https://gemini.google.com/app/5426824d7d17325e Jones, Oliver. "The Wrist Joint." TeachMeAnatomy. Last modified November 6, 2025. https://teachmeanatomy.info/upper-limb/joints/wrist-joint/ Jacksonville Orthopaedic Institute. "Ligaments in the Finger." JOI Online. Accessed March 12, 2026. https://www.joionline.net/library/ligaments-in-the-finger/#:~:text=There%20are%20%20Collateral%20Ligaments,hand%20flat%20on%20the%20table Google Gemini (2026, March 12). <i>Functional Anatomy of the Upper Extremities: Movement Patterns and Muscular-Skeletal Integration</i> [Large language model]https://gemini.google.com/app/6159e45042450ef8 Rad, Adrian. "Carpometacarpal (CMC) Joints." Kenhub. Last modified July 5, 2023. https://www.kenhub.com/en/library/anatomy/carpometacarpal-cmc-joints
III. CONTENT (Sequencing Content)	Movement Analysis of the Upper Extremities <ol style="list-style-type: none"> Shoulder (Joints & Muscles) <ol style="list-style-type: none"> Flexion: Pectoralis Major

	<ul style="list-style-type: none"> b. Extension: Latissimus Dorsi c. Abduction: Deltoid d. Adduction: Pectoralis Major & Latissimus Dorsi e. Rotation: Rotator Cuff Group <p>2. Elbow (Joints & Muscles)</p> <ul style="list-style-type: none"> a. Flexion: Biceps, Brachii, and the Brachialis b. Extension: Triceps Brachii <p>3. Wrist (Joints & Muscles)</p> <ul style="list-style-type: none"> a. Flexion, Extension, Adduction & Abduction, Radiocarpal Joint & Flexor Muscles <p>4. Hand (Joints & Muscles)</p> <ul style="list-style-type: none"> a. Carpometacarpal (CMC) Joints & Extensor Muscles <p>5. Fingers (Joints & Muscles)</p> <ul style="list-style-type: none"> a. Flexion, Extrinsic, Extension, Intrinsic, Adduction & Abduction, Knuckles and Hinges & Intrinsic Muscles 	
IV. OBJECTIVES <i>(Setting Clear Objectives and Analyzing the Tasks)</i>	<p>At the end of the lesson, the learners should be able to:</p> <ol style="list-style-type: none"> 1. Identify the different parts of the upper extremities and their movement patterns. 2. Analyze the various movement patterns of the upper extremity segments. 3. Demonstrate basic movement patterns of the upper extremity (flexion, extension, abduction, adduction, and rotation). 	
IV. PROCEDURES (Each part shall have 2-3 varied activities)		ANNOTATIONS
A. Activating Prior Knowledge	<p><u>ACTIVITY NO. 1: "Laro ng Lahi" Flashback</u></p> <p>The teacher asks students to reminisce about childhood games like <i>Siyato</i>, <i>Patintero</i>, or <i>Agawan Base</i>.</p> <p>Guide Questions:</p> <ol style="list-style-type: none"> 1. When you "flick" the stick in <i>Siyato</i>, which part of your arm provides the "snap"? 2. How does the movement of your wrist in these games differ from a slow, controlled push? 	<p><i>The teacher will let the learners use their sensory – motor recall. This bridges subconscious habits with conscious anatomical terms. This will also review the previous topic discussed by the teacher about the upper extremity's part of the body.</i></p>

	<p><u>ACTIVITY NO. 2: Body Movement Recall</u></p> <p>Learners perform simple upper limb movements such as raising arms and pushing a door. Then, the teacher will ask the following essential questions:</p> <ol style="list-style-type: none"> 1. What body parts are moving? 2. Which movement feels easier or harder? 3. What do you call this movement? <p><u>2. Establishing the Purpose of the Lesson</u></p> <p><u>ACTIVITY NO. 1: Picture Movement</u></p> <p>The teacher presents pictures or a short video showing athletes performing movements such as:</p> <ul style="list-style-type: none"> ▪ throwing a shotput ▪ pushing (bench press) ▪ lifting dumbbells ▪ pulling bow & arrow <p>Guide Questions:</p> <ol style="list-style-type: none"> 1. What movements did you observe? 2. Which parts of the arm are mostly used? <p><u>ACTIVITY NO. 2: The Tool – Less Challenge</u></p> <p>The teacher will ask the learners to imagine if they are a technician or a surgeon. Then, they will be asked with two distinct missions:</p> <ol style="list-style-type: none"> 1. Unscrew a rusted, heavy bolt from a machine. 2. Threading a microscopic needle or picking up a single grain of rice. <p>Guide questions:</p> <ol style="list-style-type: none"> 1. While you are twisting the bolt, you are squeezing your forearm. What specific part of your hand is the force coming? <p>How about for the second mission, where do you think the force is coming from to perform such?</p> <ol style="list-style-type: none"> 2. Compare the position of your hand when unscrewing the bolt versus picking up the grain of rice. Which part of your hand provided the most stability for the bolt, and which part provided the most control for the rice? 3. Considering the tools used, how does your wrist, hand, and fingers dictate the way these tools are designed? 	<p><i>The teacher explains that these actions involve upper extremity movement patterns.</i></p> <p><i>Note: The teacher may use other movement scenarios aside from the given examples here.</i></p> <p><i>This activity serves as a primary task for them to discover the connection of the joints and muscles for the upper extremities of hand, wrist and fingers. Activity setup depends on available resources.</i></p> <p><i>Set – up</i></p> <ol style="list-style-type: none"> <i>1. Provide a heavy object (like a thick textbook or a dumbbell). Learners must grip it and move it using only their palms, keeping their fingers straight.</i> <i>2. Provide small beads or coins. Learners must attempt to pick them up using the back of their hand or just their wrist, without using the "pincer" grasp of the thumb and fingers.</i>
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ACTIVITY NO. 3: The Exercise & Profession Challenge

Directions: Read and think about the situations below. Use your prior knowledge and observations to answer the guide questions. This activity will help you discover why understanding upper extremity movements is important in exercise, work, and daily life.

Situation A: Fitness Comparison

Compare the movements used in a Lat Pulldown and a Shoulder Press.

Guide Questions:

1. Which exercise involves a pulling movement?
2. Which exercise involves a pushing movement?
3. What body parts of the upper extremities are mainly used in both exercises?
4. Why do you think proper arm and shoulder movement is important when exercising?

Situation B: Profession Challenge

Imagine a technician unscrewing a rusted bolt and a surgeon threading a microscopic needle.

Guide Questions:

1. Which part of your hand provides stability for the bolt?
2. Which part of your hand provides precision for the needle?
3. Which task requires more strength?
4. Which task requires more control and accuracy?
5. How do these examples show the importance of hand and finger movements?

Guide Question:

1. Why is it important to study the movements of the shoulder, elbow, wrist, hand, and fingers in sports, work, and everyday activities?

The goal of this activity is to let learners realize that upper extremity movements are used differently depending on the task, some require strength and power, while others require precision and control. This creates curiosity and prepares them for the lesson proper on movement analysis of the upper extremities.

Instituting New Knowledge

1. Presenting Examples

ACTIVITY NO. 1: Group Activity: “Movement Analysis”

Each group receives a scenario card such as:

- | | |
|--------------------|-------------------------------------|
| a. Throwing a ball | e. Pushing a table |
| b. Playing dart | f. Pulling a drawer |
| c. Lifting a chair | g. Sweeping the floor |
| d. Lifting 5 books | h. Opening a curtain with both arms |

Each group will:

Explain how joints & muscles contribute to the activity/scenario they presented.

ACTIVITY NO. 2. The Digital Athlete (Texting)

The teacher will present several words. The task of the learners is to encode or type the words using their phones in the shortest time possible. Here are the words that the teacher may use. Whoever finishes encoding and sending the message in the shortest time will be considered the winner.

1. Wrist: The Radiocarpal Joint & The Flexors
2. Hand: The Carpometacarpal (CMC) Joints & The Extensors
3. Fingers: Knuckles and Hinges & The Intrinsic Muscles

ACTIVITY NO. 3. The Digital Athlete (Typing Test)

The teacher will present several words. Using the website [typingtest.com](http://www.typingtest.com), learners are expected to encode or type the words using their laptops/ tablets in the shortest time possible. Here are the words that the teacher may use.

Whoever finish encoding and sending the message in the shortest time will be considering as winner.

1. Wrist: The Radiocarpal Joint & The Flexors
2. Hand: The Carpometacarpal (CMC) Joints & The Extensors
3. Fingers: Knuckles and Hinges & The Intrinsic Muscles

Guide Questions:

1. During the speed test, did you find your wrist perfectly still, or did you tilt it to reach certain letters?
2. Put your other hand on the inside of your forearm (palm side) while you type. Do you feel something “jumping” or tightening there? Why do you think the “power” for your wrist is coming from your arm and not the wrist itself?

Learners are divided into 8 groups.

Learners will perform the assigned scenario (by draw lots).

Groups share their answers briefly.

The teacher may choose the activity based on the availability of devices. This activity ensures the integration of the three bones, joints and muscle groups of the upper extremities by allowing the students to experience cooperation of the wrist, hand and fingers.

Supervision of the teacher for this activity is a must.

The teacher may use this website link:

<https://www.typingtest.com/>

3. When you hovered over the keyboard or gripped your phone, you probably noticed a ‘hollow’ or arch in your palm. What part of your hand plays the part of creating the stable dock for your device?
4. Feel the top of your forearm. Can you feel those muscles pulling to keep your hand from dropping while you type? Without those muscles, would you still be able to aim at the keys?
5. In the Digital Athlete race, why was it important for the palm to stay strong and steady while the fingers did the moving? How do these joints and muscles act as the chassis or frame your hand?
6. Based on the activity, what are the essential role or part of the joints and muscles in the wrist, hand and fingers?

2. Discussing New Concept

The teacher introduces the topic:

Movement Analysis of the Upper Extremities

Discussion includes:

1. Shoulder Joint & Muscles involved

The shoulder is a highly mobile joint that allows for several types of movement:

- Flexion (raising the arm forward): This movement primarily involves the Pectoralis Major (chest muscle) and the anterior part of the Deltoid.
- Extension (moving the arm backward): This action is driven by the Latissimus Dorsi (back muscle) and the posterior Deltoid.
- Abduction (moving the arm away from the body): The Deltoid is the primary muscle responsible for lifting the arm to the side.
- Adduction (bringing the arm closer to the body): This movement involves the Pectoralis Major and Latissimus Dorsi.
- Rotation (controlled circles): Rotation and joint stability are managed by the Rotator Cuff group, which includes the Supraspinatus, Infraspinatus, Teres Minor, and Subscapularis.

2. Elbow Joint & Muscles involved

The elbow functions as a hinge joint, primarily allowing for the bending and straightening of the arm:

- Flexion (bending the elbow): The primary muscles involved are the Biceps Brachii and the Brachialis, both located on the front of the upper arm.
- Extension (straightening the elbow): This movement is driven by the Triceps Brachii, located on the back of the upper arm.

The teacher uses diagrams and demonstrations to explain the movements. Given the content, the teacher needs to recall the anatomical concepts of the upper extremities as they proceed with the major movement identified by the competencies. Note that every after the anatomical concepts mechanical function or movement were given for each.

3. The Wrist: The Radiocarpal Joint

This is the main "navigation" joint where the forearm (radius) meets the first row of wrist bones.

- Type: Condylloid (it works like a joystick).
- Mechanical Function/ Movement - Joints: Allows you to tilt your hand up and down (flexion/extension) and side-to-side (radial/ulnar deviation).
- The "Engine": The Flexors and Extensors in your forearm pull on these joints to aim your hand. The Flexors (The "Grip" Muscles). These are located on the anterior (palm-side) of your forearm. Their primary job is to "close" the hand or pull the wrist forward.
- Major Muscles: Flexor Carpi Radialis/Ulnaris: These move the Wrist (Carpal Complex). They allow you to "snap" your wrist or tilt it side-to-side.
- Flexor Digitorum Superficialis & Profundus: These are the heavy lifters for the Fingers (Phalanges). They have long tendons that travel through your palm to pull your fingers into a fist or a "Pincer" move.
- Flexor Pollicis Longus: Specifically controls the bending of the Thumb.

Movement of the Wrist

- Flexion (bending the wrist toward the palm): Driven by the Flexor Carpi Radialis and Flexor Carpi Ulnaris.
- Extension (raising the back of the hand): Managed by the Extensor Carpi Radialis (Longus and Brevis) and Extensor Carpi Ulnaris.
- Adduction/Abduction (side-to-side tilting): These movements occur through the coordinated effort of both flexor and extensor groups on either the thumb side (radial) or pinky side (ulnar).

4. The Hand: The Carpometacarpal (CMC) Joints

These joints connect the wrist bones to the long bones of your palm (Metacarpals).

- The Base: Most of these joints are fairly stiff to provide a strong "chassis" for your hand.
- Mechanical Function/Movement. The Thumb Exception: The CMC joint of the thumb is a Saddle Joint. This unique shape is what allows your thumb to cross over your palm (opposition) so you can grip a phone or a baseball bat.

The Extensors (The "Release" Muscles)

These are located on the posterior (back side) of your forearm. Their job is to "open" the hand, straighten the fingers, or lift the wrist.

- Major Muscles: Extensor Carpi Radialis (Longus & Brevis): These lift the Wrist upward (extension). You use these when you are typing or revving a motorcycle.
- Extensor Digitorum: This is the main muscle that straightens your Fingers. If you lay your hand flat on a desk and lift your fingers up, this muscle is doing the work.
- Extensor Pollicis Longus/Brevis: These allow the Thumb to extend and pull away from the palm.

Movement of the Hand & Fingers

- Flexion (making a fist / bending fingers)
- Extrinsic: The Flexor Digitorum Superficialis and Profundus (located in the forearm) pull long tendons to close the fingers.
- Intrinsic: The Lumbricals help bend the knuckles while keeping the finger straight.
- Extension (straightening fingers): Primarily driven by the Extensor Digitorum, which runs along the back of the forearm.
- Abduction & Adduction (spreading fingers apart or bringing them together)
- Dorsal Interossei: Muscles that spread the fingers (Abduction).
- Palmar Interossei: Muscles that pull the fingers together (Adduction).

5. The Fingers: Knuckles and Hinges

The fingers rely on two types of joints to turn the Phalanges into modular levers. Metacarpophalangeal (MCP) Joints: These are your big knuckles. They allow your fingers to bend down into a fist and also spread apart (abduction).

- Interphalangeal (IP) Joints: These are the smaller hinges in your fingers.
- PIP (Proximal): The middle knuckle.
- DIP (Distal): The knuckle closest to your fingernail.
- The Intrinsic Muscles (The Fine – Tuners) While the forearm muscles provide the power, tiny muscles within the hand (between the Metacarpals) handle the delicate movements.
- Thenar Muscles: The "thumb pad" muscles that allow for the opposable thumb.

- **Lumbricals & Interossei:** These sit between your Metacarpals. They are the "lead actors" in precision movements, allowing you to spread your fingers apart or bring them together.

Movement Role	Joint	Muscles	Upper Extremities
Direction	Radiocarpal	Flexors	Wrist
Stability	Carpometacarpal	Extensors	Hand
Precision	Knuckles and Hinges	Intrinsic	Fingers

I. Discussion: The "Engine" and the "Chassis"

1. **Shoulder & Elbow:** Discuss the roles of the Pectoralis Major (Flexion), Latissimus Dorsi (Extension), and Deltoids (Abduction).

2. **Wrist & Hand:** Explain how the Radiocarpal joint acts as a "navigation" tool while the CMC joints provide a stable base.

II. Critical Integration: Injury Prevention & Deterioration (Added Content)

- **The "Impingement" Risk:** Explain how improper internal rotation during shoulder abduction (e.g., flaring elbows during a bench press) can pinch tendons.
- **Joint Deterioration:** Discuss how improper "snapping" or repetitive "claw-like" grips in gaming/texting accelerate joint wear.

3. Developing Mastery

ACTIVITY NO. 1: The "Multi-Pattern Challenge"

The Scenario: Students will simulate three different movement patterns used in common daily activities. They will perform each "move" and then identify which part of the upper extremity is the "Lead Actor" for that specific pattern.

1. Pattern A: The "Steering" Move (The Wrist)

Learners will think of three daily activities he/she mostly does at home that involve arm movements.

	<p>Action: Hold an imaginary steering wheel or a jar lid. Rotate it left and right without moving your elbow or shoulder. Question: What specific part of your upper extremities is used? What specific joint and muscles are functioning? How about the movement?</p> <p>2. Pattern B: The "Push-Up" Move (The Palm) Action: Place your palm flat against your desk and push down as if you are trying to stand up using only your hand for support. Question: What specific part of your upper extremities is used? What specific joint and muscles are functioning? How about the movement?</p> <p>3. Pattern C: The "Pincer" Move (The Fingers) Action: Pick up a single strand of hair or a tiny piece of paper from the desk using only your thumb and index finger. Question: What specific part of your upper extremities is used? What specific joint and muscles are functioning? How about the movement?</p> <p><u>ACTIVITY NO. 2: The Multi-Pattern Exercise Lab</u></p> <p>Students simulate three patterns:</p> <ul style="list-style-type: none"> ○ Pattern A (The Steering Move): Rotate an imaginary wheel (Wrist focus). ○ Pattern B (The Push-Up Move): Palm flat on the desk (Hand/Stability focus). ○ Pattern C (The Pincer Move): Picking up a single hair (Finger/Precision focus). ○ Guide Question: Why is the "hollow" or arch in your palm essential for stability when gripping a heavy object? 	<p><i>The activities presented focused on developing the mastery by providing learners the opportunities to learn through experiencing scenarios, in which each part will have movement in real – life scenarios. Then after, follow-up questions are given.</i></p>
B. Demonstrating Knowledge and Skills	<p>1. Finding Practical Application</p> <p>Groupings: Divide the class in to 5 groups for a “Tutting” Performance</p> <hr/>	<p><i>Each group will perform a 1-minute Hand Dance routine,</i></p>

	RUBRIC for EVALUATING TUTTING PERFORMANCE					also called as “Tutting”, demonstrating movements learned from the lesson discussed. Note: Teacher will give allotted time for this activity (creating, rehearsal & presentation) After each performance, the group will describe what are the movements they used. Note: Tutting is a dance style, focused on creating intricate, geometric, and angular movements with the body, primarily arms and fingers, often inspired by ancient Egyptian art. https://www.google.com/search?q=tutting&oq=tutting&gs_lcrp=EgZjaHJvbWUqBggAEEUYOzIGCAAQRRg7MqYIARBFGDwyBggCEEUYPDIGCAMQRRg90qEJMjc5N2owajE1qAIIsAIB8QXxdcMV8TY3og&sourceid=chrome&ie=UTF-8
	Learner/Group: _____ Section: _____ Date: _____					
	Criteria	10 (Excellent)	8.5 (Very Good)	7 (Good)	5 (Acceptable)	
	TECHNIQUE (knowledge) Learners demonstrates accurate execution of arms movement patterns	Demonstrates exceptional ability to accurately demonstrate arms movement patterns	Demonstrates considerable ability to accurately demonstrate arms movement patterns	Demonstrates emerging ability to accurately execute arms movement patterns	Demonstrates limited knowledge of arms movement patterns	
	GROUP DYNAMIC (communication) Learners demonstrates danced completely together throughout the dance	The group danced completely together throughout the dance	The group dance together for most of the dance	The group dances somewhat together for most of the dance	The group danced was confused, not together most of the dance	
RHYTHM/ TEMPO (application) Learners shows accuracy in beat, tempo, rhythms and dance sequences	The group is outstandingly accurate in beat, tempo, rhythms and dance sequences	The group shows great understanding of tempo, beat, by rarely getting off beat or making errors in rhythm	The group shows good understanding of tempo and but periodically gets off beat	The group attempts to keep a rhythm but gets off beat and speeds up or falls behind. Doesn't follow beat in music		

PERFORMANCE (application) Learners demonstrates enthusiasm by showing energy in movements and giving their best	Performs complete dance with lots of confidence and enthusiasm, making few or no errors.	Performs complete dance with some confidence and enthusiasm, making some errors.	Performs complete dance with little confidence and enthusiasm, making many errors.	Performs complete dance with no confidence or enthusiasm, making constant errors.
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Sample "Tutting"
Performance:
<https://youtu.be/oJ6mC4DsOM4?si=TSPH5eLneY0ivD6F>

Anecdotal comments:

PEER ASSESSMENT in GROUP ACTIVITY/PERFORMANCE

Learner's Name: _____ Date: _____
Grade & Section: _____

Indicators	Always (4 pts.)	Mostly (3 pts.)	Sometime (2 pts.)	Rarely (1 pt.)	Never (no pt.)
Contributed to the creation of the performance					
Learned and was able to perform the created sequence					
Willingly participated with a positive attitude					
Followed rules, routines and procedures					
Listened actively and respectfully to the teacher and groupmates					
TOTAL Points					

	<p><u>ACTIVITY NO. 2 Analysis</u></p> <p>The teacher may present the following situations and the students may write their answer on a clean sheet or paper.</p> <p>1.1. Compare the Steering move and the Push-Up move. What specific muscles and joints functioned and were used?</p> <p>1.2 A volleyball "spike" is a three-stage motion: Aiming the hand, hitting with power, and snapping the fingers for topspin. Describe the "collaboration" of the hand's anatomy during this move. In your own words, explain how the Radiocarpal joint (Wrist) navigates the direction, how the CMC joints (Hand) provide the striking surface, and how the IP joints (Fingers) create the final snap. Which muscles act as the "Engine" for that final downward snap?</p> <p>1.3 Given the two scenarios:</p> <p>1.3.1 Learners will crumple a paper and will eventually target the trash bin to let it be shoot. (Assume that the students will be playing a basketball).</p> <p>1.3.2. Think of a person using a pair of scissors to cut a complex shape out of paper.</p> <p>Describe how the three joints and muscles groups integrate to complete this task. Which group handles the direction, which handles the grip, and which handles the cutting pressure?</p> <p>2. Making Generalization</p> <p><u>ACTIVITY NO.1: Q&A</u></p> <p>The teacher asks:</p> <ul style="list-style-type: none"> • Why are the shoulder and elbow important in performing daily activities? • How do these joints and muscles help in real life situation, exercises and/or sports? 	<p><i>This paper and pencil test supports individual responsive and reflective instruction by encouraging to share their personal experiences based on the scenario given.</i></p> <p><i>The scenario given may somehow be modified by the teacher. This will also depend on the availability of the materials.</i></p> <p><i>Expected Answer:</i> <i>The shoulder and elbow allow different arm movements that help us perform everyday tasks and physical activities effectively</i></p>
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	<p>ACTIVITY NO. 2: Complete the paragraph</p> <p>The teacher asks the students to complete the paragraph by writing the correct words based on the discussion:</p> <p>Movement is a Team Effort: The forearm muscles provide the power, the (1) _____ provides the direction, the (2) _____ provides the stability, and the (3) _____ provide the precision. Without the balance between Flexors (closing) and Extensors (opening), the hand could not function as the versatile tool it is today.</p> <p>Key to correction 1. wrist 2. hand 3. fingers</p>	<p><i>Learners may answer this in a clean sheet of paper. The generalization summarizes the entire movement of the wrist, hand and fingers.</i></p>																								
<p>V. ASSESSMENT <i>(Assessing Learnings)</i></p>	<p>Short Quiz (5 minutes) Learners will answer this in a ½ crosswise sheet of paper. Complete the table. Give an activity for each given movement. Then identify the joint used and muscled involved.</p> <table><tr><th>Given Movement</th><th>Specific Activity/ relevance to exercise/sports activity</th><th>Joint used</th><th>Muscles involved</th></tr><tr><td>1. Bending the elbow</td><td></td><td></td><td></td></tr><tr><td>2. Raising the arm sideways</td><td></td><td></td><td></td></tr><tr><td>3. Straightening the elbow</td><td></td><td></td><td></td></tr><tr><td>4. Moving the arm toward the body</td><td></td><td></td><td></td></tr><tr><td>5. Moving the arm backward</td><td></td><td></td><td></td></tr></table>		Given Movement	Specific Activity/ relevance to exercise/sports activity	Joint used	Muscles involved	1. Bending the elbow				2. Raising the arm sideways				3. Straightening the elbow				4. Moving the arm toward the body				5. Moving the arm backward			
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<p>VI. REFLECTION <i>(Feedback & Continuous Improvement)</i></p>	<p><i>This section presents the key highlights and challenges encountered by both teachers and learners during the teaching-learning process throughout the unit. It also includes the adjustments made by the teacher to improve instruction.</i></p> <p>The activities in this Lesson Exemplar were engaging and helpful in making the lesson easy to understand. Through games, group work, and movement tasks, students were able to connect the concepts to everyday actions. These activities also encouraged teamwork, confidence, and active participation.</p> <p>Using physical activities made learning more enjoyable and meaningful because students were able to experience the movements themselves. Activities assessment was also an effective and fun way to measure their understanding while promoting fitness.</p>																									

Some challenges may include limited time, space, and the need to ensure safety during activities. Overall, the lesson provided a positive learning experience that helped students understand the importance of lower extremity movements in daily life and sports.

ENRICHMENT ACTIVITY

Prepare the following materials:

- ✓ *Activity Sheet*
- ✓ *Pen/Pencil*
- ✓ *Movement Cards (if given)*

Wear comfortable clothing and make sure you have enough space to move safely. Follow all safety reminders during the activity.

Review First

Recall the meaning of the following movements:

- **Flexion** – bending or decreasing the angle of a joint
- **Extension** – straightening or increasing the angle of a joint
- **Abduction** – movement away from the body
- **Adduction** – movement toward the body

Rotation – turning around an axis

Part A: Identify Me!

Directions:

1. Observe the movement shown on the card, picture, or demonstrated action.
2. Identify the following:
 - a. Body part involved
 - b. Type of movement
 - c. Muscle/s used
3. Write your answers in the space provided.
4. Complete all items independently.

Example:

Movement	Body Part	Action	Muscle
Raising Arm forward	Shoulder	Flexion	Pectoralis Major

Part B: Movement Analysis Relay

Directions:

Read each movement situation carefully. Analyze the action and answer the questions.

For each item, write:

1. What joint is moving?
2. What movement is happening?
3. What muscle helps perform the movement?

Guide Questions:

- What joint is primarily moving?
- Which muscle helps produce that action?
- Is the movement flexion or extension? Why?

Answer each item on your own.

Part C: Create a Mini Routine

Directions:

Create your own short movement routine using **five upper extremity movements** from the lesson.

Your routine must include any five of the following:

✓ Flexion ✓ Extension ✓ Abduction ✓ Rotation ✓ Adduction

Steps:

1. Plan the order of your movements.
2. Practice the routine safely.
3. Perform each movement correctly.
4. After performing, explain the movements used.

Write Your Reflection:

- Which movement was easiest for you? Why?
- Which movement was most challenging? Why?
- How can these movements help you in daily life or sports?

Closure Questions

Answer the following in complete sentences:

1. Why is movement analysis important in physical activity?
2. How can proper movement prevent injuries?
3. Which upper extremity movement do you use most in daily life? Why?

INTERVENTION ACTIVITY

**Review the lesson and recall samples learning activities.*

ACTIVITY 1: MOVE YOUR BODY!

Do the following movements using common household objects.

Then tell what it feels like upon doing the activity. The first one is done for you as an example.

Movement	Household Alternative	Which muscle group & joint was responsible in that movement to do the task?
Bench Press	Pushing against a wall with both hands.	Resistance against the chest muscle, shoulder, elbows and wrist.
1. Shotput Throw		
2. Striking the golf ball		
3. Deadlift		
4. Archery Pull		
5. Striking the golf ball		

	<p><u>ACTIVITY 2: “MOVEMENT ANALYSIS”</u> <i>Reenact the following scenario.</i></p> <p>Then explain how joints & muscles contribute to the activity/scenario they presented.</p> <p>Scenario 1. Throwing a ball</p> <hr/> <hr/> <p>Scenario 2. Playing dart</p> <hr/> <hr/> <p>Scenario 3. Lifting a chair</p> <hr/> <hr/> <p>Scenario 4. Lifting 5 books</p> <hr/> <hr/> <p>Scenario 5. Pushing a table</p> <hr/> <hr/> <p>Scenario 6. Pulling a drawer</p> <hr/> <hr/> <p>Scenario 7. Sweeping the floor</p> <hr/> <hr/> <p>Scenario 8. Opening a curtain with both arms</p> <hr/> <hr/>
<p>VII. USE OF GENERATIVE AI</p>	<p>In preparing this Learning Exemplar (LE), the author(s) used AI- generated response on “Basic Muscles involved in the movement of shoulder and elbow” at Google. "Gemini." Accessed March 12, 2026 in order to provide context for the teacher/learners or reviewer and to ensure technical accuracy, provide clear anatomical descriptions, and streamline the organization of complex physiological concepts for learner-centered instruction.</p> <p>The author(s) reviewed and finalized the writing of the content. The author(s) take(s) full responsibility for the content of this LE.</p>

Lesson Title/Topic	Movement Analysis of the Lower Extremities	Lesson Exemplar	7
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I. OBJECTIVES	
A. Content Standard	<i>The learners demonstrate understanding of the basic structure and function of the human body in relation to fitness, exercise, and health for the optimization of human movement performance.</i>
B. Performance Standard	<i>The learners evaluate basic functional movement patterns using anatomical knowledge to optimize performance across different needs and skill levels.</i>
C. Learning Competencies	<i>Analyze the various movement patterns of the lower extremity segments.</i>
II. REFERENCES and MATERIALS (Selecting Resources and Material)	<p>Hoffman, Shirl J., and Janet C. Harris. <i>Introduction to Kinesiology: Studying Physical Activity</i>. 5th ed. Champaign, IL: Human Kinetics, 2018.Introduction to Kinesiology: Studying Physical Activity (Open Library record)</p> <p>Neumann, Donald A. <i>Kinesiology of the Musculoskeletal System: Foundations for Rehabilitation</i>. 3rd ed. St. Louis, MO: Elsevier, 2017.Kinesiology of the Musculoskeletal System – Elsevier Book Page</p> <p>McGinnis, Peter M. <i>Biomechanics of Sport and Exercise</i>. 4th ed. Champaign, IL: Human Kinetics, 2020.https://us.humankinetics.com/products/biomechanics-of-sport-and-exercise-4th-edition</p> <p>Thompson, Clem W., and R. T. Floyd. <i>Manual of Structural Kinesiology</i>. 20th ed. New York: McGraw-Hill Education, 2017.https://www.mheducation.com/highered/product/manual-structural-kinesiology-thompson-floyd</p> <p>National Academy of Sports Medicine. <i>NASM Essentials of Corrective Exercise Training</i>. Burlington, MA: Jones & Bartlett Learning, 2022.https://www.jblearning.com/catalog/productdetails/9781284224795</p>
III. CONTENT (Sequencing Content)	<p><i>This section outlines the lesson or topic that learners need to learn to independently attain the Content Standard and achieve the Performance Standard.</i></p> <p>Lesson 2: Movement Analysis of the lower Extremities</p> <ol style="list-style-type: none"> 1. Hips 2. Knees 3. Ankle 4. Foot

IV. OBJECTIVES <i>(Setting Clear Objectives and Analyzing the Tasks)</i>	<i>This section outlines the unpacked learning competencies. These are the knowledge, skills, attitude that the learners will gain after instructions.</i> <ul style="list-style-type: none">• Identify the different parts of the lower Extremities and its movement patterns (direction in anatomical term);• Analyze the various movement patterns of the lower extremity segments; and• Perform the basic human movement patterns in relation to fitness, exercise, and health to optimize human movement.	
IV. PROCEDURES <i>(Selecting Strategies, Making Meaningful Content, Delivering Lesson and Assessing Learning)</i> <p>This section focuses on selecting learner-centered, evidence-based instructional approaches such as problem-based learning, collaborative tasks, interdisciplinary integration, and technology-enhanced instruction. These strategies are intended to foster active engagement, critical thinking, and adaptability across diverse learning pathways. The chosen approaches and methodologies will be reflected through varied and relevant activities and assessments that emphasize real-world relevance and application, thereby enhancing learner engagement and comprehension.</p> <p>(Each part shall have 2-3 varied activities)</p>		ANNOTATIONS <p><i>*Instruction to the teacher on how to facilitate the activities.</i></p> <p><i>*In the Annotation, explicitly explain how the IDF is applied in each part of the lesson</i></p>
A. Activating Prior Knowledge	1. Activating Prior Knowledge <p><i>This involves activities in which the learners can recall or connect what they already know that is relevant to the new lesson. It serves as a cognitive bridge between previous learning and new concepts. This can be done through questioning, short activities, visual prompts, or discussions.</i></p> <p>Activity 1: Mirror Movement (Pair Activity)</p> <p>Objective: This activity helps learners recall and recognize common movements of the upper extremities (arms, shoulders, elbows, and wrists). Through observation and imitation, students will better understand how these joints move during physical activities.</p> <p>Instruction: Ask students to find a partner. Each pair will work together during the activity. Within each pair, one student will be the Leader and the other will be the Mirror. The Leader will perform simple arm movements.</p>	<p><i>Allow a few volunteers to share their answers with the class. Emphasize that understanding how the shoulder, elbow, and wrist joints move helps improve coordination, body awareness, and performance in sports and daily physical activities.</i></p>

	<p>The Mirror will carefully observe and copy the Leader's movements as accurately as possible, as if they were looking at their reflection in a mirror. The Leader slowly performs the following movements so the Mirror can follow along smoothly:</p> <ul style="list-style-type: none"> • Raising Arms – Slowly lift both arms upward. • Bending Elbows – Bend and straighten the elbows. • Rotating Shoulders – Move the shoulders in slow circular motions. <p>Encourage Leaders to move slowly and clearly so their partner can imitate each movement correctly. The Mirror must focus on copying the movements exactly—matching the speed, direction, and position of the Leader's arms. After a few minutes, ask students to switch roles so both partners experience being the Leader and the Mirror. After completing the activity, each pair discusses the movements they performed and identifies which parts of the upper extremities were involved.</p> <p>Reflective Questions:</p> <ol style="list-style-type: none"> 1. Which joints were mainly involved in the movements you performed or copied? 2. How did the mirror activity help you understand how the shoulder, elbow, and wrist move? 3. Why is it important to understand movement patterns of the upper extremities in sports or physical activities? <p>ACTIVITY 2: Action Guessing Game (Upper Body Charades)</p> <p>This activity helps learners identify and recognize different upper extremity movements by observing their classmates. Through a fun charades-style game, students will practice identifying how the shoulder, elbow, and wrist joints move during different actions. The activity also strengthens observation skills, teamwork, and understanding of functional body movements.</p> <p>Materials Needed:</p> <ul style="list-style-type: none"> • Movement cards (prepared by the teacher) • Small pieces of paper or printed cards containing movement terms 	<p><i>Conclude the activity by emphasizing that many daily tasks and sports skills rely on coordinated movements of the upper extremities. Understanding how the shoulder, elbow, and wrist joints move helps improve body awareness, performance, and injury prevention during physical activities.</i></p>
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	<p>Procedures:</p> <ol style="list-style-type: none"> 1. Divide the class into small groups of 4–5 members. Ask each group to sit or stand together so they can easily observe the movements performed by their classmates. Explain that they will be playing a charades-style guessing game, where one student will act out a movement and the others will try to guess it. 2. Provide each group with a movement card. Each card contains the name of a specific upper extremity movement. Remind students that the movement should be performed without speaking or giving verbal clues. 3. Within each group, select one student to be the performer. The performer will: <ul style="list-style-type: none"> • Look at the movement written on the card. • Act out the movement slowly and clearly using their upper body. • Avoid talking, spelling, or giving hints. Encourage the performer to repeat the movement several times so the other students can observe carefully. 4. The remaining group members will observe the action and try to guess the movement pattern being performed. They may discuss briefly with their group before giving their final answer. If the group guesses correctly, they earn a point. Afterward, another member becomes the performer, and the group receives a new movement card. Allow the activity to continue for several rounds so different students have the chance to perform and guess. <p>Guide questions:</p> <ol style="list-style-type: none"> 1. What type of movement did you observe? 2. Which joints allowed the movement to happen? 3. How important is this movement for functional tasks or physical activities? <p>2. Establishing the Purpose of the Lesson</p> <p>Activity 1: “What Happens If...?” (Scenario-Based Activity)</p> <p>This activity introduces learners to the important role of the lower extremities (hips, knees, ankles, and feet) in everyday and sports</p>	<p><i>Elucidate to the learners that understanding how these body parts move is important for movement analysis, injury prevention, and improving performance in sports and physical activities.</i></p> <p><i>The teacher should provide specific scenario/s or popular sports that highly utilize the lower extremities for concrete basis of the discussion.</i></p>
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movements. Through guided scenarios and discussion, learners will begin to understand how these body parts work together during functional activities such as walking, running, and jumping. The activity also helps students connect the lesson to real-life situations.

Instructions

1. Start the activity by asking students to imagine a situation related to their body movements. Explain that the class will explore “what might happen if certain parts of the lower body could not move properly.”
2. Present the following questions for learners to think about:
 - “What would happen if your knees could not bend properly?”
 - “How would your walking, running, or jumping be affected?”
3. Give students a moment to think quietly about their answers before discussing.
4. Ask students to work with their partner in mirror movement. Each group should discuss the questions and share their ideas.
5. After the small group discussions, bring the class back together. Ask a few groups or volunteers to share their ideas and observations.

Guide questions:

1. Why do you think bending the knees is important when walking?
2. What roles do the hips, knees, and ankles play when jumping?
3. How do these joints help us move safely and efficiently?

ACTIVITY 2: Interactive Body Mapping

This activity helps students identify the different segments and joints of the lower extremities and understand how they move during physical activities. By using their own bodies as a guide, students will visually and physically connect the hip, thigh, knee, leg, ankle, and foot to different types of movements. This also helps them appreciate how understanding body movement is useful in sports, dance, and in daily living.

	<p>Instructions:</p> <ol style="list-style-type: none"> 1. Ask learners to stand beside their desks or in an open area where they can move freely without bumping into others. Guide learners to locate and touch the different parts of their lower extremities. Ask them to gently point to or touch the following parts as you mention them: <ul style="list-style-type: none"> • Hip – the joint connecting the leg to the torso • Knee – the joint that allows the leg to bend • Ankle – the joint connecting the leg to the foot • Foot – the part that supports the body when standing and moving 1. Pause briefly for each body part to ensure students are identifying the correct location. 2. Demonstrate several simple lower extremity movements. Ask students to carefully observe and then perform the movements with you. Explain each movement in simple terms: <ul style="list-style-type: none"> • Flexion – bending the joint (example: bending the knee) • Extension – straightening the joint (example: straightening the leg) • Abduction – moving the leg away from the body • Adduction – bringing the leg back toward the body • Rotation – turning the leg inward or outward 3. After performing the movements, ask students to identify which body parts were mainly responsible for each movement. <p>Reflective Questions:</p> <ol style="list-style-type: none"> 1. Why is it important to know which part of the body moves in each activity? 2. How can this knowledge help athletes and dancers? 	<p><i>Encourage learner to move slowly and safely while performing each movement so they can clearly feel which joints and muscles are involved.</i></p>
<p>B. Instituting New Knowledge</p>	<p>1. Presenting Examples</p> <p><i>This step involves showing a relatable, concrete, or real-life example that illustrates the new concept. Examples can be visual, situational, or experiential and are used to spark interest and provide context.</i></p>	<p><i>This activity serves as a fun and engaging introduction to the lesson. Instead of immediately presenting the terms, learners are</i></p>

Activity 1: CRYPTOGRAM – Decode the Movement

This activity allows learners to discover important movement patterns of the lower extremities by solving a simple cryptogram. Through decoding, learners will become familiar with key movement terms such as flexion, extension, rotation, inversion, and eversion. The activity also encourages critical thinking, teamwork, and curiosity before the formal discussion of the lesson.

Materials Needed

- Printed cryptogram worksheet or board presentation
- Pen or pencil for each learner
- Board/marker (optional for checking answers)

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encouraged to discover the vocabulary themselves through decoding. This strategy stimulates curiosity and problem-solving skills, allowing students to become more invested in the lesson.

Encourage learners to work collaboratively and discuss possible letter combinations. Some students may find the puzzle challenging at first, so gently guide them by giving small hints or guiding questions without directly revealing the answers.

As learners begin to identify words such as flexion, extension, rotation, inversion, and eversion, acknowledge their effort and celebrate small successes. This positive reinforcement builds confidence and motivation before moving into the formal discussion.

Remind learners that these terms describe movements their bodies already perform every day, even if they are not yet familiar with the scientific vocabulary. This helps students see that the lesson connects directly to

	<p>Processing Questions:</p> <ol style="list-style-type: none"> 1. Have you experienced performing any of these movements in your daily activities or sports? Give an example. 2. Which part of the lower extremities do you think performs these movements the most? 3. Why is it important to understand these movement patterns when analyzing physical activities? <p>2. Discussing New Concept</p> <p><i>This is the explicit teaching or guided exploration of the lesson's key ideas. It includes defining terms, explaining relationships, using models or analogies, and encouraging learner interaction.</i></p> <p>SUB-TOPIC 1: MOVEMENT PATTERN OF LOWER EXTREMITIES (HIPS, KNEE, ANKLE, AND FOOT)</p> <p>ACTIVITY 1: EXPLICITATION: MOVEMENT PATTERN</p> <p>Introduction</p> <p>The lower extremities are composed of the hips, knees, ankles, and feet. These body segments work together to produce movement, maintain balance, and support body weight. They play an important role in everyday activities such as walking, running, jumping, kicking, and maintaining posture.</p> <p>Movement analysis of the lower extremities helps us understand how each joint moves, how muscles coordinate, and how efficient and safe movement is produced during physical activity and sports.</p> <p>1. Movement Pattern of the Hips</p> <p>The hip joint is a ball-and-socket joint, which allows movement in multiple directions. It connects the pelvis and the femur (thigh bone) and is responsible for powerful and stable</p>	<p><i>their own physical experiences.</i></p> <p><i>Use these questions to help learners connect the decoded terms to real-life movements. Encourage students to think about activities they commonly perform such as walking, climbing stairs, running, or playing sports.</i></p> <p><i>Present the information in a way that is simple, interactive, and relatable.</i></p> <p><i>Instead of only reading definitions, invite learners to perform small movements while listening. For example:</i></p> <ul style="list-style-type: none"> • <i>Ask them to lift their leg forward to demonstrate hip flexion.</i> • <i>Let them bend and straighten their knees to observe knee movements.</i> • <i>Have them point their toes upward and</i>
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	<p>movements. It also provides power for locomotion, stability for balance and control during sports performance</p> <p>Major Hip Movements</p> <p>A. Flexion Movement that brings the thigh forward toward the body. <i>Example: Lifting the leg when walking, running, or climbing stairs.</i></p> <p>B. Extension Movement that moves the thigh backward away from the body. <i>Example: Pushing the leg backward during running or jumping.</i></p> <p>C. Abduction Movement that moves the leg away from the midline of the body. <i>Example: Stepping sideways during defense in basketball.</i></p> <p>D. Adduction Movement that brings the leg toward the midline of the body. <i>Example: Bringing the legs together after a jumping jack.</i></p> <p>E. Rotation</p> <ul style="list-style-type: none"> • Internal Rotation – thigh turns inward • External Rotation – thigh turns outward <p>2. Movement Patterns of the Knee</p> <p>The knee joint is primarily a hinge joint connecting the femur and tibia. It plays a major role in supporting body weight and enabling locomotion. Knees also helps in shock absorption, supporting body weight and providing mobility during locomotion.</p> <p>Major Knee Movements</p> <p>A. Flexion Bending the knee, decreasing the angle between the thigh and leg. <i>Example: Bending the knee during squatting or running.</i></p>	<p><i>downward to feel ankle movements.</i></p> <p><i>This kinesthetic approach helps learners connect the terms with actual body movements, making the lesson easier to understand and remember.</i></p> <p><i>Maintain an encouraging tone and remind students that mistakes are part of learning movement analysis.</i></p>
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	<p>B. Extension Straightening the knee, increasing the angle between the thigh and leg. <i>Example: Straightening the leg when standing up or kicking a ball.</i></p> <p>3. Movement Patterns of the Ankle</p> <p>The ankle joint connects the leg and foot and is essential for balance, walking, and propulsion. The ankle also helps maintain and balance, provide push-off force during movement, and adjust the body to different surfaces.</p> <p>Major Ankle Movements</p> <p>A. Dorsiflexion Movement where the foot moves upward toward the shin. <i>Example: Lifting the foot when walking or running.</i></p> <p>B. Plantar Flexion Movement where the foot points downward. <i>Example: Pushing the foot down during jumping, running, or tiptoeing.</i></p> <p>4. Movement Patterns of the Foot The foot acts as the body's base of support and helps with balance, shock absorption, and propulsion. It also helps to maintain balance and posture, adapt to uneven surfaces, and assist in efficient walking and running</p> <p>Major Foot Movements</p> <p>A. Inversion Turning the sole of the foot inward.</p> <p>B. Eversion Turning the sole of the foot outward.</p>	<p><i>Teacher should be mindful in giving activities to prevent the risk factors amplifying the different movements of the lower extremities.</i></p> <p>(Risk Factors: Fatigue: Promotes improper biomechanics, such as knee valgus (knees collapsing inward). Improper Equipment: Using shoes with inadequate support. Overtraining: Increasing intensity or duration too quickly.)</p>
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	<p>ACTIVITY 2: PICTURE FLIP, PERFECT!</p> <p>Objectives: To help students identify and understand the different movement patterns of the lower extremities by recognizing and performing them.</p> <p>Materials:</p> <ul style="list-style-type: none"> • Printed picture cards showing different lower extremity movements (walking, running, jumping, hopping, skipping, galloping, etc.) • A table or board to place the cards • Space where students can perform the movements <p>Instructions:</p> <ol style="list-style-type: none"> 1. The teacher will place the picture cards face down on a table or board. 2. Students will take turns flipping one picture card. 3. After flipping the card, the student must identify the movement pattern shown in the picture. 4. The student will then demonstrate the movement using their lower extremities. 5. The class will observe and check if the movement is performed correctly. 6. If the student performs the correct movement, they earn one point for their team or themselves. 7. Continue the activity until all picture cards are flipped and demonstrated. 8. The student or team with the most correct demonstrations wins the game. <p>Reflective questions:</p> <ol style="list-style-type: none"> 1. Which movement pattern was the most challenging? What made it difficult? 2. How did the pictures help you understand the different movements of the lower extremities? 3. Why is it important to follow proper form and safety when performing these movements? 	<p><i>Learners identify movement patterns through pictures and demonstrations. This checks comprehension in an engaging way. To reinforce lesson concepts through action, use clear picture cards, encourage safe demonstrations, and give feedback immediately.</i></p>
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	<p>3. Developing Mastery</p> <p><i>In this part learners will engage in guided and independent practice activities to reinforce the concept. This may include drills, problem-solving, application tasks, or peer collaboration. This is the explicit teaching or guided exploration of the lesson's key ideas. It includes defining terms, explaining relationships, using models or analogies, and encouraging learner interaction.</i></p> <p><i>*this pertains to formative assessment</i></p> <p>ACTIVITY 1: INQUIRY-BASED APPROACH</p> <p>Direction: Teacher will present a scenario that shows different movements of the lower extremities, then the learners will answer the reflective questions and reflect to the given scenario.</p> <p>Scenarios:</p> <ol style="list-style-type: none"> 1. Maria is late for school, so she runs quickly to catch the bus. As she runs, her hips extend and flex alternately, her knees bend and straighten, and her ankles push off the ground to propel her forward. 2. During a volleyball game, Carlo jumps high to spike the ball. Before jumping, he bends his hips and knees, then extends them forcefully while his ankles plantarflex to push his body upward. 3. Ana walks upstairs to reach her classroom. As she steps up, one leg flexes at the hip and knee to lift the foot, while the other leg extends to support and push the body upward. 4. During a soccer match, Miguel swings his leg to kick the ball. His hip flexes, his knee extends, and his supporting leg stabilizes his body while his ankle locks to strike the ball accurately. 5. During a dance performance, Lea jumps and lands on the floor. Upon landing, her hips and knees bend, and her ankles dorsiflex to absorb the impact and maintain balance. 	<p><i>This activity helps learners understand how the lower extremities move during daily activities and sports. Through real-life scenarios such as running, jumping, climbing stairs, and kicking, learners analyze the actions of the hips, knees, ankles, and feet.</i></p> <p><i>The teacher should guides learners in answering reflective questions and using correct movement terms. This promotes critical thinking, participation, and collaboration while allowing the teacher to assess understanding through discussion.</i></p> <p><i>By the end of the activity, learners will appreciate the</i></p>
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	<p>Reflective Questions:</p> <ol style="list-style-type: none"> 1. What lower extremity joints and muscles are involved in the movement? 2. What movements occur at the hip, knee, and ankle during the activity? 3. How do the lower extremities work together to perform the movement? 4. What is the role of the feet and ankles in maintaining balance and stability? 5. Why is proper coordination of the lower extremity joints and muscles important in performing movements safely and effectively? <p>ACTIVITY 2: MOVEMENT ANALYSIS STATIONS</p> <p>Learners will be able to analyze and describe the movement patterns of the hip, knee, ankle, and foot while performing different physical movements.</p> <p>Materials Needed</p> <ul style="list-style-type: none"> • Station instruction cards • Worksheet or activity sheet for recording answers • Chair or low platform (for step-ups) • Timer or stopwatch • Whistle (optional) <p>Class Organization</p> <ul style="list-style-type: none"> • Divide the class into 4–5 groups with equal members. • Assign each group to a station. • Each station contains a specific movement activity related to lower extremity movements. 	<p><i>importance of proper coordination, balance, and safe movement.</i></p> <p><i>The purpose of this activity is to apply concepts through active learning. Assign group properly, explain station rules first, monitor safety closely, and rotate groups on time.</i></p>
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	<p>STATION ACTIVITIES</p> <p>Station 1: Squat and Stand Students perform 5–8 squats while observing how their hips, knees, and ankles move during the downward and upward phases.</p> <p>Station 2: Step-Up Exercise Students step up and down on a chair or platform for 5 repetitions using alternating legs.</p> <p>Station 3: Vertical Jump Students perform 3–5 vertical jumps, focusing on the bending of joints before take-off and during landing.</p> <p>Station 4: Forward Lunge Students perform 5 lunges on each leg, observing how the supporting and moving legs function.</p> <p>Guide questions:</p> <ol style="list-style-type: none"> 1. What lower extremity joints are involved in the movement? 2. What type of movement occurs at the hip joint? 3. What movement occurs at the knee joint? 4. What movement occurs at the ankle and foot? 5. How do these joints work together to perform the movement effectively? 	
<p>C. Demonstrating Knowledge and Skills</p>	<p>1. Finding Practical Application <i>In this stage learners apply what they have learned to real-life or simulated scenarios, problems, or tasks. This involves transferring knowledge and skills to authentic contexts and this will serve as scaffolding for the performance task.</i></p> <p>ACTIVITY 1: ROLE PLAYING</p> <p>Direction: The teacher will group the learners into five groups, each group will be given a scenario that shows different movements of the upper extremities and the actions needed to perform, the learners will</p>	<p><i>Learners perform real-life scenarios using lower extremity movements. This promotes creativity and practical application.</i></p> <p><i>Give groups preparation time, Encourage teamwork, and focus on movement accuracy, not acting skills alone. The purpose of this</i></p>

	<p>have a minute to practice and present in front of the class. After the presentation, the learners will answer the guided questions.</p> <p>Scenarios:</p> <ol style="list-style-type: none"> 1. You are working a part-time job at a grocery store. A customer asks for a heavy box of detergent located on the very back of the bottom shelf. The Action: Perform a long forward lunge to reach deep into the shelf while keeping your back straight. Hold the position for three seconds as if gripping the box, then push back to a standing position. 2. You are at a music festival. You are in the middle of a packed row of people and need to get to the aisle to buy water without turning your back on the stage. The Action: Move strictly sideways (laterally) for five steps. Keep your toes pointed forward toward the "stage" while stepping out wide and bringing the trailing foot to meet it. 3. are walking quickly to class in the rain. You step on a metal manhole cover that is incredibly slick, and your foot starts to slide outward. The Action: Mimic a "near-slip." One foot slides out to the side, and you must quickly "catch" your weight and pull your foot back under your center of gravity to avoid a wipeout. 4. You are playing defense in a PE basketball game. The opponent suddenly dribbles past your left side, and you must change direction 180 degrees instantly to chase them. The Action: Plant your lead foot firmly on the ground (don't move it!) and rotate your entire body around that fixed foot to face the opposite direction. 5. You are volunteering at a daycare. A toddler is crying, and you need to get down to their eye level to comfort them without bending over at the waist (which would look scary to the child). The Action: Perform a deep, slow squat until your thighs are parallel to the floor, hold for a moment to "talk" to the child, and then stand back up smoothly. 	<p><i>activity is to apply movement knowledge in everyday situation.</i></p>
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	<p>Guide questions:</p> <ol style="list-style-type: none"> 1. Which joints of the upper extremities are involved in each of the scenarios presented? 2. Why is coordination of different lower extremity movements important in performing everyday tasks? 3. What could happen if one joint or muscle of the lower extremity cannot move properly while performing these activities? <p>ACTIVITY 2: Movement Pattern Bingo</p> <p>The learner will receive a Bingo card containing different lower extremity movement patterns. This activity combines movement with familiar game, encourages repeated practice of movement patterns, and promotes active participation from all students.</p> <p>Procedure:</p> <ol style="list-style-type: none"> 1. The teacher calls out a movement (e.g., “Jump forward three times” or “Skip across the space”). 2. Students must perform the movement correctly before marking it on their Bingo card. 3. The first student to complete a row or column shouts “Bingo!” 4. The teacher checks if all movements were performed correctly. <p>Reflective Questions:</p> <ol style="list-style-type: none"> 1. Which movement pattern helped you finish your Bingo card the fastest? Why? 2. How can practicing these movements help you in sports or daily activities? <p>2. Making Generalization</p> <p><i>This phase the learners will draw conclusions or summarize the key takeaways from the lesson. It can be done through discussions, reflective questions, or concept mapping.</i></p>	<p><i>This activity allows learners to generalize their understanding of lower extremity movement patterns through a fun and engaging game. By repeatedly performing the movements before marking their Bingo cards, learners reinforce correct execution while improving coordination, speed, and body awareness. The game format increases motivation and participation, making practice enjoyable and meaningful. Through reflection, learners recognize which movements they perform best and understand how these skills can be useful in sports, exercise, and everyday tasks.</i></p>
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	<p>ACTIVITY 1: Build-the-Movement Challenge</p> <p>The learner work in small groups to design a short sequence of lower extremity movements that demonstrates their understanding of the different patterns. This activity helps the students synthesize the lesson by combining movements and explaining how they work together.</p> <p>Procedure:</p> <ol style="list-style-type: none"> 1. Divide the class into groups of 3–5 students. 2. Each group must create a short movement sequence using at least three different lower extremity movement patterns. 3. Groups perform their sequence in front of the class. 4. After the performance, classmates identify the movements used and explain their characteristics. 5. The teacher highlights the correct concepts and key takeaways. <p>Reflective Questions:</p> <ol style="list-style-type: none"> 1. Why did your group choose those specific movement patterns? 2. What did you learn about how different movements affect balance and coordination? <p>ACTIVITY 2: MOVEMENT PATTERN QUIZ BEE</p> <p>This activity is a fast-paced review game where learner answer questions about movement patterns and then demonstrate them. This will reinforces understanding and recall concepts while allowing students to demonstrate their knowledge physically.</p> <p>Procedure:</p> <ol style="list-style-type: none"> 1. The teacher asks a question related to the lesson (e.g., “Which movement pattern uses one foot repeatedly?”). 2. The first team to answer correctly must demonstrate the movement pattern. 3. If the demonstration is correct, the team earns points. 4. Continue with different questions until the review is complete. 	<p><i>This activity helps learners wrap up the lesson by putting everything together in a meaningful way. Through group collaboration, they are able to creatively apply their understanding of lower extremity movement patterns by designing and performing a short sequence. It encourages them to think beyond memorization and instead focus on how movements</i></p>
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	<p>Reflective Questions:</p> <ol style="list-style-type: none">1. Which movement pattern do you think is most useful in sports or daily life? Why?2. How did practicing these movements help you better understand how your lower body works?	<p><i>connect and work together in real situations. The reflection and class discussion also help learners clarify concepts, recognize correct movement patterns, and deepen their understanding of balance and coordination in physical movement.</i></p>			
<p>V. ASSESSMENT <i>(Assessing Learnings)</i></p>	<p>ACTIVITY 1: LET’S MOVE! LET’S DO THE ZUMBA</p> <p>This activity allows learners to apply and demonstrate basic human movement patterns through a fun and energetic Zumba dance routine. While performing the routine, students will focus on how the lower extremities (hips, knees, ankles, and feet) move and work together during different dance steps. The activity also promotes coordination, rhythm, physical fitness, and body awareness.</p> <p><i>(see the rubric below for evaluating learners’ output)</i></p>				
	<p>Criteria</p>	<p>4 – Excellent</p>	<p>3 – Good</p>	<p>2 – Fair</p>	<p>1 – Needs Improvement</p>
	<p>Execution of Zumba Steps</p>	<p>Performs all dance steps correctly with clear and controlled movements.</p>	<p>Performs most steps correctly with minor mistakes.</p>	<p>Performs some steps correctly but shows several mistakes.</p>	<p>Has difficulty performing the steps and often needs guidance.</p>
	<p>Use of Lower Extremities(hips, knees, ankles, feet)</p>	<p>Demonstrates excellent awareness and proper use of lower body movements throughout the routine.</p>	<p>Shows good use of lower body movements with occasional errors.</p>	<p>Shows limited control or awareness of lower body movements.</p>	<p>Rarely demonstrates proper lower body movement patterns.</p>

	Coordination and Rhythm	Moves smoothly and consistently follows the rhythm of the music.	Mostly follows the rhythm with minor timing errors.	Sometimes follows the rhythm but movements are often off-beat.	Struggles to follow the rhythm and coordination is limited.
	Energy and Participation	Participates actively with high energy and enthusiasm throughout the activity.	Participates well with good energy most of the time.	Participates but shows low energy or inconsistent effort.	Shows little participation or effort in the activity.
	Body Awareness and Control	Demonstrates excellent balance, posture, and body control during movements.	Shows good balance and control with minor lapses.	Shows some control but balance and posture are inconsistent.	Shows poor balance and body control during the routine.
	Scoring guide: 17–20 – Proficient 13–16 – Approaching Proficiency 9–12 – Developing 5–8 – Beginning				
VI. REFLECTION <i>(Feedback and Continuous Improvement)</i>	<p><i>This section presents the key highlights and challenges encountered by both teachers and learners during the teaching-learning process throughout the unit. It also includes the adjustments made by the teacher to improve instruction.</i></p> <p>The activities in this Lesson Exemplar were engaging and helpful in making the lesson easy to understand. Through games, group work, and movement tasks, students were able to connect the concepts to everyday actions such as walking, running, and jumping. These activities also encouraged teamwork, confidence, and active participation.</p> <p>Using physical activities made learning more enjoyable and meaningful because students were able to experience the movements themselves. The Zumba assessment was also an effective and fun way to measure their understanding while promoting fitness.</p>				

Some challenges may include limited time, space, and the need to ensure safety during activities. Overall, the lesson provided a positive learning experience that helped students understand the importance of lower extremity movements in daily life and sports.

Enrichment Activity

ACTIVITY 1: DESIGN YOUR OWN FITNESS ROUTINE

Objective:

To allow advanced learners to apply their understanding of lower extremity movement patterns by creating a short exercise routine.

Instructions:

1. Ask learners to create a 1–2 minute fitness routine that uses at least five different lower extremity movements such as:
 - Hip flexion
 - Knee extension
 - Ankle plantar flexion
 - Squat
 - Lunge
 - Jumping movements
2. After creating fitness routine, learners must present their routine to the class and explain which joints and movement patterns are being involved.

Output: *Fitness routine*

Rubric for Activity 1: Design Your Own Fitness Routine

Criteria	Excellent (10 pts)	Good (8 pts)	Fair (6 pts)	Needs Improvement (4 pts)
Use of Lower Extremity Movements	Uses 5 or more correct lower extremity	Uses at least 5 movements with minor errors.	Uses 3–4 movements with some errors.	Uses fewer than 3 movements or incorrect movements.

	movements clearly and accurately.			
Creativity and Routine Design	Routine is highly creative, well-organized, and engaging.	Routine is organized and shows some creativity.	Routine is simple with limited creativity.	Routine lacks organization and creativity.
Execution and Performance	Movements are performed confidently, smoothly, and with proper form.	Most movements are performed correctly with few mistakes.	Some movements lack control or proper form.	Many movements are incorrect or incomplete.
Explanation of Joints and Movements	Clearly explains all joints involved and movement patterns correctly.	Explains most joints and movements correctly.	Explains some joints and movements with errors.	Unable to explain joints and movement patterns.
Participation and Confidence	Shows excellent energy, confidence, and full participation.	Shows good confidence and participates well.	Participates but lacks confidence.	Shows little participation or effort.

Total Score: _____ / 50 Points

Rating Guide:

- **45–50** = Outstanding
- **39–44** = Very Satisfactory
- **33–38** = Satisfactory
- **25–32** = Needs Improvement
- **24 below** = Poor

Intervention Activity

ACTIVITY 1: FLIP BOOK ON-THE-GO!

Objective: This activity allows learners to recall the different movement patterns of the lower extremities. Learners will individually demonstrate and analyze each movement pattern, take photos, and compile them into a flip book or portfolio.

Material/s needed:

- *Mobile phone or any devices with installed camera*
- *Printer*
- *Photo paper*
- *Bond paper/specialty paper/cardboard*

Instruction:

1. Review the different movement patterns of the lower extremities discussed in class, such as:
 - Hip flexion and extension
 - Abduction and adduction
 - Knee flexion and extension
 - Ankle dorsiflexion and plantar flexion
 - Foot inversion and eversion
2. Choose at least 5 movement patterns that the learners will demonstrate.
3. Ask a classmate, friend, or family member to help take clear photos of the learner while performing each movement. If no one is available, the learner may use a timer or phone stand.
4. Perform each movement correctly and safely. Make sure that body position clearly shows the movement pattern.
5. Print or draw the photos and place them in a small booklet, bond paper, or portfolio to create your Flip Book.
6. Below each photo, write the following details:
 - Name of the movement pattern
 - Body part/joint involved
 - Short explanation of the movement
 - Example of its use in sports or daily activities
7. Arrange the pages neatly in sequence and decorate your flip book creatively.

Output: Flip Book or Portfolio

Rubrics for Activity 1: Flip Book On-the-go!

Criteria	Excellent (10)	Good (8)	Fair (6)	Needs Improvement (4)	Score
Accuracy of Movement Patterns	All 5 movement patterns are correctly demonstrated with precise body mechanics and proper joint actions.	Most movements are correct with minor errors in execution.	Some movements are incorrect or unclear in execution.	Movements are mostly incorrect or not demonstrated properly.	—
Completeness of Content	Includes all required details for every movement: name, joint involved, explanation, and sports/daily application.	Missing 1 required detail in some entries.	Missing 2 or more required details in several entries.	Incomplete or lacks most required details.	—
Photo Quality & Clarity	Photos are clear, well-framed, and clearly show correct movement execution.	Photos are mostly clear with slight issues in framing or visibility.	Some photos are unclear or do not clearly show the movement.	Photos are unclear, blurry, or not useful for analysis.	—
Organization & Sequencing	Flip book is well-organized, logically sequenced, and easy to follow.	Minor issues in sequence or layout but still understandable.	Organization is inconsistent; sequence is somewhat confusing.	Disorganized and difficult to follow.	—
Creativity & Presentation	Highly creative, visually appealing, and shows strong effort in design and layout.	Good presentation with some creative elements.	Basic presentation with minimal creativity.	Lacks effort in design and presentation.	—
Understanding of Movement Concepts	Demonstrates excellent understanding of lower extremity movement patterns through explanations.	Shows good understanding with minor inaccuracies.	Shows limited understanding; explanations are basic or partially incorrect.	Demonstrates poor or no understanding of concepts.	—

	<p>Total Score: _____ / 50 Points</p> <p>Rating Guide:</p> <ul style="list-style-type: none"> • 45–50 = Outstanding • 39–44 = Very Satisfactory • 33–38 = Satisfactory • 25–32 = Needs Improvement • 24 below = Poor <p>**Note to the teachers:</p> <p>The teacher may choose to implement the other recommended activities for enrichment to support students who are experiencing difficulty in understanding the lesson.</p>
<p>VII. USE OF GENERATIVE AI</p>	<p>In preparing this Learning Exemplar (LE), the author(s) used Gemini 3 Flash (Web Version) December 17, 2025, version. https://gemini.google.com/app/4c34064bc86fd4d1 and ChatGPT to generate possible activities or recommendation regarding the movement analysis of the lower extremities.</p>

Lesson Title/Topic	Analysis of Basic Movement Patterns	Lesson Exemplar	8
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I. OBJECTIVES	
A. Content Standard	<i>The learners demonstrate understanding of the basic structure and function of the human body in relation to fitness, exercise, and health for the optimization of human movement performance.</i>
B. Performance Standard	<i>The learners evaluate basic functional movement patterns using anatomical knowledge to optimize performance across different needs and skill levels.</i>
C. Learning Competencies	<i>Execute basic movement patterns using different anatomical terms and movement descriptors</i>
II. REFERENCES and MATERIALS (Selecting Resources and Material)	<p>BPT, U. T. (2024, June 24). Human Anatomy Terminology. Muscle&Motion - Strength Training Anatomy, Muscular Anatomy and More! https://www.muscleandmotion.com/humananatomyterminology/#:~:text=Directional%20terms%20describe%20the%20positions%20of%20structures%20relative,a%20left%2C%20there%20must%20also%20be%20a%20right.</p> <p>Gross and fine motor skills. (n.d.). Early Movers. https://www.earlymovers.org.uk/motor-skills Human Movement. (2021, October 22). Bartleby. https://www.bartleby.com/subject/science/biology/concepts/human-movement</p> <p>Instructor, M. M. α. D. N. C. P. M. (n.d.). Mobility and Stability: Joint Functions When We Move. https://blog.nasm.org/certifiedpersonal-trainer/mobility-and-stability-joint-functions-when-wemove#:~:text=Stability%3A%20The%20ability%20of%20the,each%20has%20a%20primary%20function</p> <p>Motor Control & Motor Learning -. (2018, April 26). https://exercise.trekeeducation.org/motor-learning/ On the Normal Use of Reflexes: The hypothesis that reflexes form the basic language of the motor program permits simple, flexible specifications of voluntary movements and allows fruitful speculation on JSTOR. (n.d.). www.jstor.org. https://www.jstor.org/stable/27843368</p> <p>Study Rocket. (2023, November 24). Planes and Axes of Movement – GCSE Physical Education Edexcel Revision – Study Rocket. Study Rocket. https://studyrocket.co.uk/revision/gcse-physical-education-edexcel/short-course/planes-and-axes-ofmovement#:~:text=%E2%80%9CPlanes%20and%20axes%20of%20movement%E2%80%9D%20refers%20to%20the,divides%20the%20body%20into%20left%20and%20right%20halves.</p>

III. CONTENT (Sequencing Content)	Lesson 3. Analysis of Basic Movement Patterns 1. Walking 2. Running 3. Jumping 4. Throwing	
IV. OBJECTIVES (Setting Clear Objectives and Analyzing the Tasks)	<ul style="list-style-type: none">• Recall the anatomical terms and movement descriptor• Distinguish anatomical terms and movement descriptor in the basic movement patterns (Walking, Running, Jumping, and Throwing) in relation to fitness, exercise, and health to optimize human movement.• Demonstrate basic movement patterns (Walking, Running, Jumping, and Throwing) in relation to fitness, exercise, and health to optimize human movement.	
IV. PROCEDURES (Selecting Strategies, Making Meaningful Content, Delivering Lesson and Assessing Learning) This section focuses on selecting learner-centered, evidence-based instructional approaches such as problem-based learning, collaborative tasks, interdisciplinary integration, and technology-enhanced instruction. These strategies are intended to foster active engagement, critical thinking, and adaptability across diverse learning pathways. The chosen approaches and methodologies will be reflected through varied and relevant activities and assessments that emphasize real-world relevance and application, thereby enhancing learner engagement and comprehension. (Each part shall have 2-3 varied activities)		ANNOTATIONS *Instruction to the teacher on how to facilitate the activities. *In the Annotation, explicitly explain how the IDF is applied in each part of the lesson
A. Activating Prior Knowledge	1. Activating Prior Knowledge Activity 1: Lower Limb Puzzle !. Prepare a simple diagram of the lower extremities cut into parts: <ul style="list-style-type: none">• Hip• Thigh• Knee• Leg• Ankle• Foot	Collaborative Learning Visual recognition

	<p>2. Divide students into small groups.</p> <p>3. Each group receives the cut out body parts and assemble the lower extremity puzzle on a manila paper.</p> <p>4. After assembling, groups label the parts.</p> <p>Guide Questions:</p> <p>*What parts make up the lower extremities?</p> <p>* Which parts help you move when walking or running?</p> <p>*Which part acts like a hinge when bending your leg?</p> <p>Activity 2: Leg Work Detective</p> <ol style="list-style-type: none"> 1. Prepare movement cards with the following actions: <ul style="list-style-type: none"> *walking *running *jumping *throwing 2. Students work in pairs or in small groups. 3. Each pair completes a table identifying the parts of the lower extremities involved in each movement. 4. Students discuss their answers with the class. <p>2. Establishing the Purpose of the Lesson</p> <p>Activity 1: Real-Life Scenario – why do Athletes Move Efficiently?</p> <p>Teacher presents the scenario:</p> <p>During a school sports competition, two students are running. One student runs smoothly and quickly while the other gets tired easily and moves awkwardly.</p> <p>Guide Questions:</p> <ol style="list-style-type: none"> 1. Why do you think one runner performs better? 2. How can understanding body movements help improve 	<p>*Expected Output Ex: Walking – Hip, Knee, ankle, foot – Alternating leg movement, knee bending and straightening</p> <p>Problem-based learning Expected insight: Understanding movement helps improve performance, prevent injury and maintain health.</p>
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- performance?
3. Why is it important to know how our body moves?

Activity 2: Mystery Movement Challenge

1. Prepare four activity cards labelled only with “clues”, not the actual movement.

Example:

Card 1

- Used when going from one place to another slowly
- Requires alternating leg movement

Card 2

- Used in sports like basketball and football
- Faster than walking

Card 3

- Both feet leave the ground
- For a moment your body is in the air

Card 4

- Your shoulder rotates to create force
- Used when sending an object toward a target

2. Students are divided into small groups
3. Each group reads the clues and guesses the movement
4. After guessing, groups demonstrate the movement.

Processing Questions:

1. Where do we commonly use these movements in daily life?
2. In what sports do we use these movements?
3. Why do athletes need to perform these movements correctly?

	<p>Activity 3: Act it Out</p> <ol style="list-style-type: none"> 1. Prepare cards with names of sports such as: <ol style="list-style-type: none"> a. Basketball b. Volleyball c. Patintero d. Leksong tinik e. Sepak takraw f. Tumbang preso 2. Students are divided into small groups. 3. Each group picks one card and has 30 seconds to plan a short silent role play or action demonstration showing movements used in that sport or game. 4. The group performs the movements without speaking, and the rest of the class guesses the sports or game. 5. After guessing, ask: <ol style="list-style-type: none"> a. What movements did you observe? b. Did you see walking, running, jumping or throwing? 	<p>Experiential Learning / Collaborative Learning</p>
<p>B. Instituting New Knowledge</p>	<p>1. Presenting Examples</p> <p>Activity 1: Body Part Focus</p> <p>Display pictures of body parts only (not full sports scenes)</p> <ul style="list-style-type: none"> - Knee bending - Arm swinging - Ankle pushing off the ground - Shoulder rotating <p>Students guess:</p> <p>* What movement could this body part be doing?</p> <p>Example: Knee bending – walking or running</p> <p>Reveal the full movement pattern.</p>	<p>*Students start noticing specific body movements, preparing them to understand anatomical movement descriptions.</p>

	<p>2. Discussing New Concept</p> <p>Activity 1: Mini Lecture and Movement terms</p> <p>Introduce key anatomical terms using simple explanations and visuals.</p> <p>Jumping involves explosive movement, primarily occurring in the sagittal plane for vertical lift, with frontal plane movement (abduction/adduction) during movements like jumping jacks.</p> <p>Preparation (Loading Phase):</p> <p>Knee Flexion: Bending the knees.</p> <p>Hip Flexion: Bending at the hips.</p> <p>Ankle Dorsiflexion: Slight movement to load calf muscles.</p> <p>Take-off (Propulsion Phase):</p> <p>Hip Extension: Powerfully straightening the hips (gluteus maximus, hamstrings).</p> <p>Knee Extension: Powerfully straightening the knees (quadriceps).</p> <p>Ankle Plantarflexion: Pushing off with toes (gastrocnemius, soleus)</p> <p>Walking is a cyclic movement (gait) involving stance (60%) and swing (40%) phases, relying on alternating, coordinated joint actions.</p> <p>Heel-Strike: Foot hits ground, ankle in dorsiflexion, knee</p>	<p>*Students connect movement with anatomical terminology</p>
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	<p>in extension.</p> <p>Support Phase: Weight-bearing leg keeps knee straight (extension) to support weight; hips stay stable through mild abduction.</p> <p>Toe-Off: Rear foot prepares to leave ground; hip extension and ankle plantarflexion (pushing off).</p> <p>Swing Phase: Moving leg is raised via hip flexion (iliopsoas) and knee flexion (hamstrings) to clear the ground.</p> <p>Running</p> <p>Running is similar to walking but with higher intensity, no double-support phase, and a longer flight phase.</p> <p>Swing Phase (62% of cycle): Requires rapid knee flexion and hip flexion.</p> <p>Stance Phase: Rapid, intense plantarflexion at the ankle for propulsion.</p> <p>Foot Action: Increased dorsiflexion is needed to clear the ground, and foot inversion/eversion helps stabilize on uneven surfaces.</p> <p>Throwing is a multi-joint, kinetic chain movement designed to transfer energy from the legs to the hand.</p> <p>Wind-up/Stride: Rotation of the trunk and hips; flexion of the lead hip and knee.</p> <p>Arm Cocking: Scapular retraction (pulling shoulder blades</p>	
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	<p>together), shoulder abduction (90°), and extreme shoulder external rotation.</p> <p>Acceleration: Rapid shoulder internal rotation, elbow extension, and scapular protraction (moving shoulder forward).</p> <p>Follow-through: Deceleration of the arm via reverse motions.</p> <p>Discussion points:</p> <ul style="list-style-type: none"> • What muscles are involved? • In what plane of motion the movement encompasses? <p>*Ask students to mimic movement while explaining the terms</p> <p>Activity 2: Body Mapping Activity</p> <p>Students work in small groups. Each group receives a diagram of the human body (lower extremity)</p> <p>Task:</p> <ol style="list-style-type: none"> 1. Identify the body parts used in walking, running, jumping and throwing 2. Label the joints/parts and movements 3. Groups present their answers. <p>Activity 3: Movement Analogy – Body as A Machine</p> <p>Explain: “Our body works like a machine. Bones are like levers, joints like hinges, and muscles provide the force for movement”</p> <p>Ask students to discuss:</p>	<p>Collaborative Task</p> <p>*Encourages Peer learning and conceptual understanding *You can use the app Anatomy by M&M *If app is not available, the teacher can use pictures instead</p> <p>Analogy – based explanation *Simplifies anatomical concepts Key Ideas:</p> <ul style="list-style-type: none"> - The knee joint control flexion and extension similar to how a hinge controls the movement of a door. - Muscles provide the power that
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	<ul style="list-style-type: none"> - How is the hip like a hinge? - Why are muscles important for movement? <p>3. Developing Mastery</p> <p>Activity 1: Movement Analysis Worksheet</p> <p>Students complete a table:</p> <table border="1"> <thead> <tr> <th>Movement</th><th>Body Parts Used</th><th>Movement Descriptor</th></tr> </thead> <tbody> <tr> <td>Walking</td><td>Legs, knees</td><td></td></tr> <tr> <td>Running</td><td></td><td>Flexion, extension</td></tr> <tr> <td>Jumping</td><td>Legs, ankles</td><td></td></tr> <tr> <td>Throwing</td><td>Arms, shoulders</td><td></td></tr> </tbody> </table> <p>Activity 2: Peer Demonstration Challenge</p> <p>Students work in pairs.</p> <p>Task:</p> <ol style="list-style-type: none"> 1. One student performs a movement (walk run, jump, throw) 2. The partner identifies the anatomical terms used in the movement. 3. They switch roles. <p>Example:</p> <p>Student performs jumping, partners says: knee flexion, hip</p>	Movement	Body Parts Used	Movement Descriptor	Walking	Legs, knees		Running		Flexion, extension	Jumping	Legs, ankles		Throwing	Arms, shoulders		<p>drives movement, just like a motor powers a machine.</p> <ul style="list-style-type: none"> - Bones help transfer force and create movement efficiently similar to levers in machines. - The ankle helps store and release energy for movement similar to how spring works - Movement is a system of coordinated parts, similar to a machine with interconnected components. <p>Independent Practice</p> <p>Collaborative learning/ application</p> <p>*Reinforces movement analysis through peer interaction</p>
Movement	Body Parts Used	Movement Descriptor															
Walking	Legs, knees																
Running		Flexion, extension															
Jumping	Legs, ankles																
Throwing	Arms, shoulders																

	flexion, ankle dorsiflexion etc.	
C. Demonstrating Knowledge and Skills	<p>1. Finding Practical Application Activity 1: Sports Movement Analysis</p> <p>Let the students choose a common sport or game played in the Philippines, such as basketball, Volleyball, Sepak Takraw, Patintero.</p> <p>Task:</p> <ol style="list-style-type: none"> 1. Identify at least two movements used in the sport or game. 2. Describe the body parts involved. 3. Explain the movement using anatomical terms. <p>Example:</p> <p>Sports: Basketball</p> <p>Movement: jumping for rebound</p> <p>Body parts involved: legs, knees, ankles</p> <p>Movement descriptors: knee extension ankle plantar flexion</p> <p>Activity 2: Fitness Movement Planner</p> <p>Students imagine they are fitness coaches for a school activity</p> <p>Task:</p> <ol style="list-style-type: none"> 1. Create a simple 3 – movement exercise routine using the following movements: walking, running, jumping, throwing. 2. Students must demonstrate the movement. 3. Explain how the movement improves health or fitness 	<p>Helps learners connect movement patterns to real sports and physical activities</p> <p>Application Task/Scaffolding for Performance Task</p> <p>*Allows learners to apply movement knowledge to exercise and health contexts.</p>

	1 way they can apply the lesson in real life				
V. ASSESSMENT (Assessing Learnings)	Body Fitness Routine (Authentic Performance Based Assessment)				
	Task: Students will design and demonstrate a short fitness routine that uses basic movement patterns. The routine should highlight the movements of the upper and lower extremities.				
	Movement Analysis Presentation				
	Students will be grouped. They will analyse one sport. They must explain:				
	1. What movements patterns are used				
	2. What joints and muscles are involved				
	3. What anatomical movements occur				
	4. How proper movement improves fitness and prevents injury				
	Rubric Body Fitness Routine				
	Criteria	4 – Excellent	3 – Proficient	2 – Developing	1 – Beginning
	Movement Performance	Performs all movements correctly, smoothly, and confidently	Performs most movements correctly with minor errors	Performs some movements correctly with noticeable mistakes	Unable to perform movements correctly
	Identification of Extremities	Clearly identifies all lower extremity parts	Identifies most extremity parts	Identifies few extremity parts	Unable to identify extremity parts
	Explanation of Movement Patterns	Clearly explains how the extremities move	Explains movement patterns with minor gaps	Explanation is incomplete or unclear	Unable to explain movement patterns

	<div>Routine Design</div> <div>Routine is organized, creative, and complete</div> <div>Routine is somewhat organized and complete</div> <div>Routine lacks organization and completeness</div> <div>Routine is incomplete</div>	
	<div>Collaboration and Participation</div> <div>All members actively participate</div> <div>Most members participate</div> <div>Some members participate</div> <div>Very limited participation</div>	
VI. REFLECTION (Feedback and Continuous Improvement)	This section presents the key highlights and challenges encountered by both teachers and learners during the teaching-learning process throughout the unit. It also includes the adjustments made by the teacher to improve instruction.	
VII. ENRICHMENT/ INTERVENTION ACTIVITIES	<p>ENRICHMENT ACTIVITIES *For advanced/fast learners. These activities deepen understanding of lower extremity movement patterns.</p> <p>Enrichment Activity 1: “Movement Scientist Challenge Strategy: Analytical / Higher-order thinking Procedure 1. Learners choose one movement: * Walking * Running * Jumping * Throwing 2. They analyze and explain: *Which movement requires the most force? *Which movement requires less force? 3. They present their analysis to the class.</p> <p>Enrichment Activity 2: Design a Safe Exercise Plan Strategy: Application / Real-life connection Procedure 1. Learners design a 3–5 minute warm-up routine focusing only on the lower extremities.</p>	

	<p>2. They must explain:</p> <ul style="list-style-type: none"> * Why each movement is included * How it prepares the hips, knees, and ankles <p>INTERVENTION ACTIVITIES (For learners who need additional support) These activities simplify concepts while reinforcing essential skills.</p> <p>Intervention Activity 1: Guided Movement Practice</p> <p>Strategy: Step-by-step demonstration</p> <p>Procedure</p> <ol style="list-style-type: none"> 1. The teacher demonstrates one movement at a time slowly. 2. Learners follow with guided cues: * <ul style="list-style-type: none"> “Bend your knees.” * “Straighten your legs.” * “Push using your feet.” 3. The teacher gives immediate corrective feedback. <p>Purpose:</p> <p>Reinforces correct movement</p> <p>Builds confidence</p> <p>Intervention Activity 2: “Label the Parts”</p> <p>Strategy: Visual reinforcement</p> <p>Procedure</p> <ol style="list-style-type: none"> 1. Learners are given a simple diagram of the lower extremities. 2. They label: * Hip * Knee * Ankle * Foot 3. The teacher reviews answers together. <p>Purpose :</p> <p>Strengthens identification of body parts</p> <p>Supports visual learners</p> <p>*Note to the teachers The teacher may choose to implement the other recommended activities for enrichment to support students who are experiencing difficulty in understanding the lesson.</p>
<p>VIII. USE OF GENERATIVE AI</p>	<p>In preparing this Learning Exemplar (LE), the author(s) used ChatGPT as learning aid for idea generation, language refinement and content organization. The author reviewed and finalized the writing of the content. The author takes full responsibility for the content of this LE.</p>