25SCHOOLS
FREE LEARNING NOTES FOR ZAMBIA

FORM 1

Physical Education and Sport

Movements and Perceptual Motor Learning

Lesson notes for learners · Competence-Based Curriculum

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Every time you run to catch a minibus, balance on one foot to take off a shoe, or kick a ball on the school field, you are using planned body movement. This topic names the kinds of movement, shows how movements are put together into patterns and formations, and explains how the body learns to use what it sees, hears and feels to move well. It also shows how a PE session is organised so that the body is safe and ready.

AFTER THESE NOTES YOU SHOULD BE ABLE TO

- Name and perform locomotor, non-locomotor, balancing and manipulative movements
- Perform movement patterns and combine them into a sequence
- Take part in a movement formation such as a line, circle or column
- Explain what perceptual motor learning is and give activities that develop it
- Organise a PE session into warm-up, main activity and cool-down and say what each part is for

KEY WORDS

Locomotor movement	a movement that takes the body from one place to another, such as walking or hopping
Non-locomotor movement	a movement done in one spot without travelling, such as bending or twisting
Manipulative movement	a movement in which you handle or control an object, such as throwing or catching
Balance	the ability to hold the body steady, either still or while moving
Movement pattern	a set way of moving the body in a repeated order, such as the steps of a skip
Formation	the arrangement of a group of people on the floor or field, such as a circle or a line
Movement exploration	trying out different ways of doing a movement to find what your body can do
Perception	the brain making sense of what the senses report, such as sight, hearing and touch

1 Kinds of movement

All sport and dance is built from four kinds of movement. Learn to tell them apart.

Locomotor movements move you from one place to another. Examples are walking, running, jumping, hopping, skipping, leaping and galloping. A child running across the school field to reach the netball court is using a locomotor movement.

Non-locomotor movements are done on the spot. The feet stay in place while another part of the body moves. Examples are bending, stretching, twisting, swinging, turning on the spot and pushing. Stretching your arms above your head in the morning is a non-locomotor movement.

Balancing activities are about holding the body steady. You can balance while still, such as standing on one leg, or while moving, such as walking along a narrow line. A small base, such as one foot, makes balance harder than a wide base, such as two feet apart.

Manipulative movements involve an object. You throw, catch, kick, bounce, strike, roll or carry it. Dribbling a football, catching a netball and hitting a ball with a bat are all manipulative.

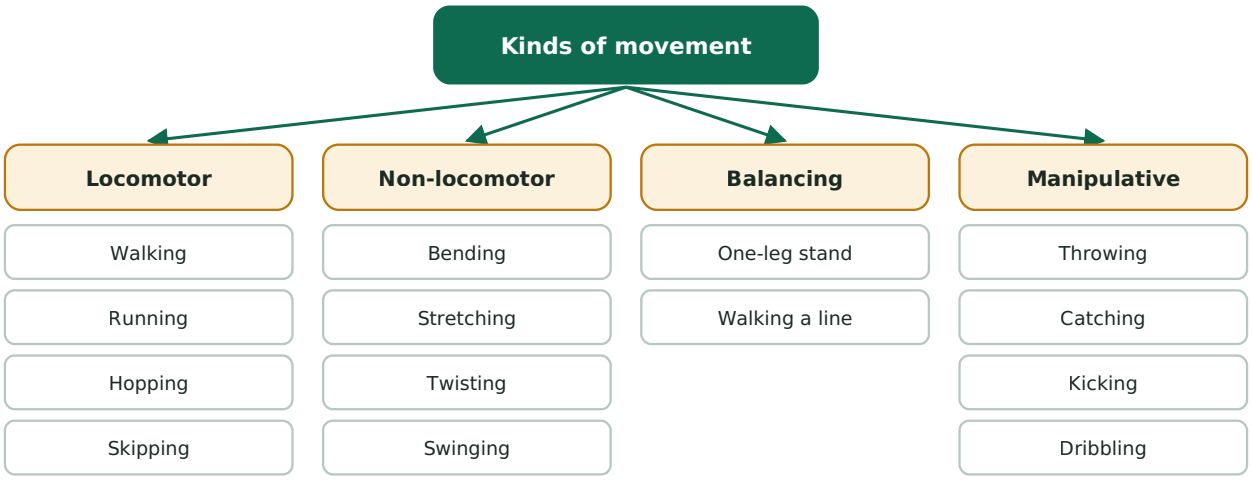


Figure 1. The four kinds of movement activities, with examples of each

WORKED EXAMPLE

A learner dribbles a football while running down the field. Which kinds of movement does she use?

Running takes her from one place to another, so it is locomotor.

Dribbling means controlling a ball with the feet, so it is manipulative.

Answer: locomotor and manipulative movement together.

2 Movement patterns, combinations and formations

A movement pattern is a movement done in a fixed order that can be repeated. A skip, for example, is a step and a hop on one foot, then a step and a hop on the other. Once you can do the pattern, you can repeat it smoothly without thinking about each part.

A combination joins two or more patterns into one sequence. You might run for four steps, jump, land, and then turn on the spot. Good combinations flow: the end of one movement leads straight into the next, and the body stays in control.

A formation is how a group is arranged while it moves. In a line, learners stand side by side. In a column, they stand one behind another. In a circle, they face the centre. Other common formations are a square and a scattered formation, where everyone has their own space. Formations are used in marching, dance, drills and team warm-ups. Each person must keep their place and spacing so that no one collides.

To perform a pattern well, start slowly, learn the order, then add speed. Keep your eyes up, keep the body balanced and move with the group's rhythm.

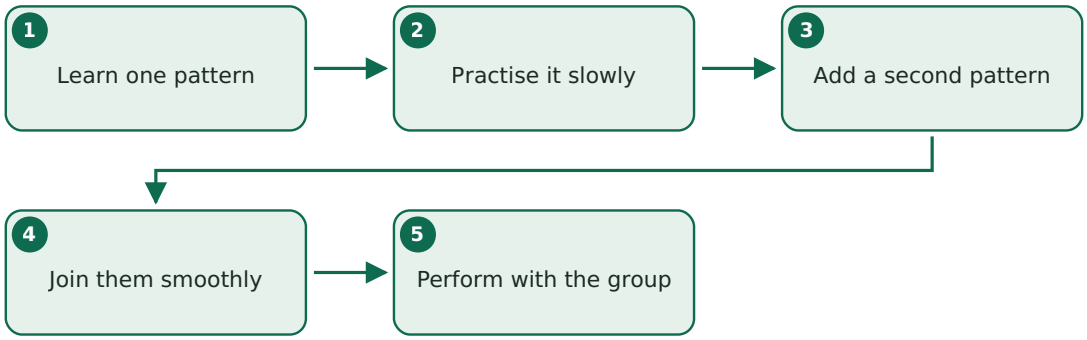


Figure 2. Building up a movement sequence

3 Movement exploration and perceptual motor learning

Movement exploration means trying different ways of doing one movement. Take hopping. You can hop high or low, fast or slow, forwards or sideways, on the left foot or the right. By exploring, you find out how your body moves and which way works best for a task.

Perceptual motor learning is the learning of how to use sensory information to guide movement. The senses report what is happening: eyes see a ball coming, ears hear a whistle, the skin and muscles feel where the body is. The brain makes sense of this, which is perception. The body then responds with movement, which is the motor part. A goalkeeper sees the ball leave the striker's boot and dives. That quick link between seeing and moving is perceptual motor skill.

Perceptual motor skills include body awareness (knowing where your body parts are), spatial awareness (knowing how much space you have and where others are), direction awareness (left, right, forwards, backwards), balance, and hand-eye and foot-eye coordination.

Activities that develop them include dodging games, catching and throwing at different distances, hopscotch, walking along a line or bench, skipping rope, and moving through a course of cones. Practised often, these activities make movement quicker, safer and more accurate.

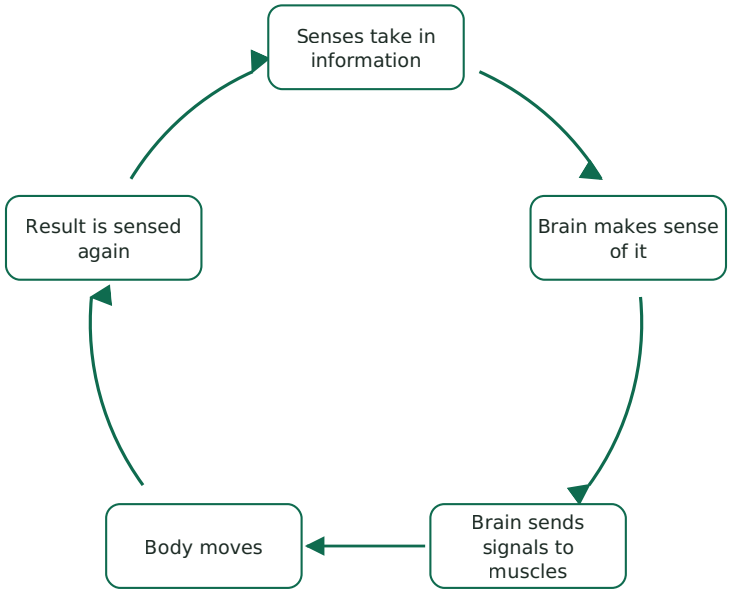


Figure 3. How perceptual motor skill works

4 Warm-up, main activity and cool-down

A good PE session has three parts, always in this order.

The warm-up comes first and lasts about 5 to 10 minutes. It uses light jogging, skipping and gentle stretches. Its purpose is to raise the heart rate and body temperature, loosen the joints and prepare the muscles, which lowers the chance of injury.

The main activity is the work of the session: practising skills, playing a game, or doing a drill or sequence. Locomotor, non-locomotor, balancing and manipulative activities are all done here.

The cool-down comes last. It uses slow walking or jogging and gentle stretching. Its purpose is to let the heart rate and breathing return slowly to normal and to help the muscles relax. Stopping suddenly after hard exercise is not good for the body.

Part	What you do	Purpose
Warm-up	Light jogging, skipping, gentle stretches	Prepare the body, prevent injury
Main activity	Skills, drills, games, sequences	Develop skills and fitness
Cool-down	Slow walking, gentle stretching	Return body to rest, relax muscles

Figure 4. The three parts of a session

TRY THIS

On the school field or a clear open space, work with two or three classmates. Mark a short course with stones or bottles. Walk, hop and skip through it, then add a throw and catch with a rolled-up sock or small ball. Link three of these into one sequence and show it to the others. Always begin with a short warm-up and end with a cool-down.

REMEMBER

- The four kinds of movement are locomotor, non-locomotor, balancing and manipulative.
- A movement pattern is a movement done in a repeated order; a combination joins patterns together.
- A formation is the arrangement of a group, such as a line, column or circle.
- Movement exploration means trying different ways of doing a movement.
- Perceptual motor learning is learning to link what the senses report with how the body moves.
- A PE session has a warm-up, a main activity and a cool-down, in that order.

? Check yourself

1. Name the four kinds of movement activities.
2. Is twisting the trunk while standing in one place locomotor or non-locomotor? Give a reason.
3. Give two examples of manipulative movements.
4. What is a movement combination?
5. Describe how a column formation differs from a line formation.
6. Explain perceptual motor learning using a goalkeeper as an example.
7. State two activities that develop perceptual motor skills.
8. State one purpose of a warm-up and one purpose of a cool-down.

ANSWERS

1. Locomotor, non-locomotor, balancing and manipulative.
2. Non-locomotor, because the body does not travel from one place to another.
3. Any two of: throwing, catching, kicking, dribbling, striking, bouncing, rolling.
4. Two or more movement patterns joined together in one smooth sequence, such as run, jump, land and turn.
5. In a column, learners stand one behind another. In a line, they stand side by side.
6. The goalkeeper sees the ball and the brain makes sense of it (perception), then the body dives to stop it (motor response). Perceptual motor learning is learning to link the two quickly and accurately.
7. Any two of: hopscotch, dodging games, catching and throwing, walking along a line, skipping rope, running through cones.
8. Warm-up: prepares the body and lowers the chance of injury. Cool-down: returns the heart rate and breathing slowly to normal and helps muscles relax.

Written by 25Schools to follow the Form 1 Physical Education and Sport syllabus of the Zambian competence-based curriculum. Free for learners to read, download and share. More notes and quizzes at 25schools.com.