Plants

Lesson plan and teacher's notes · Grade 2 Science · 2 periods of 40 minutes

School	(write school name)	**Teacher**	(write name)
Date	(date)	**Class**	Grade 2
Subject	Science	**Enrolment**	Boys ___ Girls ___ Total ___
Time	80 minutes	**Topic**	Plants

Learners with visual impairment touch real plants to find the root, stem, leaf, flower and fruit, then follow the life cycle from seed to seedling to adult plant to fruits and seeds using real objects and tactile models. Two periods of 40 minutes.

Specific outcomes

By the end of the lesson, learners should be able to:

1. Identify the root, stem, leaf, flower and fruit by touch
2. Arrange the stages of a plant's life cycle in order
3. Explain the stages in simple sentences

Prior knowledge

- Learners have touched plants
- Learners know seeds such as beans and maize

Teaching and learning materials

- Real plants with root, stem, leaves, flowers and fruit
- Dry seeds such as beans and maize
- Seedlings in containers
- Tactile charts or models
- Braille labels
- Clay or playdough, sticks and string
- Soil and pots

References

Ministry of Education (CDC) Grade 2 Science syllabus and module; 25Schools learners' note: Plants.

Lesson development

Stage and time	Teacher activities	Learner activities
Period 1 Present and practice 20 min	Ask whether learners have touched a plant and what it felt like. Give each learner a real plant or plant parts to touch. Introduce each part one by one: the root is under the soil and holds the plant, the stem supports it, the leaf is usually flat and soft, the flower is colourful or scented, the fruit contains seeds. Learners match Braille labels and sort mixed parts into groups.	Touch the plant, name the parts and sort them.
Period 1 Produce and closure 20 min	Learners make a plant model with clay, sticks and string showing the parts and explain it. Go to the school garden to touch real plants. Give more plants or models for learners to identify parts alone.	Model the plant and name its parts.
Period 2 Present and practice 20 min	Show dry seeds, a seedling and a mature plant. Learners touch each. Use simple repeated language: this is a seed, it is small and hard; this is a seedling, it is young and soft. Tell the story of a seed that grows into a plant with fruits. Learners arrange objects in order and act the stages by curling like a seed and standing tall like a plant.	Touch, repeat the stages and act them.
Period 2 Produce and closure 20 min	Learners arrange tactile materials in order alone and explain the life cycle in their own words. Learners plant a seed in soil and water it. Check that each learner names at least three stages and explains them in simple sentences.	Arrange the stages and explain.

Teacher's content notes

Read these before the lesson. They are what you need to know, not what to copy onto the board.

Parts of a plant

Root: found under the soil, holds the plant. Stem: supports the plant. Leaf: usually flat and soft. Flower: colourful or scented. Fruit: contains seeds.

Life cycle

A seed is small and hard. It grows into a young, soft seedling. The seedling becomes an adult plant with flowers. The plant produces fruits with seeds inside.

Importance

Plants are important for food, medicine, shelter and income.

Questions to ask during the lesson

Question	Expected answer
The teacher holds up a whole plant in class and asks Chanda to feel the part at the bottom that is thin and under the soil. (a) What is this part called. (b) What does it do. (c) Which part supports the plant above it.	(a) Root. (b) Holds the plant. (c) Stem.
The teacher gives learners a dry bean, a young soft plant and a big plant with flowers and asks them to say what happens as a plant grows. (a) What is the dry bean. (b) What is the young soft plant. (c) What comes later on the big plant.	(a) A seed. (b) A seedling. (c) Fruits with seeds.
During the role-play the teacher asks learners to curl like a seed and then stand tall like a plant while naming each stage out loud for the class. (a) What do they act first. (b) What do they act in between. (c) What do they act last.	(a) Seed. (b) Seedling. (c) Adult plant.

Worked examples for the board

Naming parts by touch

Step 1: Hold the plant. Step 2: Touch the thin part under the soil. It is the root. Step 3: Feel the hard part above it. It is the stem. Step 4: Feel the flat soft part. It is the leaf.

Ordering the life cycle

Step 1: Put the seed first. Step 2: Put the seedling next. Step 3: Put the plant with flowers next. Step 4: Put the fruits with seeds last.

Board plan

Write the title Plants. List the five parts, then draw the life cycle as four steps joined by arrows.



The finished board

Mistakes to expect

Learners often think	Put it right
The seed is already a big plant.	Let learners feel a dry seed, then a seedling, then a big plant and say how they differ.
Only the leaves are parts of a plant.	Give learners a whole plant and let them find the root, stem, leaf, flower and fruit by touch.

Differentiation

Learners who struggle

Use one real plant and teach one part at a time with hand guidance, then name it aloud.

Learners who finish early

Ask learners to tell the plant life cycle to a partner using only their own words.

Hearing or visual impairment

Give each learner real plant parts to touch, describe every object aloud, use Braille labels and pair learners with a helper for the school garden walk.

No projector, no printing

Use bean or maize seeds, a weed with roots, and soil in a tin or plastic bottle.

If time is short

Keep touching the plant parts and ordering the four stages. Plant the seed at home.

Evaluation

Question or task	A correct answer shows
The teacher gives Bupe a small plant and asks her to point to parts as she names them. (a) Name the part under the soil. (b) Name the part that contains seeds. (c) Name the part that supports the plant.	(a) Root. (b) Fruit. (c) Stem.
The teacher gives Mwamba tactile objects for a seed, a seedling, a flowering plant and a fruiting plant and asks him to arrange them and explain. (a) Which comes first. (b) Which comes after the seed. (c) Which stage has seeds inside.	(a) The seed. (b) The seedling. (c) The fruit.

Homework

Njavwa's family grows beans in their garden. She picks one bean seed, plants it in a tin with soil and waters it. (a) What will the seed grow into first. (b) Name one part of a bean plant. (c) Name one thing plants give us.

Extra practice with answers

Question	Answer
1. Mulenga is given a tomato plant in the school garden and the teacher asks him to find the part that contains seeds. (a) Name this part. (b) Which part is colourful or scented. (c) Which part holds the plant in the soil.	(a) Fruit. (b) Flower. (c) Root.
2. Bupe has a bean seed, a seedling and a flowering plant on her desk, all mixed up, and the teacher asks her to order them. (a) Which goes first. (b) Which goes second. (c) Which goes third.	(a) Seed. (b) Seedling. (c) Flowering plant.

3. Njavwa's mother grows maize and sells some at the market in Feira to pay school fees. A friend asks why plants matter. (a) Name one thing plants give us. (b) Name another. (c) Which one did Njavwa's mother use.	(a) Food. (b) Medicine, shelter or income. (c) Food and income.
4. Mwamba plants a maize seed in soil and waters it every morning for two weeks, and a young soft plant comes up. His teacher asks him to explain. (a) What did he plant. (b) What is the young plant. (c) What does it need to grow.	(a) A seed. (b) A seedling. (c) Water.

Answers to the learners' check-yourself questions

1. Name three parts of a plant.
   Root, stem, leaf, flower or fruit.
2. Which part holds the plant in the soil.
   The root.
3. What comes after the seed.
   The seedling.
4. Name one thing plants give us.
   Food, medicine, shelter or income.
5. Mulenga plants a bean seed in a small pot at home and waters it every day. After some days a young soft plant comes out. (a) What was planted. (b) What is the young plant called. (c) What must he keep giving it.
   (a) A seed. (b) A seedling. (c) Water.
6. Chanda touches a plant at school. One part is under the soil and thin. Another part is flat and soft. (a) Name the part under the soil. (b) Name the flat and soft part. (c) What does the part under the soil do.
   (a) The root. (b) The leaf. (c) It holds the plant.

Teacher's reflection

What went well:

What I will change next time:

Learners who need follow-up: