Grade 11 Agriculture

Term 2 - 60 complete lesson plans

Ready to teach, in the KICD lesson-plan format | 40-minute lessons | PDF and editable Word

ABOUT THIS PACK

60 complete, ready-to-teach Grade 11 Agriculture lesson plans for Term 2, covering crop production structures, digestive systems of animals, animal health: parasite control, structures in animal production and aquaculture.

TOPICS IN THIS PACK

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1.6	Crop production structures	13
2.1	Digestive systems of animals	10
2.2	Animal health: parasite control	11
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2.4	Aquaculture	10

INSIDE EVERY LESSON PLAN

- The specific learning outcomes, key inquiry question, core competencies, values and PCIs, and the resources needed.
- A timed lesson flow: what the teacher does and what the learners do, from introduction to summary.
- The key content (a worked example, notes or a practical with its expected results), then four practice questions with the answers for the teacher.
- The common mistake to watch for, and ideas for learners who need support and for those ready for more.
- A four-level CBC assessment rubric (EE, ME, AE, BE), homework, and a blank reflection space to fill in after teaching.

A TASTE OF LESSON 1

Crop production structures: meaning and types

By the end of the lesson, the learner should be able to: a) explain what crop production structures are; b) name structures used in crop production and their uses

> **Crop production structures**
> Crop production structures are buildings and shelters on a farm that help to grow, protect or store crops. They control the conditions the crop grows in, or protect harvested produce, so that yield and quality improve.

You also receive this pack as an editable Word file, so you can change any lesson to suit your class before you print it. Lessons follow the order of the KICD curriculum design.

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Crop production structures: meaning and types

Strand 1.0 Crop Production > Sub-strand 1.6 Crop production structures | Lesson 1 of 13 | 40 minutes

SCHOOL	TEACHER	DATE
CLASS / STREAM	TIME	ROLL (B / G)

SPECIFIC LEARNING OUTCOME(S)

By the end of the lesson, the learner should be able to: a) explain what crop production structures are; b) name structures used in crop production and their uses

KEY INQUIRY QUESTION(S)

- How can farm structures enhance crop production?

CORE COMPETENCIES, VALUES AND PCIS IN THIS LESSON

COMPETENCY	**Critical thinking and problem solving**	Learners choose a method, check their answers and give reasons for their choices.
COMPETENCY	**Creativity and imagination**	Learners make up their own examples, patterns or ways of showing the idea.
VALUE	**Responsibility**	Learners look after shared materials and finish every task.
VALUE	**Respect**	Learners listen while others explain and accept correction politely.
PCI	**Life skills**	Learners practise decision making and working with others.
PCI	**Financial literacy**	Examples use shillings and cents, shopping, saving and simple budgets.

LEARNING RESOURCES

Charts and pictures of greenhouses, shade net houses, granaries and cribs | Video clips of greenhouse farming in Kenya | Manila paper, pencils, rulers and marker pens | Calculators for costing | Digital devices with safe internet access (where available)

ORGANISATION OF LEARNING

Whole class for introductions and the trip briefing; groups of four to five for the trip, sketch designs, costing and model making, with one learner as safety monitor; a class display at the end.

KEY WORDS

greenhouse | shade net house | granary | crib | UV-treated polythene | ventilation | gutter | foundation | frame | sketch design | bill of quantities | model | hermetic storage

THE LESSON AT A GLANCE

Introduction	Teacher models	Guided practice	On their own	Wrap-up
6 min	9 min	10 min	9 min	6 min

LESSON FLOW

Stage	Minutes	The teacher	The learners
Introduction	6	Greet the class and ask: "A farmer grows tomatoes in the open, and they keep getting blight in the rains. Another grows them under a plastic roof and harvests all year. What does the roof do?" Take two or three answers, link them to earlier work, then state today's outcome.	Answer the starter question, recall what they already know and read the outcome aloud.
Step 1: Teacher models	9	Take learners through "Crop production structures" (key ideas on the next page), explaining as you go. Use charts and pictures of greenhouses, shade net houses, granaries and cribs, video clips of greenhouse farming in Kenya, manila paper, pencils, rulers and marker pens. Ask learners to predict what comes next before you show it.	Watch, predict the next step, ask questions and note the key steps in their exercise books.
Step 2: Guided practice	10	Give questions 1 and 2. Move round the groups, ask "How do you know?" and correct errors kindly on the spot.	Work in pairs or small groups, explain each step to a partner and check one another's answers.
Step 3: Independent practice	9	Set questions 3 and 4 for individual work. Mark as you walk round and note who needs help in the next lesson.	Work on their own, then swap books with a partner to check.
Summary and conclusion	6	Ask two or three learners to state the key idea in their own words. Give this exit question and check the answers: "How does a granary help crop production?"	Say the key idea in their own words and answer the exit question in the exercise book.

KEY IDEAS

Crop production structures

Crop production structures are buildings and shelters on a farm that help to grow, protect or store crops. They control the conditions the crop grows in, or protect harvested produce, so that yield and quality improve.

Main types: greenhouses (frames covered with clear UV-treated polythene or glass, which trap warmth and protect crops from rain, wind and pests); shade net houses (frames covered with shade net that cuts strong sun, reduces wind, hail and pests and keeps humidity); nursery shades (simple shelters for seedlings); granaries and cribs (stores for grain and maize cobs); produce stores and cold rooms (for vegetables, fruits and seed); and irrigation structures such as water tanks and pans.

In Kenya greenhouses and shade nets are used for tomatoes, capsicum, cucumber, kale, flowers and seedlings; granaries and hermetic stores protect maize and beans after harvest.

PRACTICE QUESTIONS - WITH ANSWERS FOR THE TEACHER

No.	Question	Answer
1	What is a crop production structure?	**A building or shelter on the farm that helps to grow, protect or store crops.**
2	Name four crop production structures.	**Any four of: greenhouse, shade net house, nursery shade, granary, crib, produce store, cold room, water tank or pan.**
3	Name three crops commonly grown in greenhouses in Kenya.	**Any three of: tomatoes, capsicum, cucumber, kale, flowers, seedlings.**
4	How does a granary help crop production?	**It protects harvested grain from pests, moisture and theft, reducing post-harvest losses.**

WATCH OUT FOR

Learners think structures are only for growing. Storage structures are crop production structures too.

ASSESSMENT RUBRIC - THE FOUR CBC LEVELS

Level	What the learner can do
Exceeds expectations (EE)	Can explain what crop production structures are confidently and accurately, explain the method used, and apply the idea to new or unfamiliar problems.
Meets expectations (ME)	Can explain what crop production structures are accurately in familiar situations; notices and corrects slips without help.
Approaches expectations (AE)	Can partly explain what crop production structures are, or does so with prompts from the teacher or a partner; makes some errors.
Below expectations (BE)	Cannot yet explain what crop production structures are without direct help; needs the idea taught again with concrete objects.

SUPPORT AND EXTENSION

Learners who need support	Show pictures of six structures and let learners say whether each is for growing or for storing.
Learners ready for more	Why can a greenhouse farmer sell tomatoes at a better price in the long rains than an open-field farmer? (Answer: The greenhouse crop is protected from rain and blight, so it is healthy and harvested when open-field supply is low and prices high)
Inclusion	Seat learners with low vision near the board and read aloud whatever you write; use large, clear, tactile materials; allow extra time; pair with a patient partner; use gestures or Kenyan Sign Language for the key words.

HOMEWORK AND FOLLOW-UP

Redo questions 3 and 4 neatly in the exercise book. Then tell someone at home what you learned about "crop production structures: meaning and types" and bring one question of your own to ask next lesson.

TEACHER SELF-CHECK

- Did every learner get a turn to handle materials or explain their thinking?
- Did most learners meet the outcome? Write down the names of those who did not.
- Was the pace right — did any step take too long or too short a time?
- Which competency and value did I see learners showing?
- What will I change the next time I teach this lesson?

REFLECTION ON THE LESSON / SELF-REMARKS

Write this after teaching - what worked, what to change, which learners need follow-up.

ELIMU254

The greenhouse: parts and how it works

Strand 1.0 Crop Production > Sub-strand 1.6 Crop production structures | Lesson 2 of 13 | 40 minutes

SCHOOL	TEACHER	DATE
CLASS / STREAM	TIME	ROLL (B / G)

SPECIFIC LEARNING OUTCOME(S)

By the end of the lesson, the learner should be able to: a) describe the parts of a greenhouse and their functions; b) explain how a greenhouse creates good growing conditions

KEY INQUIRY QUESTION(S)

- How can farm structures enhance crop production?

CORE COMPETENCIES, VALUES AND PCIS IN THIS LESSON

COMPETENCY	**Critical thinking and problem solving**	Learners choose a method, check their answers and give reasons for their choices.
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