Grade 10 Agriculture

Term 2 - 61 complete lesson plans

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

ABOUT THIS PACK

61 complete, ready-to-teach Grade 10 Agriculture lesson plans for Term 2, covering general crop harvesting, breeds of livestock, animal handling and safety, general animal health, bee keeping and animal rearing project.

TOPICS IN THIS PACK

Topic	Name	Lessons
1.7	General Crop Harvesting	10
2.1	Breeds of Livestock	10
2.2	Animal Handling and Safety	9
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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

Factors that determine when a crop is harvested

By the end of the lesson, the learner should be able to: a) explain the factors that decide the time of harvesting; b) relate the time of harvest to quantity and quality of the produce

> **Deciding when to harvest**
> Harvesting is the gathering of the mature crop from the field. The right time depends on several factors: the stage of growth or maturity of the crop...

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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ELIMU254

Factors that determine when a crop is harvested

Strand 1.0 Crop Production > Sub-strand 1.7 General Crop Harvesting | Lesson 1 of 10 | 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 the factors that decide the time of harvesting; b) relate the time of harvest to quantity and quality of the produce

KEY INQUIRY QUESTION(S)

- How does harvesting process affect the quantity and quality of crop produce?

CORE COMPETENCIES, VALUES AND PCIS IN THIS LESSON

COMPETENCY	**Citizenship**	Learners take turns, listen to others and link the work to life in their community.
COMPETENCY	**Critical thinking and problem solving**	Learners choose a method, check their answers and give reasons for their choices.
VALUE	**Integrity**	Learners record their own honest results and mark work truthfully.
VALUE	**Unity**	Learners share materials fairly and work as one team.
PCI	**Life skills**	Learners practise decision making and working with others.
PCI	**Learner support programme**	Learners seek and give guidance and support to one another.

LEARNING RESOURCES

Charts and photographs showing signs of maturity of maize, Irish potatoes and sweet potatoes | Video clips on harvesting and post-harvest handling | Manila paper and marker pens for posters and reports | Notebooks, pencils and rulers | Digital devices with safe internet access (where available)

ORGANISATION OF LEARNING

Groups of four to six working together on the harvest with rotating roles (harvester, carrier, sorter, recorder); whole class for the safety talk, the resource person and the summaries; pairs for measuring and recording; individual harvest records.

KEY WORDS

maturity | harvesting | moisture content | curing | grading | post-harvest loss | winnowing | hermetic | yield | aflatoxin

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 harvests maize too early, another too late. What might each lose?" 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 "Deciding when to harvest" (key ideas on the next page), explaining as you go. Use charts and photographs showing signs of maturity of maize, Irish potatoes and sweet potatoes, video clips on harvesting and post-harvest handling, manila paper and marker pens for posters and reports. 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: "Explain how the purpose of the crop affects the time of harvest."	Say the key idea in their own words and answer the exit question in the exercise book.

KEY IDEAS

Deciding when to harvest

Harvesting is the gathering of the mature crop from the field. The right time depends on several factors: the stage of growth or maturity of the crop (a crop harvested too early is small and poor in quality; harvested too late it may shed grain, rot, be eaten by pests or lose quality); the purpose (green maize for roasting is picked while the kernels are soft, dry maize for grain much later; a vegetable for the market when tender; seed only when fully dry); the variety, which sets how many days to maturity; the weather (harvest and dry in dry weather because rain causes mould and rotting); the market and price; the availability of labour, tools and storage; and the moisture content of the produce.

Harvesting at the right stage gives the highest quantity (yield) and the best quality (size, colour, taste, nutrition, keeping time) and so the best price. Poor timing and poor handling at harvest waste all the work put into growing the crop.

The importance of the harvesting process: it is the point at which the farmer turns months of work into food and income, and mistakes made here cannot be corrected later.

PRACTICE QUESTIONS - WITH ANSWERS FOR THE TEACHER

No.	Question	Answer
1	State four factors that determine the time of harvesting.	**For example: stage of maturity; purpose; variety; weather; market; labour; moisture content.**
2	Explain why harvesting is best done in dry weather.	**Rain makes produce wet, so it moulds and rots and is hard to dry.**
3	State one loss that results from harvesting too late.	**For example: shedding of grain; rotting; pest damage; lower quality.**
4	Explain how the purpose of the crop affects the time of harvest.	**Green maize is picked early while soft; grain maize is left to dry on the plant until hard.**

WATCH OUT FOR

Learners think that a crop should be harvested as soon as possible. The correct stage differs by crop and purpose.

ASSESSMENT RUBRIC - THE FOUR CBC LEVELS

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

SUPPORT AND EXTENSION

Learners who need support	Give a table with crop and purpose and ask learners to fill in what stage to harvest.
Learners ready for more	Why might a farmer delay harvest waiting for a better price? What risk is taken? (Answer: Prices may rise, but the crop may be spoiled by pests, rain or theft while it waits)
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 "factors that determine when a crop is harvested" 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.