Grade 8 Agriculture and Nutrition

Term 1 - 39 complete lesson plans

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

ABOUT THIS PACK

39 complete, ready-to-teach Grade 8 Agriculture and Nutrition lesson plans for Term 1, covering soil conservation measures, water harvesting and storage, kitchen and backyard gardening and poultry rearing in a fold.

TOPICS IN THIS PACK

Topic	Name	Lessons
1.1	Soil Conservation Measures	10
1.2	Water Harvesting and Storage	9
2.1	Kitchen and Backyard Gardening	9
2.2	Poultry Rearing in a Fold	11

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

Soil erosion and why soil must be conserved

By the end of the lesson, the learner should be able to: a) explain soil erosion and its causes; b) state why soil conservation is important

> **Losing our soil**
> Soil erosion is the removal of the top fertile soil by running water, wind or animals.
> Causes: bare soil (no plant cover), farming on steep slopes without structures, overgrazing, cutting trees, ploughing up and down the slope, heavy rain.

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.

CONTENTS

No.	Lesson	Topic	Page
1	Soil erosion and why soil must be conserved	1.1 Soil Conservation Measures	4
2	Methods of soil conservation	1.1 Soil Conservation Measures	7
3	Marking contours	1.1 Soil Conservation Measures	10
4	Constructing trash lines	1.1 Soil Conservation Measures	13
5	Constructing stone lines	1.1 Soil Conservation Measures	16
6	Constructing soil bunds	1.1 Soil Conservation Measures	19
7	Strip cropping and grassed waterways	1.1 Soil Conservation Measures	22
8	Building a farm model	1.1 Soil Conservation Measures	25
9	Maintaining conservation structures	1.1 Soil Conservation Measures	28
10	Caring for soil	1.1 Soil Conservation Measures	31
11	Why harvest and store water	1.2 Water Harvesting and Storage	34
12	Ways of storing harvested water	1.2 Water Harvesting and Storage	37
13	Roof water harvesting	1.2 Water Harvesting and Storage	40
14	Calculating how much water a roof can collect	1.2 Water Harvesting and Storage	43
15	Harvesting water in the school (part 1)	1.2 Water Harvesting and Storage	46
16	Harvesting water in the school (part 2)	1.2 Water Harvesting and Storage	49
17	Keeping stored water safe	1.2 Water Harvesting and Storage	52
18	Maintaining water harvesting structures	1.2 Water Harvesting and Storage	55
19	Responsible use of harvested water	1.2 Water Harvesting and Storage	58
20	Roles of kitchen and backyard gardens	2.1 Kitchen and Backyard Gardening	61
21	Planning a kitchen garden	2.1 Kitchen and Backyard Gardening	64
22	Preparing the garden beds	2.1 Kitchen and Backyard Gardening	67
23	Planting by direct sowing	2.1 Kitchen and Backyard Gardening	70
24	Raising and transplanting seedlings	2.1 Kitchen and Backyard Gardening	73
25	Caring for the garden: watering, mulching and weeding	2.1 Kitchen and Backyard Gardening	76
26	Growing herbs and spices	2.1 Kitchen and Backyard Gardening	79
27	Harvesting and using garden produce	2.1 Kitchen and Backyard Gardening	82

28	Adopting kitchen gardens at home	2.1 Kitchen and Backyard Gardening	85
29	What is a poultry fold?	2.2 Poultry Rearing in a Fold	88
30	Parts and design of a fold	2.2 Poultry Rearing in a Fold	91
31	Choosing and preparing materials	2.2 Poultry Rearing in a Fold	94
32	Constructing the fold (part 1): the frame	2.2 Poultry Rearing in a Fold	97
33	Constructing the fold (part 2): mesh, roof and door	2.2 Poultry Rearing in a Fold	100
34	Stocking the fold	2.2 Poultry Rearing in a Fold	103
35	Feeding and watering	2.2 Poultry Rearing in a Fold	106
36	Moving the fold and sanitation	2.2 Poultry Rearing in a Fold	109
37	Protection from predators, weather and disease	2.2 Poultry Rearing in a Fold	112
38	Keeping poultry records	2.2 Poultry Rearing in a Fold	115
39	Responsibility in poultry rearing	2.2 Poultry Rearing in a Fold	118

Soil erosion and why soil must be conserved

Strand 1.0 Conservation of Resources > Sub-strand 1.1 Soil Conservation Measures | 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 soil erosion and its causes; b) state why soil conservation is important

KEY INQUIRY QUESTION(S)

- How can we conserve soil in the environment?

CORE COMPETENCIES, VALUES AND PCIS IN THIS LESSON

COMPETENCY	**Creativity and imagination**	Learners make up their own examples, patterns or ways of showing the idea.
COMPETENCY	**Digital literacy**	Learners use a phone, tablet or the class computer to explore or check the idea.
VALUE	**Unity**	Learners share materials fairly and work as one team.
VALUE	**Responsibility**	Learners look after shared materials and finish every task.
PCI	**Environmental awareness**	Examples link to caring for the school and home environment.

LEARNING RESOURCES

Pictures of soil conservation structures | Chart of erosion types | Learners' exercise books

ORGANISATION OF LEARNING

Whole class for the introduction and the summary; pairs or groups of four to five for guided practice; individual work for the independent tasks.

KEY WORDS

soil erosion | soil conservation | strip cropping | grassed waterway | stone line | trash line | soil bund | contour

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

Inside this plan: the step-by-step lesson flow with what the teacher and learners do, the key content, practice questions with answers, a common mistake to watch for, an assessment rubric on the four CBC levels, support and extension ideas, homework and a reflection page.

LESSON FLOW

Stage	Minutes	The teacher	The learners
Introduction	6	Greet the class and ask: "Key question: how can we conserve soil in the environment? Where does the soil go when heavy rain falls on a bare slope?" 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 "Losing our soil" (key ideas on the next page), explaining as you go. Use pictures of soil conservation structures, chart of erosion types, learners' exercise books. 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: "What is soil conservation?"	Say the key idea in their own words and answer the exit question in the exercise book.

KEY IDEAS

Losing our soil

Soil erosion is the removal of the top fertile soil by running water, wind or animals.

Causes: bare soil (no plant cover), farming on steep slopes without structures, overgrazing, cutting trees, ploughing up and down the slope, heavy rain.

Effects: loss of fertile topsoil, gullies, low crop yields, silting of rivers and dams, floods.

Soil conservation means protecting soil from erosion and keeping it fertile.

PRACTICE QUESTIONS - WITH ANSWERS FOR THE TEACHER

No.	Question	Answer
1	Define soil erosion.	**Removal of fertile topsoil by water, wind or animals.**
2	Give three causes of soil erosion.	**Bare soil, overgrazing and cutting trees.**
3	Give two effects of soil erosion.	**Low yields and silted rivers.**
4	What is soil conservation?	**Protecting soil from erosion and keeping it fertile.**

WATCH OUT FOR

Link to what learners see in their own area.

ASSESSMENT RUBRIC - THE FOUR CBC LEVELS

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

SUPPORT AND EXTENSION

Learners who need support	Show before and after pictures of eroded land.
Learners ready for more	Why is ploughing across a slope better than up and down? (Answer: Furrows across the slope slow down running water)
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 "soil erosion and why soil must be conserved" 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.

Methods of soil conservation

Strand 1.0 Conservation of Resources > Sub-strand 1.1 Soil Conservation Measures | Lesson 2 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) describe strip cropping, grassed waterways, stone lines, trash lines and soil bunds; b) explain how each works

KEY INQUIRY QUESTION(S)

- How can we conserve soil in the environment?

CORE COMPETENCIES, VALUES AND PCIS IN THIS LESSON

COMPETENCY	**Creativity and imagination**	Learners make up their own examples, patterns or ways of showing the idea.
COMPETENCY	**Digital literacy**	Learners use a phone, tablet or the class computer to explore or check the idea.
VALUE	**Unity**	Learners share materials fairly and work as one team.
VALUE	**Responsibility**	Learners look after shared materials and finish every task.
PCI	**Environmental awareness**	Examples link to caring for the school and home environment.

LEARNING RESOURCES

Pictures of soil conservation structures | Chart of erosion types | Learners' exercise books

ORGANISATION OF LEARNING

Whole class for the introduction and the summary; pairs or groups of four to five for guided practice; individual work for the independent tasks.

KEY WORDS

soil erosion | soil conservation | strip cropping | grassed waterway | stone line | trash line | soil bund | contour

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

Inside this plan: the step-by-step lesson flow with what the teacher and learners do, the key content, practice questions with answers, a common mistake to watch for, an assessment rubric on the four CBC levels, support and extension ideas, homework and a reflection page.

LESSON FLOW

Stage	Minutes	The teacher	The learners
Introduction	6	Greet the class and ask: "What structures have you seen on farms on hillsides?" 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 "Five methods" (key ideas on the next page), explaining as you go. Use pictures of soil conservation structures, chart of erosion types, learners' exercise books. 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: "Along which line are bunds and stone lines built?"	Say the key idea in their own words and answer the exit question in the exercise book.

KEY IDEAS

Five methods

Strip cropping: growing crops in strips across the slope, alternating a row crop (maize) with a cover crop or grass, so running water is slowed.

Grassed waterways: channels planted with grass that carry excess water safely off the farm.

Stone lines: lines of stones laid along the contour to slow water and trap soil.

Trash lines: crop residues (maize stalks, weeds) laid along the contour.

Soil bunds: ridges of soil built along the contour to hold water and soil.

Search digital or print resources for pictures of each.

PRACTICE QUESTIONS - WITH ANSWERS FOR THE TEACHER

No.	Question	Answer
1	What is strip cropping?	**Growing crops in alternate strips across the slope.**
2	What is a grassed waterway?	**A grass-planted channel that carries excess water away.**
3	What material makes a trash line?	**Crop residues.**
4	Along which line are bunds and stone lines built?	**Along the contour.**