Grade 8 Integrated Science

Term 3 - 54 complete lesson plans

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

ABOUT THIS PACK

54 complete, ready-to-teach Grade 8 Integrated Science lesson plans for Term 3, covering reproduction in human beings, transformation of energy and pressure.

TOPICS IN THIS PACK

Topic	Name	Lessons
2.3	Reproduction in human beings	18
3.1	Transformation of Energy	20
3.2	Pressure	16

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

Ground rules and the reproductive systems

By the end of the lesson, the learner should be able to: a) agree ground rules for learning about reproduction; b) name the main parts of the male and female reproductive systems

> **Learning respectfully**
> Ground rules: use correct terms; no laughing at others; no personal questions; what is shared stays in class; anonymous questions go in the question box.
> Female parts (recap): ovaries (make eggs), oviducts (tubes carrying the egg), uterus (womb), cervix, vagina.

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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Ground rules and the reproductive systems

Strand 2.0 Living Things and the Environment > Sub-strand 2.3 Reproduction in human beings | Lesson 1 of 18 | 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) agree ground rules for learning about reproduction; b) name the main parts of the male and female reproductive systems

KEY INQUIRY QUESTION(S)

- How best can challenges related to the menstrual cycle be managed?

CORE COMPETENCIES, VALUES AND PCIS IN THIS LESSON

COMPETENCY	**Learning to learn**	Learners say what they found easy or hard and decide their next step.
COMPETENCY	**Self-efficacy**	Learners attempt each task with confidence and see that effort improves results.
VALUE	**Love**	Learners help a classmate who is stuck.
VALUE	**Respect**	Learners listen while others explain and accept correction politely.
PCI	**Health promotion issues**	Examples link to healthy habits at home and at school.

LEARNING RESOURCES

Charts of the female and male reproductive systems | A 28-day cycle calendar chart | A question box | 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

menstrual cycle | menstruation | ovulation | ovary | oviduct | uterus | sperm | ovum (egg) | fertilisation | implantation | STI

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: "Why should we use correct scientific words when talking about our bodies?" 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 "Learning respectfully" (key ideas on the next page), explaining as you go. Use charts of the female and male reproductive systems, a 28-day cycle calendar chart, a question box. 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: "Give one class ground rule."	Say the key idea in their own words and answer the exit question in the exercise book.

KEY IDEAS

Learning respectfully

Ground rules: use correct terms; no laughing at others; no personal questions; what is shared stays in class; anonymous questions go in the question box.

Female parts (recap): ovaries (make eggs), oviducts (tubes carrying the egg), uterus (womb), cervix, vagina.

Male parts (recap): testes (make sperm), sperm ducts, penis.

All these changes are a normal part of growing up.

PRACTICE QUESTIONS - WITH ANSWERS FOR THE TEACHER

No.	Question	Answer
1	Which organ makes eggs?	**The ovary.**
2	Which organ makes sperm?	**The testis.**
3	What is another name for the uterus?	**The womb.**
4	Give one class ground rule.	**For example no laughing at others.**

WATCH OUT FOR

Keep a calm, matter-of-fact tone. Some schools teach parts of this in single-sex groups; follow school policy.

ASSESSMENT RUBRIC - THE FOUR CBC LEVELS

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

SUPPORT AND EXTENSION

Learners who need support	Use labelled charts; avoid photographs.
Learners ready for more	Why is it important for boys to learn about menstruation too? (Answer: So they understand and support girls, and stigma ends)
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 "ground rules and the reproductive systems" 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.

What is the menstrual cycle?

Strand 2.0 Living Things and the Environment > Sub-strand 2.3 Reproduction in human beings | Lesson 2 of 18 | 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 menstrual cycle; b) state its usual length

KEY INQUIRY QUESTION(S)

- How best can challenges related to the menstrual cycle be managed?

CORE COMPETENCIES, VALUES AND PCIS IN THIS LESSON

COMPETENCY	**Learning to learn**	Learners say what they found easy or hard and decide their next step.
COMPETENCY	**Self-efficacy**	Learners attempt each task with confidence and see that effort improves results.
VALUE	**Love**	Learners help a classmate who is stuck.
VALUE	**Respect**	Learners listen while others explain and accept correction politely.
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LEARNING RESOURCES

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ORGANISATION OF LEARNING

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KEY WORDS

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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 best can challenges related to the menstrual cycle be managed? First, what is the cycle?" 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 "A monthly cycle" (key ideas on the next page), explaining as you go. Use charts of the female and male reproductive systems, a 28-day cycle calendar chart, a question box. 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: "From which day is a cycle counted?"	Say the key idea in their own words and answer the exit question in the exercise book.

KEY IDEAS

A monthly cycle

From puberty, a girl's body prepares for a possible pregnancy each month. This repeating process is the menstrual cycle.

A cycle is counted from the first day of one period to the first day of the next. It is often about 28 days, but anything from about 21 to 35 days is normal, and cycles are often irregular in the first years.

Menstruation (a period) is when the lining of the uterus, with some blood, leaves the body through the vagina, usually for 3 to 7 days.

PRACTICE QUESTIONS - WITH ANSWERS FOR THE TEACHER

No.	Question	Answer
1	What is menstruation?	**The shedding of the uterus lining, with some blood, through the vagina.**
2	How long is a typical cycle?	**About 28 days (21 to 35 is normal).**
3	How long does a period usually last?	**About 3 to 7 days.**
4	From which day is a cycle counted?	**The first day of a period.**