Grade 7 Integrated Science

Term 3 - 52 complete lesson plans

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

ABOUT THIS PACK

52 complete, ready-to-teach Grade 7 Integrated Science lesson plans for Term 3, covering human excretory system, electrical energy and magnetism.

TOPICS IN THIS PACK

Topic	Name	Lessons
3.2	Human Excretory System	18
4.1	Electrical Energy	18
4.2	Magnetism	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

Excretion and excretory organs

By the end of the lesson, the learner should be able to: a) explain excretion; b) name the excretory organs

> **Excretion**
> Excretion is the removal of waste products made by the body's activities.
> If wastes build up, they poison the body.

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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Excretion and excretory organs

Strand 3.0 Living things and the Environment > Sub-strand 3.2 Human Excretory System | 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) explain excretion; b) name the excretory organs

KEY INQUIRY QUESTION(S)

- What is the role of the excretory system?
- How can a healthy excretory system be maintained?

CORE COMPETENCIES, VALUES AND PCIS IN THIS LESSON

COMPETENCY	**Communication and collaboration**	Learners explain their thinking to a partner and report their findings to the group.
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	**Unity**	Learners share materials fairly and work as one team.
PCI	**Health promotion issues**	Examples link to healthy habits at home and at school.

LEARNING RESOURCES

Charts or models of the skin and urinary system | Hand lenses | Print and digital materials on kidney health | 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

excretion | excretory organ | epidermis | dermis | sweat gland | sweat duct | sweat pore | kidney | ureter | bladder | urethra | renal artery | renal vein | urine

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: "Key question: what is the role of the excretory system? What would happen if a house never had its rubbish removed?" 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 "Excretion" (key ideas on the next page), explaining as you go. Use charts or models of the skin and urinary system, hand lenses, print and digital materials on kidney health. 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: "Is passing faeces excretion?"	Say the key idea in their own words and answer the exit question in the exercise book.

KEY IDEAS

Excretion
Excretion is the removal of waste products made by the body's activities.
If wastes build up, they poison the body.
Excretory organs: the skin (sweat), the lungs (carbon dioxide and water vapour) and the kidneys (urine).
Removing undigested food (faeces) is egestion, not excretion, because that food was never part of the body's cells.

PRACTICE QUESTIONS - WITH ANSWERS FOR THE TEACHER

No.	Question	Answer
1	What is excretion?	**The removal of waste products made by the body**
2	Name three excretory organs.	**Skin, lungs and kidneys**
3	Why must wastes be removed?	**They would poison the body**
4	Is passing faeces excretion?	**No, it is egestion**

WATCH OUT FOR

Confusing excretion with egestion.

ASSESSMENT RUBRIC - THE FOUR CBC LEVELS

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

SUPPORT AND EXTENSION

Learners who need support	Draw a body outline and mark the three organs.
Learners ready for more	Why are the lungs both a breathing and an excretory organ? (Answer: They take in oxygen and remove carbon dioxide)
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 "excretion and excretory organs" 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.

Waste products and where they leave the body

Strand 3.0 Living things and the Environment > Sub-strand 3.2 Human Excretory System | 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 match waste products to the organs that excrete them

KEY INQUIRY QUESTION(S)

- What is the role of the excretory system?
- How can a healthy excretory system be maintained?

CORE COMPETENCIES, VALUES AND PCIS IN THIS LESSON

COMPETENCY	**Communication and collaboration**	Learners explain their thinking to a partner and report their findings to the group.
COMPETENCY	**Self-efficacy**	Learners attempt each task with confidence and see that effort improves results.
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KEY WORDS

excretion | excretory organ | epidermis | dermis | sweat gland | sweat duct | sweat pore | kidney | ureter | bladder | urethra | renal artery | renal vein | urine

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 does sweat taste salty?" 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 "Wastes and organs" (key ideas on the next page), explaining as you go. Use charts or models of the skin and urinary system, hand lenses, print and digital materials on kidney health. 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: "Name a waste removed by both the skin and kidneys."	Say the key idea in their own words and answer the exit question in the exercise book.

KEY IDEAS

Wastes and organs

Skin: sweat, containing excess water and salts.

Lungs: carbon dioxide (carbon IV oxide) and water vapour, breathed out.

Kidneys: urine, containing excess water, salts and other wastes.

Search print or digital media to confirm the waste each organ removes.

PRACTICE QUESTIONS - WITH ANSWERS FOR THE TEACHER

No.	Question	Answer
1	Which organ removes carbon dioxide?	**The lungs**
2	What is in sweat?	**Water and salts**
3	Which organ produces urine?	**The kidneys**
4	Name a waste removed by both the skin and kidneys.	**Excess water (also salts)**

WATCH OUT FOR

Saying the lungs remove oxygen.