Grade 9 Pre-Technical Studies

Term 1 - 37 complete lesson plans

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

ABOUT THIS PACK

37 complete, ready-to-teach Grade 9 Pre-Technical Studies lesson plans for Term 1, covering safety on raised platforms, handling hazardous substances, self-exploration and career development and oblique projection.

TOPICS IN THIS PACK

Topic	Name	Lessons
1.1	Safety on Raised Platforms	8
1.2	Handling Hazardous Substances	9
1.3	Self-Exploration and Career Development	6
2.1	Oblique Projection	14

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

Types of raised platforms

By the end of the lesson, the learner should be able to: a) define a raised platform; b) identify types used in tasks

> **Working above the ground**
> A raised platform is any surface used to work above the ground or floor level.
> Types: ladders (step ladder, extension ladder), trestles, steps and stools, stands, mobile raised platforms (scaffold towers with wheels), work benches, ramps.

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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Types of raised platforms

Strand 1.0 Foundations of Pre-Technical Studies > Sub-strand 1.1 Safety on Raised Platforms | Lesson 1 of 8 | 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) define a raised platform; b) identify types used in tasks

KEY INQUIRY QUESTION(S)

- What is the importance of observing safety when working on raised platforms?

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	**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	**Love**	Learners help a classmate who is stuck.
VALUE	**Responsibility**	Learners look after shared materials and finish every task.
PCI	**Disaster risk reduction**	Developed through the activities in this lesson.
PCI	**Safety and security**	Learners follow safety rules when using materials and moving about.

LEARNING RESOURCES

Pictures of raised platforms | Digital or print resources | 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

raised platform | ladder | trestle | scaffold | ramp | work bench | risk | three points of contact

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: "Walk around the school: where do people work above the ground?" 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 "Working above the ground" (key ideas on the next page), explaining as you go. Use pictures of raised platforms, digital or print resources, 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: "Give one task done on a ladder."	Say the key idea in their own words and answer the exit question in the exercise book.

KEY IDEAS

Working above the ground

A raised platform is any surface used to work above the ground or floor level.

Types: ladders (step ladder, extension ladder), trestles, steps and stools, stands, mobile raised platforms (scaffold towers with wheels), work benches, ramps.

Uses: painting walls, fixing lights, picking fruit, loading lorries, building.

PRACTICE QUESTIONS - WITH ANSWERS FOR THE TEACHER

No.	Question	Answer
1	Define a raised platform.	**A surface used to work above ground or floor level.**
2	Name four types of raised platforms.	**For example ladder, trestle, scaffold and ramp.**
3	Which platform helps move loads up to a truck?	**A ramp.**
4	Give one task done on a ladder.	**For example painting or fixing lights.**

WATCH OUT FOR

Learners forget chairs and tables are used as platforms (unsafely). Discuss why they are unsafe.

ASSESSMENT RUBRIC - THE FOUR CBC LEVELS

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

SUPPORT AND EXTENSION

Learners who need support	Match pictures to names.
Learners ready for more	List raised platforms seen in your home and community. (Answer: Answers will vary)
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 "types of raised platforms" 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.

Uses of different raised platforms

Strand 1.0 Foundations of Pre-Technical Studies > Sub-strand 1.1 Safety on Raised Platforms | Lesson 2 of 8 | 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) match platforms to tasks; b) explain why each suits its task

KEY INQUIRY QUESTION(S)

- What is the importance of observing safety when working on raised platforms?

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	**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	**Love**	Learners help a classmate who is stuck.
VALUE	**Responsibility**	Learners look after shared materials and finish every task.
PCI	**Disaster risk reduction**	Developed through the activities in this lesson.
PCI	**Safety and security**	Learners follow safety rules when using materials and moving about.

LEARNING RESOURCES

Pictures of raised platforms | Digital or print resources | 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

raised platform | ladder | trestle | scaffold | ramp | work bench | risk | three points of contact

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: "Which platform would you use to paint a classroom ceiling?" 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 "Choosing a platform" (key ideas on the next page), explaining as you go. Use pictures of raised platforms, digital or print resources, 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: "Why are chairs unsafe platforms?"	Say the key idea in their own words and answer the exit question in the exercise book.

KEY IDEAS

Choosing a platform

Step ladder: short tasks indoors (changing bulbs). Extension ladder: reaching roofs and gutters. Trestles with planks: long tasks such as painting walls. Scaffolds: building work at height. Work bench: raised surface for making items. Ramp: moving wheelbarrows, wheelchairs and loads.

Choose by height needed, how long the task is, load to carry and stability.

Never use chairs, buckets or boxes as platforms.

PRACTICE QUESTIONS - WITH ANSWERS FOR THE TEACHER

No.	Question	Answer
1	Which platform suits changing a light bulb?	**A step ladder.**
2	Which suits long building work at height?	**A scaffold.**
3	Give two factors in choosing a platform.	**For example height and stability.**
4	Why are chairs unsafe platforms?	**They tip or slide easily.**

WATCH OUT FOR

Learners pick the tallest for every task. Choose what fits.