

RATIONALISED CBE LESSON PLANS

GRADE : 6

TERM : THREE

YEAR : 2025

LEARNING AREA: SCIENCE

TEACHERS NAME:

SCHOOL:.....

WEEK 1: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Light

Specific Learning Outcomes:

- By the end of the lesson, learners should be able to:

1. Demonstrate the movement of light through materials.
2. Draw ray diagrams of images formed on plane mirrors.
3. Appreciate the importance of the movement of light in everyday life.

Key Inquiry Questions:

- How does light travel through different materials?
- What happens when light reflects off a plane mirror?
- Why is the movement of light important in our everyday lives?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio-economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design
- Various materials for experimentation (transparent, translucent, and opaque objects, mirrors, light source)

Organisation of Learning:**Introduction (5 minutes):**

- Review the previous lesson on energy sources.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of how light interacts with different materials.

Lesson Development (25 minutes):**Step 1: Exploration of Light Movement**

- Conduct a hands-on activity where students use flashlights to test how light travels through different materials (transparent, translucent, and opaque).
- Ask students to observe and share what they see when light passes through or hits each material.

Step 2: Reflection and the Law of Reflection

- Introduce the concept of reflection and the law of reflection (the angle of incidence equals the angle of reflection).
- Set up an experiment with plane mirrors where learners can shine light at various angles.
- Have students record their observations and draw a simple ray diagram showing the incident ray, reflected ray, angle of incidence, and angle of reflection.

Step 3: Drawing Ray Diagrams

- Provide learners with a worksheet to practice drawing ray diagrams based on their previous experiment.
- Encourage them to label their diagrams correctly to reinforce their understanding of incident and reflected rays.

Step 4: Discussion on Everyday Importance of Light

- Engage the class in a discussion. Ask them to think about daily activities that involve light (e.g., using mirrors, reading with direct lighting).
- Help them identify how the movement of light affects their lives and influences technology (like cameras and eyeglasses).

Conclusion (5 minutes):

- Summarize key points learned: the movement of light through materials, the law of reflection, and everyday examples of light usage.

- Conduct a quick interactive activity where students share one new thing they learned today or one way they use light in their daily life.
- Prepare learners for the next session by giving a preview of topics related to colors and light absorption.

Extended Activities:

- Light and Color Experiment: Have students use prisms or CD cases to split light into different colors, then create a presentation about how colors form and their significance in nature.
- Reflection in Art: Ask students to create a simple art project using mirrors or reflection as a concept, exploring how artists use light in their works.

Teacher Self-Evaluation:

WEEK 1: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Light

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Demonstrate the movement of light through materials.
2. Draw ray diagrams of images formed on plane mirrors.
3. Appreciate the importance of movement of light in everyday life.

Key Inquiry Questions:

- How does light move through different materials (transparent, translucent, and opaque)?
- What experiment can we conduct to show the reflection of light on plane mirrors (law of reflection)?
- Why is the movement of light important in our everyday lives?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design

Organisation of Learning

Introduction (5 minutes):

- Review the previous lesson on basic properties of light.
- Guide learners to read and discuss relevant content about materials that affect light. Emphasize the differences between transparent, translucent, and opaque materials.

Lesson Development (25 minutes):

Step 1: Understanding Transparent, Translucent, and Opaque Materials

- Define each type of material with examples (e.g., clear glass for transparent, frosted glass for translucent, and wood for opaque).
- Show images of each type and encourage students to provide additional examples from everyday life.

Step 2: Demonstrating the Movement of Light

- Conduct a simple experiment using a flashlight.
- Materials Needed: Flashlight, clear plastic sheet (transparent), wax paper (translucent), and cardboard (opaque).
- Shine the flashlight on each material and observe how the light behaves— which materials allow light to pass through and which do not.

Step 3: Reflection of Light on Plane Mirrors

- Use a small mirror to demonstrate the law of reflection.
- Activity: Have students shine a laser pointer or flashlight at the mirror and observe the angle of incidence versus the angle of reflection. Illustrate this with a quick diagram on the board.

Step 4: Drawing Ray Diagrams

- Teach students to draw ray diagrams to represent how images are formed in mirrors.
- Encourage students to draw how the light reflects off the mirror and create their own simple ray diagrams on paper.

Conclusion (5 minutes):

- Summarize key points about how light moves through different materials and the basics of reflection.

- Conduct a brief interactive quiz: ask students to identify materials as transparent, translucent, or opaque, or choose the correct ray diagram from multiple options.
- Preview next session: "How do we use light in technology and nature?"

Extended Activities

- Light Exploration Project: Encourage students to find everyday objects at home that are transparent, translucent, or opaque and bring them to class for a "light show." They can explain how they affect light.
- Mirror Art: Have students create a piece of art using mirrors, illustrating reflection, and display how the light interacts with it.

Teacher Self-Evaluation:

WEEK 1: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy:

Sub Strand: Light

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Demonstrate the movement of light through materials.
2. Draw ray diagrams of images formed on plane mirrors.
3. Appreciate the importance of the movement of light in everyday life.

Key Inquiry Questions:

- How does light move through different materials (transparent, translucent, and opaque)?
- What happens when light reflects off plane mirrors (law of reflection)?
- Why is the movement of light important in our daily lives?

Core competencies	Val- ues	PCIs
• Learning to learn • Communication • Imagination andcreativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design

Organisation of Learning:**Introduction (5 minutes):**

- Review: Begin with a short recap of the previous lesson on energy, emphasizing what students learned about energy forms.
- Discussion: Engage students in a brief discussion about light and its significance in our lives. Encourage them to share examples.

Lesson Development (25 minutes):**Step 1: Understanding Light Movement**

- Activity: Conduct a simple demonstration showing how light passes through different materials. Use a flashlight and showcase transparent, translucent, and opaque materials.
- Discussion: Ask students to categorize the materials based on how much light they allow to pass through.

Step 2: Reflection of Light

- Experiment: Have students perform an experiment using a plane mirror. They can shine a flashlight at various angles on the mirror.
- Observation: Students should detail what happens to the light beam, observing its reflection and discussing the law of reflection (angle of incidence equals angle of reflection).

Step 3: Drawing Ray Diagrams

- Activity: Teach students how to sketch a ray diagram showing the path of light as it hits the mirror and reflects.
- Guided Practice: Provide them with templates to draw their ray diagrams individually or in pairs.

Step 4: Real-life Applications of Light

- Discussion: Facilitate a conversation about how the movement of light affects everyday activities (e.g., seeing colors, using mirrors, and photosynthesis in plants).
- Examples: Invite students to brainstorm other scenarios where light plays a critical role.

Conclusion (5 minutes):

- Summarization: Recap the key points covered, highlighting the movement of light through materials and the reflection process.
- Interactive Activity: Play a quick game where students share one new fact about light they

learned during the lesson.

- Preview: Briefly introduce what will be covered in the next class (e.g., exploring prisms and colors of light).

Extended Activities:

- Creative Project: Have students create a light diary for a week, where they observe and record different instances of light use in their daily lives (e.g., natural sunlight, artificial light).
- Research Assignment: Request students to explore and present a short report on the role of light in photography, art, or technology.

Teacher self- Evaluation:

WEEK 1: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub strand: Light

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Identify the formation of shadows and eclipses in nature
2. Describe the formation of rainbows in nature
3. Appreciate the importance of the movement of light in everyday life

Key Inquiry Question(s):

- How do shadows form?
- What causes solar and lunar eclipses?
- How do rainbows form?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design

Organisation of Learning:

Introduction (5 minutes):

- Start the class with a quick review of the previous lesson on light, discussing how it travels and its properties.
- Guide students to read and discuss a selected excerpt from the learning resources that relates to the formation of shadows, eclipses, and rainbows. Emphasize the importance of understanding these concepts in everyday life.

Lesson Development (25 minutes):**Step 1: Understanding Shadows**

- Discuss what shadows are and how they are formed.
- Activity: Have students create shadows using a flashlight and different objects on a wall. Ask them to observe how the position of the light source affects shadow length and size.

Step 2: Exploring Eclipses

- Introduce the concepts of solar and lunar eclipses, explaining their differences.
- Activity: Use a globe, a ball, and a flashlight to simulate both types of eclipses. Let students observe and discuss what happens during each event.

Step 3: Formation of Rainbows

- Explain how rainbows are formed by the refraction and reflection of light in water droplets. Discuss the order of colors in a rainbow.
- Activity: Create a simple rainbow using a garden hose and sunlight or a glass of water and a flashlight. Have students write down the colors they see and the order they appear in.

Step 4: Connecting it All

- Discuss the importance of light movement in our lives and how these phenomena showcase different properties of light.
- Encourage students to think about real-life examples (e.g., how shadows affect playtime, the impact of eclipses on culture and science, or how rainbows can be a natural beauty).

Conclusion (5 minutes):

- Summarize key points: shadows, eclipses, rainbows, and the movement of light.
- Conduct a brief interactive quiz (using a show of hands or whiteboards) to reinforce the main topics covered in the lesson.
- Prepare learners for the next session about light properties and colors, prompting them to think of questions or examples they encounter at home.

Extended Activities:

- Shadow Art: Have students create artwork using shadows. They can trace the shadows of objects or their own silhouettes outdoors.
- Eclipse Presentation: Students can research historical events related to eclipses and prepare a short presentation to share with the class.
- Rainbow Experiment at Home: Encourage students to observe rainbows after a rainstorm and take pictures, noting the details they see and the conditions required for a rainbow to form.

Teacher Self-Evaluation:

WEEK 2: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Light

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Identify the formation of shadows and eclipses in nature.
2. Describe the formation of rainbows in nature.
3. Appreciate the importance of the movement of light in everyday life.

Key Inquiry Question(s):

- How do shadows form, and what are solar and lunar eclipses?
- How is a rainbow formed?

Core competencies	Val- ues	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 Science and Technology Curriculum Design

Organisation of Learning:

Introduction (5 minutes):

- Begin the lesson by reviewing the previous lesson about light and its properties.
- Guide learners to read and discuss the relevant sections in the learning resources, focusing on shadows, eclipses, and rainbows. Ask questions to encourage discussion about their experiences with these phenomena.

Lesson Development (25 minutes):

Step 1: Understanding Shadows

- Explain how shadows are formed when an object blocks light. Demonstrate this with a simple experiment using a flashlight and a toy.
- Activity: Turn off the lights in the classroom. Shine the flashlight on a toy placed on the floor. Ask students to observe the shadow created and discuss what they see.

step 2: Exploring Eclipses

- Discuss solar and lunar eclipses. Explain the positioning of the Earth, Moon, and Sun during these events.
- Activity: Use a globe and a ball (representing the Moon) to recreate a solar and lunar eclipse. Have students participate by positioning the objects in the correct alignment.

Step 3: Learning About Rainbows

- Explain how rainbows form when light is refracted through water droplets in the atmosphere. Use a diagram to illustrate the process clearly.
- Activity: Conduct a simple demonstration using a glass of water and a flashlight. Shine the flashlight through the water to project a rainbow on a white surface.

Step 4: Discussion on Importance of Light Movement

- Discuss everyday examples of how the movement of light affects what we see and helps us understand our environment. Engage students in sharing their observations and experiences related to light.

Conclusion (5 minutes):

- Summarize the key points covered in the lesson regarding shadows, eclipses, and rainbows.
- Conduct a quick interactive quiz or game to reinforce the main topics, such as a "True or False" game regarding the concepts learned.
- Preview the next session: Discuss how light can be transformed into different forms of energy and the importance of light for living organisms.

Extended Activities:

- Create a Shadow Puppet Show: Students can create shadow puppets to explore how shadows change with light sources at different angles.
- Rainy Day Observation Journal: Encourage students to keep a journal of weather changes and use them to observe and record rainbow appearances after rain.
- Eclipse Research Project: Have students research famous historical eclipses, their significance, and document their findings in a presentation format.

Teacher Self-Evaluation:

WEEK 2: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Light

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Identify the formation of shadows and eclipses in nature.
2. Describe the formation of rainbows in nature.
3. Appreciate the importance of the movement of light in everyday life.

Key Inquiry Question(s):

- Carry out activities to demonstrate the formation of shadows (solar and lunar eclipses).
- Carry out activities to demonstrate the formation of a rainbow.

Core competencies	Val- ues	PCIs
• Learning to learn • Communication • Imagination andcreativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- eco- nomic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 Science and Technology Curriculum Design

Organisation of Learning:

Introduction (5 minutes)

- Review the previous lesson on the basics of light and shadows.
- Ask students questions to elicit their previous knowledge and experiences: "What happens when you stand in the sunlight?" and "Have you ever seen a rainbow?"
- Guide learners to read and discuss relevant content from the learning resources, focusing on the concepts of shadows, eclipses, and rainbows.

Lesson Development (25 minutes):

Step 1: Exploring Shadows

- Activity: Students will create shadows using flashlights in a dim space.
- Discussion: What factors influence the size and shape of a shadow? Who can explain why shadows change during the day?

Step 2: Understanding Eclipses

- Activity: Show a simple animation or diagram of solar and lunar eclipses. Discuss how these phenomena occur.
- Discussion: What is the difference between a solar eclipse and a lunar eclipse? Why can we only see a solar eclipse from certain parts of the Earth?

Step 3: Making a Rainbow

- Activity: Utilize a glass of water and a flashlight or a hose with sunlight to demonstrate how light refracts to form a rainbow.
- Discussion: Why do we see a rainbow after rain? What are the colors, and in what order do they appear? What is the acronym to remember the colors of the rainbow (ROYGBIV)?

Step 4: Importance of Light Movement

- Activity: Brainstorm in pairs about everyday situations where light plays a crucial role.
- Discussion: How do plants use light? How does light affect our mood and activities?

Conclusion (5 minutes):

- Summarize key points: the formation of shadows, the differences between eclipses, and how rainbows are created.
- Conduct a brief interactive quiz or a game where students can answer questions based on the lesson's content.
- Preview the next session's topics: "Next time we will explore how light interacts with different materials and its effect on colors."

Extended Activities:

- Art Project: Have students create a poster of the rainbow spectrum with illustrations of items that represent each color.
- Shadow Observation: Encourage students to observe and record the shadows created by different objects at various times of the day over a week.
- Research Project: Students can work in groups to create a presentation on the significance of light in everyday life, including its role in photosynthesis and technology (like solar panels).

Teacher Self-Evaluation:

WEEK 2: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Light

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Identify applications of the movement of light through different media
2. Describe the importance of the movement of light.
3. Appreciate the importance of movement of light in everyday life.

Key Inquiry Questions:

- What are the applications of the movement of light through different media (e.g., mirrors, periscopes, kaleidoscopes, lenses, magnifying glasses)?
- Why is the movement of light important in our daily lives?

Core competencies	Val- ues	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design materials

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson: Briefly discuss what students learned about energy and forces.
- Read and Discuss: Guide learners to read and discuss relevant sections about light from their textbooks, focusing on the movement of light and its applications

Lesson Development (25 minutes) :**Step 1: Movement of Light**

- Activity: Start with an open discussion about light. Ask students to think about where they see light moving—through windows, bouncing off mirrors, etc.
- Content: Explain how light travels in straight lines and can be reflected or refracted when passing through different materials.

Step 2: Applications of Light

- Activity: Present various devices that utilize light (mirrors, periscopes, kaleidoscopes, lenses, magnifying glasses). Use visual aids or actual devices if available.
- Content: Describe how each device works and its practical applications in daily life (e.g., using a mirror for grooming, a periscope for viewing from a hidden position).

Step 3: Importance of Light

- Discussion: Engage students in a conversation about why light is important. Prompt them to consider aspects like communication (fiber optics) and technology (cameras).
- Content: Highlight the significance of light in nature (photosynthesis) and how it affects human activities.

Step 4: Reflecting on Light

- Group Activity: Divide students into small groups and provide them with different media (glass, mirrors, prisms) to experiment with the reflection and refraction of light.
- Content: Allow them to observe how the angle of incidence affects the angle of reflection and discuss their findings with the class.

Conclusion (5 minutes):

- Summary: Recap the key concepts covered, like the movement of light and its various applications.
- Interactive Activity: Conduct a quick quiz or an interactive game (like "light charades") to reinforce the main topics.

- Preview Next Session: Briefly introduce the upcoming lesson on how light interacts with different colors and why that matters.

Extended Activities:

- Light Experimentation: Encourage students to create a simple pinhole camera or a basic periscope at home. They can document their process and present their findings in the next class.
- Art Project: Have students design a kaleidoscope using everyday materials, allowing them to see the effects of light and reflectivity creatively.

Teacher Self-Evaluation:

WEEK 2: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub-Strand: Light

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Identify applications of the movement of light through different media
2. Describe the importance of the movement of light
3. Appreciate the importance of movement of light in everyday life

Key Inquiry Questions:

- What are the applications of the movement of light through different media (mirrors, periscope, kaleidoscope, lenses, magnifying glass)?
- Why is the movement of light important?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 Science and Technology Curriculum Design

Organisation of Learning:

Introduction (5 minutes):

- Begin with a quick review of the previous lesson's main concepts related to light.
- Engage students in a brief discussion about what they know about light and its applications.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing understanding key concepts such as reflection, refraction, and the different media through which light travels.

Lesson Development (25 minutes):**Step 1: Sources of Light**

- Discuss natural sources of light (e.g., the Sun, stars) and artificial sources (e.g., light bulbs, lasers).
- Encourage students to provide examples of light sources they use in their daily life.
- Activity: Group students to brainstorm and list sources of light on a whiteboard.

Step 2: Movement of Light

- Explain how light moves in straight lines and can change direction when it hits different surfaces (reflection) or when it passes through various materials (refraction).
- Relate this to practical applications, such as how mirrors work.
- Introduce diagrams or simple simulations to visualize these concepts.

Step 3: Applications of Light

- Introduce tools and devices that use light movement, such as prisms, lenses (like those in glasses), and kaleidoscopes.
- Discuss how these applications are used in daily life (e.g., periscopes in submarines, magnifying glasses for reading).
- Activity: Have students create a simple schematic of one tool and explain its use.

Step 4: Importance of Light Movement

- Summarize the significance of light in communication (fiber optics), safety (traffic lights), and technology (cameras).
- Encourage students to think about how life would be different without light movement.

Conclusion (5 minutes):

- Recap the key points learned about the sources of light, how it moves, its practical applications, and its importance.
- Conduct a brief interactive quiz or exit activity to reinforce the main topics discussed.

- Preview the next session on the properties of light and how it affects our vision, prompting students to think about how our eyes work.

Extended Activities:

- Conduct an experiment where students can create a simple periscope or kaleidoscope using mirrors and tubes to visually experience the movement of light.
- Encourage students to research and present a project on a specific application of light in technology or nature (e.g., fiber optics, how animals use light).

Teacher Self- Evaluation:

WEEK 3: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Levers as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Define the meaning of levers as simple machines.
2. Identify common levers used in day-to-day life.
3. Appreciate the use of levers in making work easier.

Key Inquiry Questions:

- What is the meaning of levers as simple machines?
- What are some common levers used in day-to-day life?

Core competencies	Val- ues	PCIs
• Learning to learn • Communication • Imagination andcreativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- eco- nomic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson on simple machines, asking students to recall other types of machines they have learned about (like pulleys or inclined planes).
- Direct learners to read sections from the textbook about levers, encouraging them to discuss what they understand about how levers work.

Lesson Development (25 minutes):**Step 1: What is a Lever?**

- Introduce the definition of a lever: a rigid bar that rotates around a fixed point called a fulcrum.
- Use a simple diagram to illustrate the components of a lever: the load, effort, and fulcrum.

Step 2: Types of Levers

- Explain the three types of levers:
- First Class: Fulcrum in the middle (e.g., seesaw)
- Second Class: Load in the middle (e.g., wheelbarrow)
- Third Class: Effort in the middle (e.g., tweezers)
- Provide everyday examples for each type and facilitate a class discussion.

Step 3: Real-Life Uses of Levers

- Ask students to brainstorm examples of levers they see or use daily and discuss how they make tasks easier.
- Encourage them to think about tools (like hammers and bottle openers) that function as levers.

Step 4: Demonstration or Activity

- Conduct a simple demonstration using a ruler and a small object (like a block of wood) to show how levers work.
- Allow students to volunteer to apply different points of pressure to lift the load and observe how it changes the effort required.

Conclusion (5 minutes):

- Summarize the key points: the definition of a lever, types of levers, and their everyday uses.
- Conduct a quick interactive quiz by asking students to identify types of levers based on given scenarios.

- Prepare students for the next session by introducing the concept of pulleys and how they relate to levers.

Extended Activities:

- Lever Hunt: Students can go home and create a list of at least five levers they find around their house or neighborhood and present them to the class in the next session.
- Create a Lever Model: Students can build a simple lever using craft materials (like popsicle sticks and a bottle cap) and demonstrate its use in class.
- Experimentation: Conduct an experiment to test how varying the position of the fulcrum impacts the ease of lifting a load, recording observations and findings.

Teacher Self-Evaluation:

WEEK 3: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Levers as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Define the meaning of levers as simple machines.
2. Identify common levers used in day-to-day life.
3. Appreciate the use of levers in making work easier.

Key Inquiry Questions:

- What is the meaning of levers as simple machines?
- What are some common levers used in day-to-day life?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design

Organisation of Learning:

Introduction (5 minutes):

- Begin by reviewing the previous lesson on simple machines. Ask students if they can recall what they learned about forces and machines.
- Guide learners to read and discuss relevant content from "New Planet Science and Technology," focusing on the definition of levers. Encourage questions to promote engagement.

Lesson Development (25 minutes):**Step 1: Definition of Levers**

- Introduce the concept of a lever as a simple machine that helps lift or move objects.
- Explain the main parts of a lever: fulcrum, effort, and load.
- Use diagrams from the learning resources to illustrate the concept.

Step 2: Types of Levers

- Discuss the three types of levers:
- First-Class Levers (fulcrum in the middle, e.g., seesaw)
- Second-Class Levers (load in the middle, e.g., wheelbarrow)
- Third-Class Levers (effort in the middle, e.g., tweezers)
- Show examples of each type in real life and encourage students to share additional examples they may have seen.

Step 3: Identifying Common Levers

- Conduct a simple class brainstorming session where students list common levers they encounter daily.
- Create a chart on the board with their ideas, categorizing them by the type of lever.

Step 4: Importance of Levers

- Discuss how levers make work easier by requiring less force to move objects.
- Provide scenarios where levers are useful (e.g., lifting heavy objects, accessing high places) and ask the students how they feel these tools improve their daily activities.

Conclusion (5 minutes):

- Summarize the key points covered during the lesson about what levers are, the types of levers, and their importance in everyday life.
- Interactive Activity: Ask students to partner up and demonstrate a lever with their bodies (e.g., one student acting as the load and the other as the effort) to visualize the concepts.
- Preview the next session, which will cover other simple machines, and ask students to think about other machines that help them in their lives.

Extended Activities:

- Research Project: Assign students to research a specific type of lever and create a poster depicting its use, examples, and how it makes work easier.
- Design Challenge: Have students build their own simple machine using a lever and present to the class on how it works and its benefits.
- Field Trip: If possible, arrange a field trip to a local construction site or playground, where students can see different types of levers in action.

Teacher Self-Evaluation:

WEEK 3: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub-Strand: Levers as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Identify the parts of a lever used in making work easier.
2. Draw simple levers used as simple machines.
3. Appreciate the use of levers in making work easier.

Key Inquiry Question(s):

- In groups, identify the parts of a lever (fulcrum/pivot, effort, and load).
- Draw simple levers used as simple machines (e.g., see-saw, fishing rod, tweezers, cracker).

Core competencies	Val- ues	PCIs
• Learning to learn • Communication • Imagination andcreativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6 - Grade 6 science and technology curriculum design.

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson on simple machines.
- Engage learners in a discussion about familiar simple machines and introduce levers as a specific type of simple machine. Emphasize that levers help us do work more easily.

Lesson Development (30 minutes):**Step 1: Understanding the Parts of a Lever**

- Introduce the three main parts of a lever: the fulcrum (pivot), effort, and load.
- Using a diagram, show these parts clearly.
- Ask students to share examples of levers they see in their everyday lives.

Step 2: Group Identification Activity

- Organize students into small groups and provide them with various objects (e.g., ruler, spoon, and books).
- In their groups, students will identify and mark the fulcrum, effort, and load for each object.
- Each group will present one example to the class and explain how it functions as a lever.

Step 3: Drawing Simple Levers

- Supply students with paper and markers.
- Guide them to draw at least two different types of levers from their discussions, such as a see-saw or tweezers.
- Encourage creativity while ensuring they label the parts of each lever in their drawings.

Step 4: Discussing the Importance of Levers

- Facilitate a class discussion to focus on why levers are important in everyday life.
- Share examples such as how cranes use levers, how levers make lifting easier, and discuss machines that incorporate levers.

Conclusion (5 minutes):

- Summarize key points about the parts of a lever and how they help us work more efficiently.
- Engage students with a brief interactive quiz or activity to reinforce what they learned.
- Preview the next session: "Next time, we will explore other types of simple machines and how they work together with levers."

Extended Activities:

- Design Challenge: Have students create a simple machine using levers at home, like a catapult, and bring it to class.
- Research Project: Assign students to find out about a specific lever used in sports or industry (e.g., a fishing rod or a crane) and present their findings to the class.
- Experiments with Balance: Set up a balance scale using levers and challenge students to measure weights using their own setups.

Teacher Self-Evaluation:

WEEK 3: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Levers as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Identify parts of a lever used in making work easier.
2. Draw simple levers used as simple machines.
3. Appreciate the use of levers in making work easier.

Key Inquiry Questions:

- In groups, identify parts of a lever (fulcrum/pivot, effort, and load).
- Draw simple levers used as simple machines (see-saw, fishing rod, tweezers, cracker).

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6 curriculum materials.

Organisation of Learning:

Introduction (5 minutes):

- Begin the lesson by reviewing the previous lesson on machines and forces.
- Introduce the topic of levers and their importance as simple machines.

- Engage students in a brief discussion to activate prior knowledge, prompting them to share any examples of levers they know.

Lesson Development (25 minutes):**Step 1: Identifying Parts of a Lever**

- Explain the three key parts of a lever: the fulcrum, the load, and the effort.
- Use a diagram on the board to illustrate these parts.
- Guide students in small groups to identify these parts on various lever examples (e.g., see-saw, tweezers).

Step 2: Drawing Simple Levels

- Distribute paper and colored pencils to each group.
- Instruct groups to draw at least three different simple machines that are levers, labeling all parts (fulcrum, effort, load).
- Allow each group to share their drawings with the class, discussing the function of each machine.

Step 3: Understanding the Function of Levers

- Facilitate a discussion on how each lever makes work easier.
- Ask groups to explain how the position of the fulcrum affects the amount of effort needed to lift a load.

Step 4: Practical Activity

- Show a simple lever setup using a pencil and an eraser as a fulcrum.
- Invite students to try lifting different weights (books, pencil cases) using makeshift levers, and experience firsthand how levers reduce effort.

Conclusion (5 minutes):

- Summarize key points: what a lever is, its parts, and how it helps in making work easier.
- Conduct a quick quiz or a game where students match lever types to their functions.
- Preview the next lesson on another simple machine (e.g., pulley) and encourage students to think of ways they see levers used in everyday life.

Extended Activities:

- Home Challenge: Ask students to identify three levers in their home and write a short paragraph about how each lever helps make work easier.
- Class Project: Create a classroom exhibit where students bring in or create models of different

types of levers and present them.

- Research Assignment: Have students research a famous invention that uses levers and prepare a short presentation for the class.

Teacher Self-Evaluation:

WEEK 4: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Levers as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Identify parts of a lever used in making work easier.
2. Draw simple levers used as simple machines.
3. Appreciate the use of levers in making work easier.

Key Inquiry Questions:

- In groups, identify parts of a lever (fulcrum/pivot, effort, and load).
- Draw simple levers used as simple machines (see-saw, fishing rod, tweezers, cracker).

Organization of Learning

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination andcre-ativity • Digital literacy • Citizenship • Critical thinking and prob-lem solving	• Unity • Respect • Integrity • Peace	• Socio- eco-nomic is-sues • Citizenship education

Introduction (5 minutes):

- Begin by reviewing the previous lesson on simple machines.
- Guide learners in reading selected sections from the New Planet Science and Technology re-source, focusing on the major concepts of levers.

Lesson Development (25 minutes):

Step 1: Understanding the Parts of a Lever

- Discuss and define the main parts of a lever:
- Fulcrum/Pivot – The point where the lever rotates.
- Effort – The force applied to move the lever.
- Load – The weight that is being lifted or moved.
- Use a visual aid or diagram of a lever to highlight these parts.

Step 2: Identifying Examples of Levers

- In small groups, ask students to identify everyday objects that are levers. Examples include:
- See-saw (children playing).
- Fishing rod (casting bait).
- Tweezers (picking up small items).
- Nutcracker (cracking nuts).
- Have each group share their examples and discuss how they make work easier.

Step 3: Drawing Simple Levers

- Provide students with paper and colored pencils.
- Instruct students to draw one of the levers identified and label its parts: fulcrum, effort, and load.

Step 4: Class Discussion

- Bring the class back together.
- Discuss as a class how levers work and their importance in everyday life.
- Encourage students to ask questions and clarify any uncertainties.

Conclusion (5 minutes):

- Summarize the key points learned: the parts of a lever and their real-world applications.
- Conduct a quick interactive activity, such as a "lever trivia" game where students answer questions about what they learned.
- Preview the next session by hinting at more complex machines and how levers play a role in them, and ask students to think about other machines they encounter daily.

Extended Activities:

- Research Project: Students can choose a simple machine (like a lever) and prepare a short presentation or poster that explains how it works and its applications in real life.
- Create Your Own Lever: Students can use classroom materials (e.g., ruler, eraser, tape) to cre-

ate a simple lever and test its efficiency in lifting different weights.

- Field Trip/Observation: Organize a visit to a local park or playground where students can observe and interact with levers in action (e.g., see-saws).

Teacher Self-Evaluation:

WEEK 4: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Levers as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Classify levers into three classes: first class, second class, and third- class levers.
2. Draw first class levers, second class levers, and third class levers.
- 3.Appreciate the use of levers in making work easier.

Key Inquiry Questions:

- In groups, classify levers into three classes (first, second, and third class levers).
- Draw first class levers, second class levers, and third class levers.

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination andcreativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson on simple machines.
- Guide learners to read and discuss relevant content from the learning resources, focusing on the differences between the three classes of levers.

Lesson Development (25 minutes):**Step 1: Introduction to Levers**

- Explain what a lever is and how it works. Use a simple diagram to illustrate the parts of a lever: the fulcrum, the load, and the effort.
- Define the three classes of levers and give everyday examples for each class.
- First Class: Fulcrum is between the effort and the load (e.g., seesaw).
- Second Class: Load is between the fulcrum and the effort (e.g., wheelbarrow).
- Third Class: Effort is between the fulcrum and the load (e.g., fishing rod).

Step 2: Group Classification Activity

- Divide students into small groups.
- Provide them with pictures or real-world objects/examples of levers.
- Instruct groups to classify the levers into first, second, and third classes and discuss their findings.

Step 3: Drawing the Classes of Levers

- Ask each group to choose one example from each class of lever and draw it on a piece of paper.
- Encourage them to label the parts of their drawings (fulcrum, effort, load).

Step 4: Class Discussion and Recap

- Invite groups to present their drawings and classifications.
- Facilitate a class discussion on how each class of lever makes work easier and where they might encounter these levers in daily life.

Conclusion (5 minutes):

- Summarize the key points discussed throughout the lesson.
- Conduct a brief interactive activity (such as a quick quiz or a lever trivia) to reinforce the main topics.
- Prepare learners for the next session by previewing an upcoming topic, like the mechanical advantage of levers or their applications in different machines.

Extended Activities:

- Lever Exploration Project: Have students choose a machine or tool that uses a lever and create a presentation or report detailing how it works, including diagrams.
- Home Investigation: Ask students to identify and document at least five examples of levers in their home or community, classifying them into the three classes.

Teacher Self-Evaluation:

WEEK 4: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Levers as simple machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Classify levers into three classes.
2. Draw first class levers, second class levers, and third- class levers.
3. Appreciate the use of levers in making work easier.

Key Inquiry Question(s):

- In groups, classify levers into three classes (first, second, and third class).
- Draw first class levers, second class levers, and third- class levers.

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 Science and Technology curriculum design

Organisation of Learning:

Introduction (5 minutes):

- Begin by reviewing the previous lesson on simple machines and their characteristics.
- Ask students to share examples of machines they encounter in daily life.
- Guide learners to read and discuss relevant sections from the learning resources, highlighting the characteristics and functions of levers.

Lesson Development (25 minutes):

Step 1: Introduction to the Three Classes of Levers

- Explain the three classes of levers:
- First Class Lever: The fulcrum is between the effort and the load (e.g., seesaw).
- Second Class Lever: The load is between the fulcrum and the effort (e.g., wheelbarrow).
- Third Class Lever: The effort is between the fulcrum and the load (e.g., tweezers).
- Show examples of each class using diagrams on the board.

Step 2: Group Activity - Classifying Levers

- Divide the students into small groups and provide them with various images of levers.
- Instruct each group to classify the levers into first, second, or third class based on the definitions provided.
- Walk around to assist groups as necessary and encourage discussion.

Step 3: Drawing Levers

- Have each group pick one example from each class of lever they classified and draw it.
- Encourage creativity and detailed labeling of the parts of each lever (e.g., fulcrum, load, effort).

Step 4: Sharing and Discussing

- Allow each group to share their drawings and explain why they classified their examples into those specific categories.
- Facilitate a discussion on the advantages of each lever type in making work easier and how they are used in everyday situations.

Conclusion (5 minutes):

- Summarize the key points covered in the lesson about the three classes of levers and their applications.
- Conduct a brief interactive activity, such as a quick quiz where students stand up if they can name a lever type or its use.
- Preview the next session on how machines like levers help increase efficiency in tasks and pose questions for consideration: "What other simple machines can we find?" or "How do ma-

chines impact our daily lives?"

Extended Activities:

- Leverage in Real Life: Assign students to observe their surroundings and bring in a picture or draw examples of different types of levers they find at home or in their community.
- Build a Lever: Challenge students to create a simple lever using household items (like a ruler and a small object as the load) and measure how much easier it is to lift the load using the lever compared to lifting it by hand.

Teacher Self-Evaluation:

WEEK 4: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Levers as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Classify levers into three classes: first, second, and third class.
2. Draw first class, second class, and third class levers.
3. Appreciate the use of levers in making work easier.

Key Inquiry Question(s):

- What are the three classes of levers?
- Can we identify examples of each class of lever in our everyday lives?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio-economic issues • Citizenship education

Learning Resources:

- "New Planet Science and Technology Grade 6" textbook
- Chart paper and markers
- Lever examples (scissors, a wheelbarrow, a fishing rod)

Organisation of Learning:

Introduction (5 minutes):

- Review of Previous Lesson: Recap the concept of simple machines and discuss how they help make work easier.
- Discussion: Prompt students to connect their previous knowledge to levers by asking if they have seen or used levers in real life. Introduce the types of levers that will be covered in the lesson.

Lesson Development (25 minutes):**Step 1: Understanding Levers**

- Introduce the concept of levers as a simple machine and explain how they work. Define the terms fulcrum, effort, and load using relatable examples.

Step 2: Classification of Levers

- Activity: In groups, students will use their textbooks to classify levers into three classes:
- First Class: Fulcrum is between the effort and the load (example: seesaw).
- Second Class: Load is between the effort and the fulcrum (example: wheelbarrow).
- Third Class: Effort is between the load and the fulcrum (example: fishing rod).
- Students draw each lever class on chart paper.

Step 3: Sharing Findings

- Each group shares their drawings and explanations for each class of lever with the class. Encourage discussion and questions about the different classes of levers.

Step 4: Real-Life Applications

- Provide examples of how levers are used in everyday situations (e.g., in tools, transportation, sports). Discuss how understanding levers can help make work easier in various contexts.

Conclusion (5 minutes):

- Summarization: Review the types of levers and reinforce the definitions of fulcrum, effort, and load.
- Interactive Activity: Conduct a brief activity where students identify an object in the classroom that represents each lever class.
- Preview Next Session: Tease the next topic, which could be exploring other simple machines, or further investigation into how levers work in different tools.

Extended Activities:

- Lever Hunt: Students look around their home or community for examples of each class of lever and take pictures or draw them.
- Design Your Lever: Create a simple machine using items around the house that demonstrates one of the lever classes. Write a short presentation on how their design works.
- Class Presentation: In groups, create a short presentation or digital slideshow explaining the three classes of levers, including pictures and examples.

Teacher Self-Evaluation:

WEEK 5: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Levers as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Demonstrate the use of levers in making work easier.
2. Make and use a beam balance from locally available materials.
3. Appreciate the use of levers in making work easier.

Key Inquiry Questions:

- In groups, how can we demonstrate the use of levers in making work easier with examples like seesaws, pliers, and scissors?
- What locally available materials can we use to make a beam balance?

Core competencies	Val- ues	PCIs
• Learning to learn • Communication • Imagination andcrea- tivity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- eco- nomic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design materials

Organisation of Learning:**Introduction (5 minutes):**

- Begin by reviewing the previous lesson on forces and energy concepts.
- Introduce levers as a simple machine. Engage students in a discussion about where they have seen levers in their daily lives.

Lesson Development (25 minutes):**Step 1: Discussion of Levers**

- Explain what a lever is and how it helps us lift heavy objects easily.
- Use examples such as seesaws, pliers, and scissors to illustrate various types of levers.
- Discuss the three classes of levers (1st, 2nd, and 3rd) and encourage students to think of other examples they see every day.

Step 2: Materials for Beam Balance

- Question the class: "Which materials do we need to make a beam balance?"
- Encourage group brainstorming and list materials such as a ruler, a small container, scissors, and weights (e.g., small stones, coins).

Step 3: Group Activity - Constructing a Beam Balance

- Divide the students into small groups.
- Provide each group with the materials they gathered to create a beam balance according to their brainstormed ideas.
- Students will need to work together to make sure their balance is even and functional, illustrating how levers can help us measure weight.

Step 4: Experiment with the Beam Balance

- Once the balances are built, have groups test them using different weights.
- Guide students to record their observations. Discuss how the beam balance works as a lever to measure weight and how it simplifies the task of comparing different items.

Conclusion (5 minutes):

- Summarize the key points discussed throughout the lesson regarding levers and their applications.
- Reinforce the learning objectives achieved: understanding types of levers, making a beam balance, and using it for measurement.
- Conduct a brief interactive activity, such as a quiz or a think-pair-share, to solidify their under-

standing.

- Preview the next session which will involve exploring other simple machines and their uses in our environment.

Extended Activities:

- Home Experiment: Ask students to find examples of levers at home (e.g., doors, bottle openers) and bring in pictures or sketches to share in the next class.
- Research Project: Have students research how levers are used in different professions and present their findings to the class.
- Design Challenge: Challenge students to create their own simple machine (using a lever) that could help with a household task, detailing the design process and intended use.

Teacher Self-Evaluation:

WEEK 5: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Levers as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Demonstrate the use of levers in making work easier.
2. Make and use a beam balance from locally available materials.
3. Appreciate the use of levers in making work easier.

Key Inquiry Questions:

- In groups, how can we demonstrate the use of levers to make work easier, like in seesaws, pliers, and scissors?
- What locally available materials can we use to make a beam balance?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson about simple machines and their functions.
- Ask students to discuss the importance of levers in everyday life and how they help make tasks easier.

Lesson Development (25 minutes):**Step 1: Materials Needed**

- Initiate a discussion on how to create a beam balance.
- Compile a list of locally available materials (e.g., a ruler, bottle caps, string, weight items like small stones).

Step 2: Building the Beam Balance

- Divide students into small groups.
- Guide each group to gather their materials and start constructing their beam balance. Provide a simple diagram or visual aid if necessary.

Step 3: Testing the Beam Balance

- Once the beam balances are built, students can test them using different weights.
- Encourage students to predict which side will tilt and discuss their observations after testing.

Step 4: Exploring Levers in Real Life

- After testing, lead a discussion about where they see levers in real life (seesaws, scissors, etc.).
- Ask groups to choose one lever application and explain how it makes work easier visually through drawings or acting out.

Conclusion (5 minutes):

- Summarize the key points about levers and how building the beam balance helped demonstrate their function.
- Conduct a quick interactive activity: Have each group present their lever application and explain its use in a short sentence.
- Preview the next session: "Next, we will explore how levers can change the direction of force more effectively."

Extended Activities:

- Home Experiment: Suggest students create a lever at home using a long stick (like a broom handle) and a stable object (like a chair) to lift a small weight (like a backpack). Have them doc-

ument their findings.

- Research Project: Ask students to research different types of levers (first, second, and third class) and create a poster illustrating examples of each type found in their daily lives.
- Classroom Engineering Challenge: Create a "lever day" where students work in teams to design a new tool that utilizes a lever to accomplish a specific task (like lifting a box). Students can present their ideas for a fun challenge!

Teacher Self-Evaluation:

WEEK 5: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Levers as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Demonstrate the use of levers in making work easier.
2. Make and use a beam balance from locally available materials.
3. Appreciate the use of levers in making work easier.

Key Inquiry Questions:

- How can we demonstrate the use of levers to make work easier, like with seesaws, pliers, and scissors?
- How can we use locally available materials to build a beam balance?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 Science and Technology Curriculum Design

Organisation of Learning:

Introduction (5 minutes):

- Start by reviewing what students learned in the last lesson about simple machines.
- Quickly discuss the importance of levers and ask for examples they might know (like seesaws or scissors).
- Guide the students to read specific sections from the learning resources that explain levers and their functions.

Lesson Development (25 minutes):**Step 1: Understanding Levers**

- Activity: Introduce the concept of levers and their three classes (first, second, and third class).
- Discussion: Provide examples of each class of lever and how they make work easier.
- Demonstration: Use a seesaw model to show how a fulcrum affects the effort and load.

Step 2: Building a Beam Balance

- Activity: Divide students into small groups.
- Instructions: Each group will gather locally available materials (like a ruler, cups, and pennies) to create a beam balance.
- Guidance: Give them step-by-step instructions on how to assemble it, ensuring they understand how the lever mechanism works.

Step 3: Testing the Beam Balance

- Activity: Have each group test their beam balance with different weights (like coins or small objects).
- Discussion: Encourage students to observe how the balance works and to share their experiences.

Step 4: Real-Life Applications

- Activity: Facilitate a discussion on where students have seen levers in action in everyday life (like in tools, playgrounds, etc.).
- Reflection: Ask students why using levers can be advantageous in these scenarios.

Conclusion (5 minutes):

- Summarize the key points discussed in the lesson regarding levers and their applications.
- Conduct a brief interactive quiz or ask questions about what they learned about beam balances and lever types.
- Prepare learners for the next session by previewing topics like the mechanical advantage of

levers and other simple machines.

Extended Activities:

- Leverage Your Imagination: Ask students to design a new type of mechanical tool using levers and present their ideas to the class. They could create a sketch or a simple prototype.
- Field Trip: Organize a visit to a local park to find examples of levers in play equipment or tools in use around the area.
- Research Project: Have students research different types of levers used in various professions (e.g., construction, gardening) and present their findings.

Teacher Self-Evaluation:

WEEK 5: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub-Strand: Levers as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Demonstrate the use of levers in making work easier.
2. Make and use a beam balance from locally available materials.
3. Appreciate the use of levers in making work easier.

Key Inquiry Questions:

- How do we see levers in action in our daily lives (e.g., see-saws, pliers, scissors)?
- How can we create a beam balance using materials we have at home or school?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Various locally available materials (e.g., sticks, plastic bottles, paper, scissors)

Organisation of Learning:

Introduction (5 minutes):

- Start with a brief review of the previous lesson on simple machines.
- Ask students to recall any examples of levers they have seen or used. Facilitate a short discussion about how these levers help them complete tasks more easily.

Lesson Development (25 minutes):**Step 1: Understanding Levers**

- Explain the concept of a lever as a simple machine that helps lift or move objects more easily. Use diagrams to illustrate the different parts of a lever: fulcrum, effort, and load.
- Show real-life examples (e.g., see-saws, pliers) and ask students how these devices use the principles of levers.

Step 2: Group Activity - Lever Demonstration

- Divide students into small groups and provide materials (sticks and a fulcrum, like a pencil or small block).
- Ask each group to create their lever using their chosen materials. Each group should demonstrate how their lever works, showing how it makes lifting a load easier.

Step 3: Making a Beam Balance

- Transition to the concept of a beam balance. Explain its purpose: to compare the weight of two objects.
- In their groups, instruct students to create a simple beam balance using materials like sticks for the beam, string as hanging support, and containers (like bottle caps) for weighing.

Step 4: Using the Beam Balance

- Have each group use their beam balance to measure different objects in the classroom or school materials.
- Encourage them to discuss their findings and how the beam balance helps them compare weights without using direct scales.

Conclusion (5 minutes):

- Summarize the key points about levers and the use of beam balances.
- Ask a few review questions to check understanding (e.g., "What are the three parts of a lever?").
- Provide a brief interactive Q&A session to reinforce the main topics.
- Preview the next lesson, which will focus on another type of simple machine—pulleys—and encourage students to think about where they might have seen pulleys in real life.

Extended Activities:

- Design Challenge: Ask students to design a compound machine that uses at least two different simple machines (including levers) and illustrate how it works.
- Home Exploration: Encourage students to find and document three examples of levers or beam balances in their homes or communities and share their findings in class.

Teacher Self-Evaluation:

WEEK 6: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Slopes as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Identify the meaning of a slope as a simple machine
2. Identify types of slopes used as simple machines
3. Appreciate the use of slopes

Key Inquiry Question(s):

- What is the meaning of a slope (inclined plane)?
- What are the types of slopes used as simple machines (e.g., ladders, ramps, staircases, roads winding up a hill)?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design

Organisation of Learning:

Introduction (5 minutes):

- Begin by reviewing the previous lesson on simple machines.
- Ask students to share what they remember and guide them to read relevant sections from the New Planet Science and Technology resource.

Lesson Development (25 minutes):**Step 1: Introduction to Slopes**

- Define what a slope or inclined plane is. Explain that it is a flat surface that is tilted at an angle.
- Use visuals (pictures or models) to show examples of slopes like ramps and stairs.
- Engage the class by asking if they can think of other examples of slopes they see in their everyday lives.

Step 2: Types of Slopes as Simple Machines

- Have students work in pairs to discuss different types of slopes they have encountered.
- Create a chart on the board with categories: Ramps, Ladders, Staircases, and Roads.
- Ask each pair to contribute at least one example for each type and draw a small diagram to illustrate their points.

Step 3: Understanding the Function of Slopes

- Explain how slopes make work easier. Discuss how they allow us to move objects or ourselves to a higher place with less effort.
- Give specific examples: rolling a heavy object up a ramp is easier than lifting it straight up.

Step 4: Real-Life Application and Discussion

- Engage the class in a discussion about how slopes help in various fields such as construction, transportation, and sports.
- Encourage students to think critically about why slopes are useful and where they see them in action.

Conclusion (5 minutes):

- Summarize the key points: the definition of a slope, types of slopes, and their importance as simple machines.
- Conduct an interactive activity: Ask students to name one slope they learned about and one way it helps reduce effort.
- Preview the next session by hinting at the relationship between slopes and other simple machines, such as levers and pulleys.

Extended Activities:

- Slope Exploration Project: Students can create a mini-project where they find a slope in their home or community, take pictures, and write a short report explaining its use as a simple machine.
- Creative Slope Design: In groups, students can design their own slope (e.g., a ramp for a toy car), build it using everyday materials, and test how effectively it works.

Teacher Self-Evaluation:

WEEK 6: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Slopes as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Identify the meaning of a slope as a simple machine.
2. Identify types of slopes used as simple machines.
3. Appreciate the use of slopes in everyday life.

Key Inquiry Questions:

- What is the meaning of a slope (inclined plane)?
- What are some types of slopes used as simple machines?
- How do slopes help us in our daily lives?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson by asking students to discuss what they learned about simple machines.

- Guide learners to read and discuss relevant content from "New Planet Science and Technology Grade 6," emphasizing the definition and purpose of slopes.

Lesson Development (25 minutes):**Step 1: Introduction to Slopes**

- Definition: Explain that a slope, or inclined plane, is a flat surface that is tilted at an angle to help lift things up or move them down more easily.
- Engage students in sharing examples of where they have seen slopes in the world around them.

Step 2: Types of Slopes

- Discuss different types of slopes (ramps, ladders, staircases, winding roads).
- Show images of each type and ask students to describe how they work as simple machines.

Step 3: How Slopes Work

- Explain how using slopes can make work easier by requiring less force than lifting something straight up.
- Have students engage in a hands-on activity using a toy car and a ramp to demonstrate how the slope reduces the force needed to move the car.

Step 4: Real-Life Applications

- Discuss real-life applications of slopes, such as their use in wheelchair access ramps or in construction.
- Invite students to brainstorm other examples where they may encounter slopes in their daily lives.

Conclusion (5 minutes):

- Summarize the key points discussed: the definition of a slope, types of slopes, and their practical uses.
- Conduct a brief interactive activity: Have students draw their favorite slope (ramp, staircase, etc.) and share with a partner how it helps us in everyday tasks.
- Preview the next session by asking, "What other simple machines can we find around us?"

Extended Activities:

- Slope Scavenger Hunt: Have students take a walk around the school or home and take pictures or draw different types of slopes they find. They can create a poster to share with the

class.

- Build a Model: Students can design and create their own simple machine using slopes with materials like cardboard, straws, or blocks to understand their function better.
- Research Project: Pick a simple machine that uses a slope and write a short report or create a presentation about how it works and its importance in our daily life.

Teacher Self-Evaluation:

WEEK 6: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Slopes as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Identify the meaning of a slope as a simple machine.
2. Identify types of slopes used as simple machines.
3. Appreciate the use of slopes in daily life.

Key Inquiry Questions:

- What does a slope (inclined plane) mean?
- What are some types of slopes that are used as simple machines?
- How do we use slopes in our everyday activities?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 Science and Technology Curriculum Design

Organisation of Learning:

Introduction (5 minutes):

- Begin with a brief review of the previous lesson on simple machines.
- Engage students in a discussion about what they remember.
- Introduce today's topic by asking students what they think a slope is and how they see slopes in real life. Guide the learners to read and discuss relevant content from the learning resources, focusing on the key concepts regarding slopes.

Lesson Development (25 minutes):**Step 1: Defining a Slope**

- Explain what a slope is, emphasizing the idea of an inclined plane.
- Ask students to think of examples of slopes they have seen.

Step 2: Types of Slopes as Simple Machines

- Discuss different types of slopes used as simple machines, like ramps, ladders, stairs, and winding roads.
- Introduce pictures or models of each type.

Step 3: Drawing Activity

- Have students draw at least two types of slopes they learned about. They can work individually or in pairs to create these drawings.
- Encourage them to label their drawings with titles and brief explanations.

Step 4: Real-Life Applications

- Discuss how slopes make work easier in everyday life.
- Ask students to share situations where they have seen or used a slope, like at the playground, at home, or in sports.

Conclusion (5 minutes):

- Summarize the key points about what slopes are and the types of slopes that act as simple machines.
- Conduct a brief interactive quiz where students can shout out or raise their hands to answer questions based on the lesson.
- Prepare students for the next session by giving them a hint about exploring the next simple machine: levers.

Extended Activities:

- Slope Exploration: Have students go outside (if feasible) to observe and photograph different types of slopes in their environment. They can create a collage or a digital presentation to share with the class.
- Slope Engineering Project: Challenge students to design and build a small model using items from home (like cardboard or wood) that demonstrates a slope's function (e.g., a ramp for a toy or a notebook incline). They will present their creation to the class.
- Research Assignment: Assign students to research a famous slope (like the Great Wall of China or a famous ramp) and present their findings with an emphasis on its design and usage.

Teacher Self-Evaluation:

WEEK 6: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Slopes as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Demonstrate how a slope makes work easier in life.
2. Identify uses of slopes.
3. Appreciate the use of slopes in everyday life.

Key Inquiry Question(s):

- How do slopes make work easier in life?
- How can we observe and record how slopes make work easier?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- "New Planet Science and Technology" Grade 6, pages 134-136

Organisation of Learning:

Introduction (5 minutes):

- Begin with a quick review of the previous lesson on energy and simple machines.

- Ask students to think about how they might use slopes in their lives (e.g., ramps, hills, etc.).
- Read and discuss relevant content from pages 134-136 with the class, encouraging students to articulate what they understand about slopes.

Lesson Development (25 minutes):

Step 1: What is a slope?

- Define what a slope is and provide real-life examples of slopes (e.g., ramps, hills).
- Present a visual aid (like a picture or a short video) showing various examples of slopes in everyday contexts.
- Engage students in a discussion: "Where do you see slopes in your daily life?"

Step 2: How do slopes make work easier?

- Conduct a simple demonstration using a board and a toy car to show how pushing the car up a slope requires less effort compared to lifting it.
- Ask students to observe and describe what happens as they change the angle of the slope: "Is it easier to push the car up a gentle slope or a steep slope?"
- Relate this demonstration back to the concept of work and energy, explaining that slopes reduce the force needed to lift an object.

Step 3: Identifying everyday slopes

- Have students brainstorm other places where slopes are utilized, such as playground slides, wheelchair ramps, or car ramps in parking lots.
- Write these ideas down on the board to create a shared list.

Step 4: Hands-on observation activity

- In pairs, have students go outside (or to a designated area) to find and describe examples of slopes.
- Provide each pair with a simple observation sheet to record their findings, including where they found the slope and how it makes work easier.

Conclusion (5 minutes):

- Summarize the main concepts: types of slopes, their simplicity, and how they help in daily life.
- Reinforce learning with a quick interactive quiz where students can share one new thing they learned about slopes.
- Preview the next lesson: "Next week, we will explore another type of simple machine: the pulley! Think about where you might see pulleys in your life."

Extended Activities:

- Slope Exploration Project: Have students take a photo of a slope they find in their neighborhood or local park and write a short paragraph explaining how it helps make work easier.
- Slope Experiment: Create a ramp using different materials (cardboard, wood, etc.) and test which material allows a toy to roll down the fastest. Record observations and conclusions.
- Community Research: Assign students to talk to family members about how slopes, such as wheelchair ramps or sledding hills, are important for accessibility and recreation in their community.

Teacher Self-Evaluation:

WEEK 7: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub-Strand: Slopes as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Demonstrate how a slope makes work easier in day-to-day life.
2. Identify uses of slopes.
3. Appreciate the use of slopes in everyday life.

Key Inquiry Questions:

- How do slopes make work easier?
- What are some uses of slopes such as ladders, ramps, and lifts?

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- "New Planet Science and Technology Grade 6"
- Grade 6 Science and Technology Curriculum Design

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson on simple machines. Ask students to share what they remember.
- Guide learners to read a brief section from the learning resources about slopes, discussing key concepts together.

Lesson Development (25 minutes):**Step 1: Understanding Slopes**

- Introduce the concept of slopes as simple machines. Explain how they help reduce the amount of force needed to lift or move objects.
- Engage students in a discussion about real-life examples, such as ramps for wheelchairs, hills for bikes, and slides in playgrounds.
- Ask students to describe their own experiences with slopes.

Step 2: Activities with Slopes

- Organize students into small groups and provide them with materials (e.g., boards, books, toy cars) to create their own slopes.
- Challenge them to test their slopes by rolling a toy car down and measuring how far it travels compared to a flat surface.
- Encourage each group to share their findings with the class.

Step 3: Identifying Uses of Slopes

- Have each student think of additional uses for slopes in daily life.
- Conduct a quick brainstorming session, allowing students to call out their ideas (e.g., loading dock ramps, emergency slides).
- Record these uses on the board for reference.

Step 4: Appreciation of Slopes

- Discuss as a class why slopes are important in making work easier and how they improve accessibility.
- Highlight that slopes help save energy and can make tasks safer.

Conclusion (5 minutes):

- Summarize the key points discussed: What slopes are, how they function, and their benefits.
- Conduct a brief interactive quiz, asking questions like "Name one everyday use of a slope" or "Why do slopes make work easier?"
- Preview the next lesson, which will delve into other simple machines, like wedges and screws, and encourage students to think of examples they see around them.

Extended Activities:

- Slope Discovery Project: Have students observe their home or neighborhood and take pictures of at least three different types of slopes, creating a scrapbook or digital presentation explaining their uses.
- Slope Experiment Report: Students can extend their group project by writing a short report about their slope experiment, including a hypothesis, method, observations, and conclusions.

Teacher Self-Evaluation:

WEEK 7: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Slopes as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Demonstrate how a slope makes work easier in day-to-day life.
2. Identify uses of slopes.
3. Appreciate the use of slopes in everyday life.

Key Inquiry Question(s):

- How do slopes make work easier?
- What are some uses of slopes, such as ladders, ramps, and lifts?

Core competencies	Val- ues	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson on simple machines.
- Ask students to think about and share where they see slopes in their lives. Guide them to read relevant content from the New Planet Science resource, focusing on the concept of slopes.

Lesson Development (25 minutes):**Step 1: Understanding Slopes**

- Introduce what a slope is and how it reduces the effort needed to lift objects. Use visual aids (pictures or diagrams) to illustrate different types of slopes (ramps, hills, etc.).

Step 2: Real-Life Applications

- Discuss real-life examples of slopes, such as ramps for wheelchairs, slides in playgrounds, and ladders. Have students share any examples they can think of from their own lives.

Step 3: Demonstrating the Concept

- Conduct a simple demonstration where students can use a board to create a slope and compare how much easier it is to move a toy car up the slope versus lifting it straight up.

Step 4: Group Discussion

- Organize students into small groups. Assign each group a different slope application (e.g., ramp, ladder, hill) and have them discuss and prepare a short presentation on how that slope is used and why it is beneficial.

Conclusion (5 minutes):

- Summarize the key points learned: how slopes make tasks easier and where they are commonly used.
- Conduct a brief interactive quiz/brainstorming activity where students shout out different slopes in everyday life.
- Preview the next lesson on another form of simple machines, such as levers, and encourage students to think of levers they see in their environment.

Extended Activities:

- Slope Design Project: Ask students to design a slope that could help in a particular scenario (e.g., a ramp for a delivery truck or a playground slide) and present it to the class.
- Slopes Around Us Walk: Organize a walk around the school or community to spot and take pictures of different slope examples. Students can create a visual portfolio titled "Slopes in Our World."

Teacher Self-Evaluation:

WEEK 7: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Slopes as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Identify the importance of the use of slopes.
2. Make a simple slope for use in school or at home.
3. Appreciate the use of slopes in everyday life.

Key Inquiry Question(s):

- What is the importance of slopes?
- How can we use locally available materials to make a slope for use in school or at home?

	Val- ues	PCIs
• Learning to learn • Communication • Imagination andcrea- tivity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- eco- nomic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design

Organisation of Learning:

Introduction (5 minutes):

- Begin with a brief review of the previous lesson on force and energy.
- Ask students to share what they remember about simple machines.
- Introduce the concept of slopes as a type of simple machine and guide students to read and discuss relevant content from the learning resources. Emphasize the importance of understanding slopes in everyday life.

Lesson Development (25 minutes):**Step 1: Understanding Slopes**

- Discuss the definition of a slope and its characteristics.
- Show real-life examples of slopes (ramps, hills, slides).
- Ask students to brainstorm where they might see slopes in their daily lives and discuss why slopes are helpful.

Step 2: The Importance of Slopes

- Explain how slopes make moving heavy objects easier (e.g., using a ramp to load a box into a truck).
- Lead a discussion on how slopes reduce the amount of force needed to lift objects.
- Engage students in a quick group activity to come up with scenarios where slopes help in everyday tasks or activities.

Step 3: Creating a Simple Slope

- Introduce a mini-project where students will create their own simple slope using locally available materials (books, cardboard, etc.).
- Explain the materials they can use and give them an idea of the size and functionality of their slope.

Step 4: Presentation and Reflection

- Have students briefly present their slopes to the class, explaining their design and the importance of slopes in their construction.
- Encourage students to reflect on what they learned about slopes and how they plan to use them.

Conclusion (5 minutes):

- Summarize the key points covered in the lesson: the definition of slopes, their importance, and practical applications.
- Conduct an interactive activity, such as a quick quiz or game, to reinforce the main topics discussed.

- Preview the next lesson's topic on how slopes relate to energy and motion to keep students engaged for future classes.

Extended Activities:

- Research Assignment: Students can research different types of slopes used in various professions (e.g., construction, sports) and present their findings in the next class.
- Slope Challenge: Have students design an ideal slope for a specific task (like rolling a ball from one height to another) and create a prototype at home or in class.
- Nature Walk: Organize a field trip or nature walk to identify natural slopes (hills, ramps) and measure their angles using a simple protractor.

Teacher Self-Evaluation:

WEEK 7: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 6	SCIENCE			

Strand: Force and Energy

Sub Strand: Slopes as Simple Machines

Specific Learning Outcomes:

-By the end of the lesson, learners should be able to:

1. Identify the importance of using slopes.
2. Make a simple slope for use at school or home.
3. Appreciate the use of slopes in everyday life.

Key Inquiry Question(s):

- Discuss the importance of slopes.
- Use locally available materials to make a slope for use in school or at home.

Core competencies	Values	PCIs
• Learning to learn • Communication • Imagination and creativity • Digital literacy • Citizenship • Critical thinking and problem solving	• Unity • Respect • Integrity • Peace	• Socio- economic issues • Citizenship education

Learning Resources:

- New Planet Science and Technology Grade 6
- Grade 6 science and technology curriculum design

Organisation of Learning:

Introduction (5 minutes):

1. Review the previous lesson about simple machines and their types.
2. Guide learners to read and discuss relevant sections regarding slopes, highlighting their importance in everyday life.

Lesson Development (25 minutes):**Step 1: Introduction to Slopes**

- Begin with a discussion about what a slope is and where we see slopes in our daily life (e.g., ramps, hills).
- Emphasize how slopes make it easier to move objects from a lower position to a higher one.

Step 2: Materials Needed

- Invite students to brainstorm materials they could use to construct a simple slope, such as cardboard, books, or plastic boards.
- Create a list of these materials on the board.

Step 3: Construction of a Simple Slope

- Divide the students into small groups.
- Guide each group to select their materials and construct a slope. Encourage them to ensure the slope is stable and can hold a small object (like a ball or toy car).

Step 4: Testing and Discussion

- Once the slopes are constructed, have the groups test their slopes by rolling a small object down.
- Engage in a discussion about the effectiveness of their slopes: What worked well? What didn't? How does the height/angle of the slope affect the speed of the object?

Conclusion (5 minutes):

- Summarize the key points covered: the function of slopes, materials used, and the concept of inclined planes as simple machines.
- Conduct a brief interactive quiz (e.g., "True or False" statements) to reinforce main topics.
- Preview the next lesson on other simple machines, posing questions such as, "How do pulleys and levers work?"

Extended Activities:

- Slope Exploration Project: Encourage students to observe and document different types of slopes in their environment. They can take pictures and describe how each slope functions.

- Slope Design Challenge: Challenge students to design a slope that can transport the heaviest object they can find (like a toy car) down its incline. They can draw their designs and present their ideas to the class.
- Research Activity: Have students research historical ramps (like the Great Pyramid of Giza) and how they were used, sharing findings in a short report or presentation.