RATIONALISED CBE LESSON PLANS

GRADE : 8

TERM : THREE

YEAR :2025

LEARNING AREA: SCIENCE

TEACHERS NAME: ……

SCHOOL :……

WEEK 1: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of Energy

Specific Learning Outcomes:
- By the end of the lesson the learner should be able to:

1.State forms of energy in nature
2.Describe forms of energy
3.Classify energy into either renewable or non-renewable
4.Appreciate the applications of energy transformation in day-to-day life

Key Inquiry Question(s):
The learner is guided to:
- State forms of energy in nature
- Discuss forms of energy
- Classify energy into either renewable or non-renewable

Core competencies	Val-ues	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- eco-nomic is-sues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 130-132

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson.

- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Introduce the concept of forms of energy, such as light, heat, sound, and kinetic energy. Discuss examples of each form.

Step 2: Explain the differences between renewable and non-renewable energy sources. Provide examples of each type and discuss their impact on the environment.

Step 3: Classify various forms of energy into renewable or non-renewable categories. Encourage students to think critically and justify their classifications.

Step 4: Explore the applications of energy transformation in daily life, such as in transportation, electricity generation, and heating.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Students can research and create presentations on innovative renewable energy technologies.
- Conduct a debate on the pros and cons of utilizing renewable energy sources.
- Visit a local energy-related facility, such as a solar panel farm or wind turbine site, to observe energy transformation in action.

Teacher Self-Evaluation:

WEEK 1: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

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

1.State forms of energy in nature
2.Describe forms of energy
3. Classify energy into either renewable or non-renewable
4. Appreciate the applications of energy transformation in day-to-day life

Key Inquiry Question(s):
- State forms of energy in nature
- Discuss forms of energy
- Classify energy into either renewable or non-renewable

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio-economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8, pages 130-132

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing

the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Introduce different forms of energy such as kinetic, potential, thermal, and electromagnetic energy.

Step 2: Discuss the characteristics and examples of each form of energy.

Step 3: Classify the different forms of energy into renewable (e.g., solar, wind, hydro) and non-renewable (e.g., fossil fuels) categories.

Step 4: Explore real-life applications of energy transformation, such as conversion of solar energy into electricity or wind energy into mechanical energy.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Conduct a hands-on experiment to demonstrate energy transformation (e.g., building a simple solar-powered toy or windmill).
- Research and present on current issues related to renewable and non-renewable energy sources, discussing the environmental impact and sustainability.

Teacher Self-Evaluation:

WEEK 1: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

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

1. State forms of energy in nature
2. Describe forms of energy
3.Classify energy into either renewable or non-renewable
4.Appreciate the applications of energy transformation in day-to-day life

Key Inquiry Question(s):
- What are the forms of energy in nature?
- How can we classify energy into renewable or non-renewable forms?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio-economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8, pages 130-132

Organization of Learning:

Introduction (5 minutes):
- Review the previous lesson on energy and its various forms.
- Guide learners to read and discuss relevant content from the learning resources, focusing on understanding key concepts.

Lesson Development (30 minutes):

Step 1: Introduce the different forms of energy such as kinetic, potential, thermal, chemical, and light energy. Discuss examples of each form.

Step 2: Explain the concept of renewable and non-renewable energy sources. Provide examples of each type and discuss their impact on the environment.

Step 3: Classify different energy sources into renewable or non-renewable categories. Encourage students to identify sources from their daily lives.

Step 4: Discuss the applications of energy transformation in everyday activities, such as cooking, transportation, and electricity generation.

Conclusion (5 minutes):

- Summarize key points about different forms of energy and their classifications.
- Conduct a brief interactive activity where students match energy sources with their respective categories (renewable or non-renewable).
- Preview upcoming topics or questions for the next session to keep students engaged and interested.

Extended Activities:

- Assign students to research and create a presentation on a specific renewable energy source like solar power or wind energy.
- Conduct a debate on the advantages and disadvantages of renewable versus non-renewable energy sources.

Teacher Self-Evaluation:

WEEK 1: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

1.State forms of energy in nature

2.Describe forms of energy

3.Classify energy into either renewable or non-renewable

4. Appreciate the applications of energy transformation in day-to-day life

Key Inquiry Question(s):

- State forms of energy in nature

- Discuss forms of energy

- Classify energy into either renewable or non-renewable

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:

- Spotlight Integrated Science Grade 8 page 130-132

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson.

- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Introduce different forms of energy such as electrical, thermal, kinetic, potential, and chemical energy.

Step 2: Discuss the characteristics and examples of each form of energy.

Step 3: Classify energy into renewable (e.g., solar, wind) and non-renewable (e.g., fossil fuels) categories.

Step 4: Explore real-life applications of energy transformation, such as how solar energy is converted into electricity.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.

- Conduct a brief interactive activity to reinforce the main topics, such as a quiz or group discussion.

- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Assign a research project where students investigate different renewable energy sources and present their findings to the class.

- Conduct a hands-on experiment demonstrating energy transformation, such as converting potential energy into kinetic energy using a simple machine.

Teacher Self-Evaluation:

WEEK 1: LESSON 5

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

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

1. State forms of energy in nature.
2.Describe forms of energy.
3. Classify energy into either renewable or non-renewable.
4. Appreciate the applications of energy transformation in day-to-day life.

Key Inquiry Question(s):

- What are the forms of energy in nature?

- How can we classify energy into renewable and non-renewable forms?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication andcol-laboration** • **Imagination andcre-ativity** • **Critical thinking and Prob-lem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- eco-nomic is-sues**

Learning Resources:

- Spotlight Integrated Science Grade 8 pages 130-132

Organization of Learning:

Introduction (5 minutes):

- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of key concepts.

Lesson Development (30 minutes):

Step 1: Discuss the different forms of energy present in nature, such as solar, wind, hydroelectric, and fossil fuels.

Step 2: Describe each form of energy and its characteristics, including examples of how they are used.

Step 3: Classify the forms of energy into renewable (solar, wind, hydroelectric) and non-renewable (fossil fuels) categories.

Step 4: Explore the applications of energy transformation in everyday life, such as in transportation, heating, and electricity generation.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics, like a matching game or quick quiz.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Create a poster showcasing different forms of energy and how they are used in daily life.
- Research and present a case study on a specific renewable energy source and its benefits.
- Conduct a debate on the topic of renewable vs. non-renewable energy sources.

Teacher Self-Evaluation:

WEEK 2: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

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

1. Describe what energy transformations are.
2.Demonstrate simple energy transformations in nature using locally available materials.
3. Appreciate the applications of energy transformation in day-to-day life.

Key Inquiry Question(s):
- What are energy transformations?
- How can we demonstrate simple energy transformations in nature using locally available materials?

Core competencies	Values	PCIs
• Learning to learn • Communication and collaboration • Imagination and creativity • Critical thinking and Problem solving	• Unity • Love • Social justice	• Safety • Socio- economic issues

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 132-137

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Understanding Energy Transformations
- Define energy transformations and discuss examples in daily life.
- Explain how energy changes forms and moves through different systems.

Step 2: Demonstration of Energy Transformations
- Conduct simple energy transformation experiments using local materials (e.g., solar cooker, water wheel).
- Discuss the outcomes and observations from the experiments.

Step 3: Applications of Energy Transformations
- Explore real-world applications of energy transformations in appliances, vehicles, and natural processes.
- Discuss the importance of efficient energy use and conservation.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics, such as a quiz or discussion.
- Prepare learners for the next session with a preview of upcoming topics and questions to consider.

Extended Activities:

- Assign a home-based energy transformation project where students design and explain a simple energy transformation device.
- Conduct a field trip to observe energy transformations in the local environment, such as at a power plant or renewable energy site.
- Facilitate a group debate on the ethical considerations of different energy sources and their impact on the environment.

Teacher Self-Evaluation:

WEEK 2: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

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

1.Describe what energy transformations are.
2. Demonstrate simple energy transformations in nature using locally available materials.
3.Appreciate the applications of energy transformation in day to day life.

Key Inquiry Question(s):
- What are energy transformations?
- How can we demonstrate simple energy transformations in nature using locally available materials?

Core competencies	Val-ues	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio-economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 132-137

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Introduce the concept of energy transformation by defining it as the conversion of one form of energy into demonstration with locally available materials to show a basic energy transformation process.

Step 2: Discuss examples of energy transformations in nature using visuals and real-life scenarios.

Step 3: Conduct a simple conversion in appliances or machines.

Step 4: Engage students in a discussion about how energy transformation is applied in day-to-day life, such as energy another.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics, such as a quiz or group discussion.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Have students research and present on a specific energy transformation process in depth.
- Conduct a hands-on experiment where students create a simple energy transformation device using household items.

Teacher Self-Evaluation:

WEEK 2: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of Energy

Specific Learning Outcomes:

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

1.Describe what energy transformations are
2. Demonstrate simple energy transformations in nature using locally available materials
3. Appreciate the applications of energy transformation in day-to-day life

Key Inquiry Question(s):
- What are energy transformations?
- How can we demonstrate simple energy transformations in nature using locally available materials?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 132-137

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson on energy and its forms.
- Guide learners to read and discuss relevant content from pages 132-137 of the learning re-

sources, focusing on understanding key concepts related to energy transformations.

Lesson Development (30 minutes):

Step 1: Discuss the concept of energy transformation and introduce examples of energy transformations in nature.

Step 2: Conduct a hands-on activity where students demonstrate simple energy transformations using locally available materials.

Step 3: Explore real-life applications of energy transformations in day-to-day scenarios such as photosynthesis, electrical energy conversion, etc.

Step 4: Reflect on the importance of understanding energy transformations for sustainable living and the environment.

Conclusion (5 minutes):

- Summarize key points about energy transformations and their significance.
- Engage students in a brief interactive activity to reinforce their understanding of the main topics covered.
- Provide a preview of upcoming topics and questions to consider for the next session.

Extended Activities:

- To deepen understanding, students can research and present on a specific energy transformation process or technology in real-world applications.
- Encourage students to create a diagram illustrating different energy transformations they encounter in their daily lives.

Teacher Self-Evaluation:

WEEK 2: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

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

1. Describe what energy transformations are
2.Demonstrate simple energy transformations in nature using locally available materials
3.Appreciate the applications of energy transformation in day-to-day life

Key Inquiry Question(s):
- What are energy transformations?
- How can we demonstrate simple energy transformations in nature using locally available materials?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication andcollaboration** • **Imagination andcreativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 132-137

Organization of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Introduce the concept of energy transformation.

Step 2: Discuss examples of energy transformation in nature.

Step 3: Conduct a hands-on activity demonstrating simple energy transformations using locally available materials.

Step 4: Review and discuss the applications of energy transformation in day-to-day life.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Assign a project where students research and present real-life examples of energy transformations in different systems.
- Conduct a group experiment where students design and test their own energy transformation model using household items.

Teacher Self-Evaluation:

WEEK 2: LESSON 5

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

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

1.Describe what is energy transformations.
2.Demonstrate simple energy transformations in nature using locally available materials.
3.Appreciate the applications of energy transformation in day to day life.

Key Inquiry Question(s):
- What are energy transformations?
- How can simple energy transformations be demonstrated in nature using locally available materials?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication andcollaboration** • **Imagination andcreativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 132-137

Organization of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Discuss the concept of energy transformations and provide examples.

Step 2: Conduct a demonstration of simple energy transformations using locally available materials.

Step 3: Discuss the applications of energy transformation in day- to- day life

Step 4: Engage learners in a hands-on activity to further explore energy transformations.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Explore energy transformations in different ecosystems.
- Create a poster or presentation showcasing various energy transformations in everyday life.

Teacher Self-Evaluation:

WEEK 3: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of Energy

Specific Learning Outcomes:

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

1. Identify appliances whose working relies on energy transformations.
2. Use digital devices to search for more information on appliances whose working relies on energy transformations.
3. Draw appliances whose working relies on energy transformations.
4.Appreciate the applications of energy transformation in day-to-day life.

Key Inquiry Questions:
- What appliances rely on energy transformations?
- How can digital devices help us learn more about energy transformations in appliances?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
Spotlight Integrated Science Grade 8 pages 138-140

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson on energy transformations.

- Guide learners to read and discuss relevant content from the learning resources, focusing **on** key concepts.

Lesson Development (30 minutes):

Step 1: Discuss different examples of appliances that rely on energy transformations.

Step 2: Engage students in a class activity to identify energy transformation processes in specific appliances (e.g., paraffin stove, dynamo, vehicle in motion, charcoal iron box).

Step 3: Have students research and draw diagrams illustrating energy transformations in the chosen appliances.

Step 4: Facilitate a discussion on the practical applications of energy transformation in daily life.

Conclusion (5 minutes):

- Summarize key points learned during the lesson.
- Conduct a brief interactive activity to reinforce understanding of energy transformations.
- Preview upcoming topics or questions for the next session.

Extended Activities:

- Encourage students to explore energy transformations in other household appliances at home.
- Conduct a group project where students create presentations on the importance of energy transformations in modern society.

Teacher Self-Evaluation:

WEEK 3: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of Energy

Specific Learning Outcomes:

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

1.Identify appliances whose working relies on energy transformations.
2.Use digital devices to search for more information on appliances whose working relies on energy transformations.
3. Draw appliances whose working relies on energy transformations.
4. Appreciate the applications of energy transformation in day-to-day life.

Key Inquiry Questions:
- Identify appliances whose working relies on energy transformations.
- Use digital devices to search for more information on appliances whose working relies on energy transformations.
- Draw appliances whose working relies on energy transformations.

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 138-140

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Discuss with students the concept of energy transformation and its importance in appliances.

Step 2: Identify and analyze the energy transformation processes in specific appliances such as a paraffin stove, dynamo, vehicle in motion, and charcoal iron box.

Step 3: Engage students in a discussion on how these appliances utilize different forms of energy.

Step 4: Have students draw diagrams illustrating the energy transformations in the identified appliances.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Students can conduct research on modern energy-efficient appliances and compare them to traditional ones in terms of energy transformation processes.
- Organize a class presentation where students explain the energy transformations in a chosen appliance to their peers.

Teacher Self-Evaluation:

WEEK 3: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of Energy

Specific Learning Outcomes:

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

1.Identify appliances whose working relies on energy transformations.
2.Use digital devices to search for more information on appliances whose working relies on energy transformations.
3. Draw appliances whose working relies on energy transformations.
4.Appreciate the applications of energy transformation in day-to-day life.

Key Inquiry Question(s):
- Identify appliances whose working relies on energy transformations.
- Use digital devices to search for more information on appliances whose working relies on energy transformations.
- Draw appliances whose working relies on energy transformations.

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 138-140

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson on energy and its forms.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of key concepts related to energy transformation.

Lesson Development (30 minutes):

Step 1: Discuss which energy transformation processes take place in appliances like a paraffin stove.

Step 2: Explore the energy transformations in a dynamo and discuss its practical applications.

Step 3: Analyze the energy conversions involved in a vehicle in motion and its impact on our daily lives.

Step 4: Investigate the energy transformation in a charcoal iron box and its efficiency in converting energy for ironing clothes.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson on energy transformation.
- Conduct a brief interactive activity, such as a quiz or discussion, to reinforce the main topics covered.
- Prepare learners for the next session by providing a preview of upcoming topics or questions to consider regarding energy transformations in different systems.

Extended Activities:

- Engage students in a hands-on activity where they identify and categorize more appliances based on their energy transformations.
- Encourage students to research and create a poster or digital presentation showcasing real-world examples of energy transformation in various devices or processes.

Teacher Self-Evaluation:

WEEK 3: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

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

1.Identify appliances whose working relies on energy transformations.
2. Use digital devices to search for more information on appliances whose working relies on energy transformations.
3. Draw appliances whose working relies on energy transformations.
4.Appreciate the applications of energy transformation in day to day life.

Key Inquiry Question(s):
- What appliances rely on energy transformations in their working mechanisms?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 138-140.

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of key concepts.

Lesson Development (30 minutes):

Step 1: Discuss with students the concept of energy transformations and provide examples to illustrate the process.

Step 2: Engage students in an interactive activity where they identify appliances that rely on energy transformations in their operation.

Step 3: Utilize digital devices to research and explore more appliances that involve energy transformations.

Step 4: Have students draw diagrams illustrating the energy transformations in various appliances such as a paraffin stove, dynamo, vehicle in motion, and charcoal iron box.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Develop a poster showcasing different appliances and their energy transformation processes.
- Create a mini science fair where students demonstrate and explain energy transformations in everyday devices or appliances.

Teacher Self-Evaluation:

WEEK 3: LESSON 5

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

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

1.Identify appliances whose working relies on energy transformations.
2.Use digital devices to search for more information on appliances whose working relies on energy transformations.
3.Draw appliances whose working relies on energy transformations.
4.Appreciate the applications of energy transformation in day to day life.

Key Inquiry Question(s):
- Identify appliances whose working relies on energy transformations.
- Use digital devices to search for more information on appliances whose working relies on energy transformations.
- Draw appliances whose working relies on energy transformations.

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 138-140

Organization of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Discuss Energy Transformation in Appliances
- Introduce different appliances like a paraffin stove, dynamo, vehicle in motion, and charcoal iron box.
- Discuss the energy transformation processes that take place in each appliance.
- Encourage students to think about how energy is converted from one form to another in these appliances.

Step 2: Research on Energy Transformation
- In pairs or small groups, have students use digital devices to search for more information on the energy transformations in the discussed appliances.
- Guide them to explore the specific processes involved in each appliance's operation.

Step 3: Energy Transformation Appliances
- Ask students to draw diagrams illustrating the energy transformation processes in the appliances.
- Encourage creativity and attention to detail in their drawings.

Step 4: Application in Daily Drawing
- Discuss and reflect on the significance of energy transformations in everyday life.
- Help students appreciate how these processes impact the functionality of common appliances.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics, such as a quiz or group discussion.
- Preview upcoming topics or questions to consider for the next session.

Extended Activities:

- Students can conduct experiments at home or in the classroom to observe energy transformations in other appliances.
- Create a presentation or poster showcasing different energy transformation processes in innovative technologies.

Teacher Self-Evaluation:

WEEK 4: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

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

1. Identify appliances whose working relies on energy transformations.
2. Use digital devices to search for more information on appliances whose working relies on energy transformations.
3. Draw appliances whose working relies on energy transformations.
4. Appreciate the applications of energy transformation in day to day life.

Key Inquiry Question(s):
- What appliances rely on energy transformations for their functioning?

Core competencies	Values	PCIs
• Learning to learn • Communication and collaboration • Imagination and creativity • Critical thinking and Problem solving	• Unity • Love • Social justice	• Safety • Socio- economic issues

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 138-140

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson on energy transformation.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Discuss energy transformation processes in appliances such as paraffin stoves.

Step 2: Explore the energy transformations in dynamos and how they function.

Step 3: Investigate the energy transformations involved in vehicles in motion.

Step 4: Analyze the energy transformations in charcoal iron boxes.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Preview upcoming topics or questions to consider for the next session.

Extended Activities:

- Have students research and present on a specific appliance that relies on energy transformations.
- Conduct a hands-on activity where students design and build a simple energy transformation model.

Teacher Self-Evaluation:

WEEK 4: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of Energy

Specific Learning Outcomes:

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

1.Identify appliances whose working relies on energy transformations
2. Use digital devices to search for more information on appliances whose working relies on energy transformations
3. Draw appliances whose working relies on energy transformations
4. Appreciate the applications of energy transformation in day to day life

Key Inquiry Questions:
- Identify appliances whose working relies on energy transformations
- Use digital devices to search for more information on appliances whose working relies on energy transformations
- Draw appliances whose working relies on energy transformations

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 138-140

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1:
- Discuss the basic principles of energy transformation and introduce the concept of energy flow in appliances.

Step 2:
- Analyze the energy transformations occurring in a paraffin stove and engage students in a discussion on how energy is converted within this appliance.

Step 3:
- Explore the energy transformations in a dynamo and discuss how it converts mechanical energy into electrical energy.

Step 4:
- Investigate the energy transformations involved in a vehicle in motion and a charcoal iron box, drawing connections between the energy sources and the work being done.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Encourage students to research and identify additional appliances that rely on energy transformations and present their findings to the class.
- Introduce a hands-on experiment demonstrating energy transformations in a simple machine or device.

Teacher Self-Evaluation:

WEEK 4: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of Energy

Specific Learning Outcomes:

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

1.Identify appliances whose working relies on energy transformations.
2. Use digital devices to search for more information on appliances whose working relies on energy transformations.
3.Draw appliances whose working relies on energy transformations.
4.Appreciate the applications of energy transformation in day-to-day life.

Key Inquiry Question(s):
- Identify appliances whose working relies on energy transformations.
- Use digital devices to search for more information on appliances whose working relies on energy transformations.
- Draw appliances whose working relies on energy transformations.

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 page 138-140

Organization of Learning:

Introduction (5 minutes):

- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, **emphasizing** the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Discuss the concept of energy transformation and its importance in appliances.

Step 2: Analyze energy transformation processes in appliances such as paraffin stove, dynamo, vehicle in motion, and charcoal iron box

Step 3: Engage students in a discussion on how these appliances convert energy for their functioning.

Step 4: Have students draw diagrams illustrating the energy transformations in the selected appliances.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Have students research and present on a modern appliance that relies on complex energy transformations.
- Conduct a hands-on experiment demonstrating energy transformation in everyday objects.

Teacher Self-Evaluation:

WEEK 4: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:
1.Identify appliances whose working relies on energy transformations.
2.Use digital devices to search for more information on appliances whose working relies on energy transformations.
3.Draw appliances whose working relies on energy transformations.
4.Appreciate the applications of energy transformation in day-to-day life.

Key Inquiry Question(s):
- What appliances rely on energy transformations for their operation?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 138-140

Organization of Learning:

Introduction (5 minutes):
- Review the previous lesson on energy transfer and transformation.
- Guide learners to read and discuss relevant content from the learning resources to reinforce understanding of key concepts.

Lesson Development (30 minutes):

Step 1: Discuss Energy Transformation Processes
- Introduce examples of appliances (paraffin stove, dynamo, vehicle in motion, charcoal iron box) and prompt students to identify the energy transformation processes taking place in each.
- Encourage students to discuss and explain the energy conversions that occur in these appliances.

Step 2: Research and Presentation
- Divide students into small groups and assign each group one of the mentioned appliances.
- Instruct students to use digital devices to research and gather information on the energy transformations in their assigned appliance.
- Each group presents their findings to the class, emphasizing the significance of energy transformation in everyday devices.

Step 3: Drawing Energy Transformations
- Ask students to sketch diagrams illustrating the energy transformations in the appliances discussed.
- Encourage creativity and attention to detail in capturing the conversion processes.

Conclusion (5 minutes):

- Summarize the key concepts and learning objectives covered in the lesson.
- Conduct a brief interactive activity, such as a quiz or discussion, to reinforce understanding of energy transformation in appliances.
- Provide a preview of upcoming topics and questions to guide students in their learning.

Extended Activities:

- Assign students the task of identifying other appliances in their homes or community that rely on energy transformations and create presentations showcasing these examples.
- Challenge students to design an innovative appliance that maximizes energy efficiency through creative transformation processes.

Teacher Self-Evaluation:

WEEK 4: LESSON 5

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of Energy

Specific Learning Outcomes:

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

1. Identify appliances whose working relies on energy transformations.
2.Use digital devices to search for more information on appliances whose working relies on energy transformations.
3. Draw appliances whose working relies on energy transformations.
4. Appreciate the applications of energy transformation in day-to-day life.

Key Inquiry Question(s):
- What appliances rely on energy transformations in their functioning?
- How can digital devices be used to research appliances based on energy transformations?
- Can you draw examples of appliances that showcase energy transformations?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 page 138-140

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson on energy transformations.
- Guide learners to read and discuss relevant content from the learning resources, focusing on key concepts.

Lesson Development (30 minutes):

Step 1: Discuss different types of energy transformations in appliances.

Step 2: Identify specific appliances (paraffin stove, dynamo, vehicle in motion, charcoal iron box) and analyze the energy transformation processes they undergo.

Step 3: Connect the identified appliances to real-life applications of energy transformations.

Step 4: Encourage students to creatively draw and label the energy transformation processes in the chosen appliances.

Conclusion (5 minutes):

- Summarize key points and learning objectives.
- Conduct a brief interactive activity to reinforce understanding.
- Provide a preview of upcoming topics or questions for the next session.

Extended Activities:

- Students can research and present on other appliances not covered in the lesson.
- Conduct a hands-on experiment demonstrating energy transformations in everyday devices.
- Create a poster showcasing different types of energy transformations in appliances around the home.

Teacher Self-Evaluation:

WEEK 5: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of Energy

Specific Learning Outcomes:

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

1.Identify safety measures associated with energy transformation.
2. Identify strategies for preventing dangers associated with energy transformation.
3.Appreciate the applications of energy transformation in day-to-day life.

Key Inquiry Question(s):
- Discuss safety measures associated with energy transformation.
- Discuss strategies for preventing dangers associated with energy transformation.

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio-economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 141-144

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of key concepts.

Lesson Development (30 minutes):

Step 1: Discuss why it is important to observe safety measures associated with energy transformation.
- Explain the potential risks and consequences of disregarding safety measures.

Step 2: Identify and discuss specific safety measures associated with common energy transformations.
- Examples could include electrical, thermal, or mechanical energy transformations.

Step 3: Explore strategies for preventing dangers associated with energy transformation.
- Discuss the importance of proper equipment, training, and supervision.

Step 4: Engage students in a scenario-based activity where they must apply safety measures and prevention strategies to hypothetical energy transformation situations.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce main topics, such as a quiz or group discussion.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Have students research and present on real-world examples where failure to observe safety measures led to energy-related accidents.
- Conduct a hands-on experiment demonstrating energy transformation and safety measures in action.

Teacher Self-Evaluation:

WEEK 5: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

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

1. Identify safety measures associated with energy transformation.
2.Identify strategies for preventing dangers associated with energy transformation.
3.Appreciate the applications of energy transformation in day-to-day life.

Key Inquiry Question(s):
- Discuss safety measures associated with energy transformation.
- Discuss strategies for preventing dangers associated with energy transformation.

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 141-144

Organisation of Learning:

Introduction (5 minutes):
1. Review the previous lesson.
2. Guide learners to read and discuss relevant content from the learning resources, emphasizing

the understanding of key concepts.

Lesson Development (30 minutes):

Step 1: Importance of Safety Measures
- Explain the importance of safety measures in energy transformation.
- Discuss real-life examples where lack of safety measures led to accidents.
- Engage students in a discussion on the potential risks of not following safety protocols.

Step 2: Safety Measures in Energy Transformation
- Present common safety measures associated with various forms of energy transformation.
- Show examples and visuals to help students understand the practical application of safety measures.
- Encourage students to brainstorm additional safety measures they think are necessary.

Step 3: Strategies for Preventing Dangers
- Explore strategies for preventing dangers associated with energy transformation.
- Discuss the role of planning, supervision, and communication in ensuring safety.
- Conduct a scenario-based activity where students have to identify potential dangers and suggest preventive measures.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics, such as a quiz or group discussion.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Assign students a research project to investigate a specific case where lack of safety measures in energy transformation led to an accident.
- Conduct a safety audit of energy transformation practices in the school or community and propose improvements.
- Create a poster or presentation highlighting the importance of safety in energy transformation for a school-wide awareness campaign.

Teacher Self-Evaluation:

WEEK 5: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of Energy

Specific Learning Outcomes:

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

1. Identify safety measures associated with energy transformation
2.Identify strategies for preventing dangers associated with energy transformation
3. Appreciate the applications of energy transformation in day-to-day life

Key Inquiry Questions:
- Discuss safety measures associated with energy transformation
- Discuss strategies for preventing dangers associated with energy transformation

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio-economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 141-144

Organization of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Introduce the concept of energy transformation and its significance in daily life.

Step 2: Discuss the potential dangers associated with energy transformation.

Step 3: Explore safety measures that can be implemented to prevent accidents.

Step 4: Engage students in a discussion on strategies for ensuring safe energy transformation practices.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Have students research and present on real-life examples where energy transformation safety measures are crucial.
- Conduct a hands-on experiment demonstrating the principles of energy transformation in a safe environment.

Teacher Self-Evaluation:

WEEK 5: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

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

1.Identify safety measures associated with energy transformation

2.Identify strategies for preventing dangers associated with energy transformation

3.Appreciate the applications of energy transformation in day-to-day life

Key Inquiry Question(s):

- Discuss safety measures associated with energy transformation

- Discuss strategies for preventing dangers associated with energy transformation

Core competencies	Val-ues	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio-economic issues**

Learning Resources:

- Spotlight Integrated Science Grade 8 pages 141-144

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson.

- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of the key concepts.

Lesson Development (30 minutes)

Step 1: Discuss the concept of energy transformation and its relevance in daily life.

Step 2: Identify common safety measures associated with different forms of energy transformation.

Step 3: Analyze strategies for preventing dangers related to energy transformation.

Step 4: Discuss practical applications of energy transformation in various scenarios.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.

- Conduct a brief interactive activity to reinforce the main topics.

- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Have students research and present real-world examples of energy transformations and associated safety measures.

- Organize a hands-on activity where students design a safety plan for a specific energy transformation scenario.

Teacher Self-Evaluation:

WEEK 5: LESSON 5

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Transformation of energy

Specific Learning Outcomes:

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

1. Identify safety measures associated with energy transformation.
2. Identify strategies for preventing dangers associated with energy transformation.
3. Appreciate the applications of energy transformation in day-to-day life.

Key Inquiry Questions:
- Discuss safety measures associated with energy transformation.
- Discuss strategies for preventing dangers associated with energy transformation.

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 141-144

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of key concepts.

Lesson Development (30 minutes):

Step 1: Discuss the importance of observing safety measures associated with energy transformation. Explain why it is crucial to prioritize safety in all energy-related activities.

Step 2: Identify and discuss specific safety measures commonly associated with energy transformation processes. Encourage students to think critically about how these safety measures can prevent accidents and ensure smooth energy transformations.

Step 3: Explore strategies for preventing dangers linked to energy transformation. Have students brainstorm and share their ideas on how to mitigate potential risks effectively.

Step 4: Engage students in a group discussion to highlight the real-life applications of energy transformation in various everyday scenarios. Encourage them to analyze and appreciate the role of energy conversion in their daily lives.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics discussed.
- Prepare learners for the next session by providing a preview of upcoming topics or questions for further consideration.

Extended Activities:

- Assign students a project to create a safety poster illustrating important safety measures related to energy transformations.
- Conduct a hands-on experiment demonstrating different forms of energy transformation in action.
- Encourage students to research and present on a specific energy transformation process not covered in the lesson.

Teacher Self-Evaluation:

WEEK 6: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Pressure

Specific Learning Outcomes:

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

1. Identify the meaning of pressure.
2. Carry out activities to determine pressure in solids and liquids.
3. Discuss the relationship among pressure, area of contact, and weight of solids.
4. Discuss the relationship between pressure and height of liquids.
5. Appreciate the application of pressure in solids and liquids.

Key Inquiry Question(s):
- What is pressure?
- How is pressure determined in solids and liquids?
- What is the relationship between pressure, area of contact, and weight of solids?
- How does pressure vary with the height of liquid?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- eco- nomic is- sues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 147-160

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of key concepts.

Lesson Development (30 minutes):

Step 1: What is pressure?
- Define pressure as the force applied perpendicular to the surface of an object.
- Discuss examples of pressure in everyday life.

Step 2: Determining pressure in solids and liquids
- Conduct hands-on activities where students measure and calculate pressure in solids and liquids.
- Discuss the factors that affect pressure measurements in different substances.

Step 3: Relationship between pressure, area of contact, and weight of solids
- Explore how pressure changes with variations in area of contact and weight of solids through experiments.
- Engage students in discussions on the impact of these factors on pressure.

Step 4: Relationship between pressure and height of liquid
- Demonstrate how pressure in a liquid column varies with height.
- Conduct activities to measure pressure at different heights in a liquid container.
- Discuss the implications of height on pressure in liquids.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Students can design their experiments to investigate pressure in different materials.
- Create posters or presentations showcasing real-world applications of pressure in solids and liquids.

Teacher Self-Evaluation:

WEEK 6: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Pressure

Specific Learning Outcomes:

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

1.Identify the meaning of pressure.
2.Carry out activities to determine pressure in solids and liquids.
3.Discuss the relationship among pressure, area of contact, and weight of solids.
4.Discuss the relationship between pressure and height of liquid.
5.Appreciate the application of pressure in solids and liquids.

Key Inquiry Question(s):
- What is pressure?
- How can we determine pressure in solids and liquids?
- What is the relationship among pressure, area of contact, and weight of solids?
- How does pressure relate to the height of a liquid?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 147-160

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, **emphasizing** the understanding of key concepts.

Lesson Development (30 minutes):

Step 1: Define Pressure
- Discuss the meaning of pressure.
- Provide examples and real-life applications of pressure.

Step 2: Determining Pressure in Solids and Liquids
- Conduct hands-on activities to measure pressure in solids and liquids.
- Discuss the results and observations.

Step 3: Relationship Among Pressure, Area of Contact, and Weight of Solids
- Explore how pressure, area of contact, and weight of solids are interrelated.
- Engage in discussions and problem-solving activities.

Step 4: Relationship Between Pressure and Height of Liquid
- Investigate how pressure changes with the height of a liquid column.
- Conduct experiments and analyze the data.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Preview upcoming topics or questions for the next session.

Extended Activities:

- Design an experiment to explore the effects of pressure on different materials.
- Research and present a case study on the practical applications of pressure in everyday life.

Teacher Self-Evaluation:

WEEK 6: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Pressure

Specific Learning Outcomes:

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

1. Identify the meaning of pressure
2. Carry out activities to determine pressure in solids and liquids
3. Discuss the relationship among pressure, area of contact, and weight of solids
4. Explore the relationship between pressure and the height of liquid
5. Appreciate the application of pressure in solids and liquids

Key Inquiry Question(s):
- What is pressure?
- How can we determine pressure in solids and liquids?
- What is the relationship between pressure, area of contact, and weight of solids?
- How does pressure change with the height of liquid?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8, pages 147-160

Organization of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of key concepts.

Lesson Development (30 minutes):

Step 1: Understanding Pressure
- Define pressure and provide examples in daily life.
- Discuss the units used to measure pressure.

Step 2: Determining Pressure in Solids and Liquids
- Conduct activities to measure pressure in solids and liquids.
- Compare and contrast the pressure exerted by different substances.

Step 3: Relationship Between Pressure, Area of Contact, and Weight of Solids
- Explore how the area of contact and weight of solids affect the pressure exerted.
- Discuss real-world applications of pressure in different scenarios.

Step 4: Relationship Between Pressure and Height of Liquid
- Investigate how the pressure changes with the height of a liquid column.
- Conduct experiments to observe this relationship.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Preview upcoming topics or questions to consider in the next session.

Extended Activities:

- Encourage students to conduct their own pressure experiments at home using everyday materials.
- Research and present on how pressure is used in specific industries or technologies.

Teacher Self-Evaluation:

WEEK 6: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Pressure

Specific Learning Outcomes:

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

1.Identify the meaning of pressure.
2.Carry out activities to determine pressure in solids and liquids.
3.Discuss the relationship among pressure, the area of contact, and the weight of solids.
4.Explore the relationship between pressure and the height of liquid.
5. Appreciate the application of pressure in solids and liquids.

Key Inquiry Question(s):
- What is pressure?
- How can we determine pressure in solids and liquids?
- What are the relationships among pressure, area of contact, and weight of solids?
- How does pressure relate to the height of liquid?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 147-160

Organisation of Learning:

Introduction (5 minutes):

- Review the previous lesson.
- Guide learners to read and discuss the relevant content from the learning resources, emphasizing the understanding of key concepts.

Lesson Development (30 minutes):

Step 1: What is pressure?
Explain the concept of pressure and provide examples from everyday life.

Step 2: Determining Pressure
Conduct activities to determine pressure in solids and liquids.

Step 3: Relationships Among Pressure, Area of Contact, and Weight
Discuss how pressure, area of contact, and weight of solids are related.

Step 4: Relationship Between Pressure and Height of Liquid
Explore the relationship between pressure and the height of liquid.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Conduct an experiment to further understand pressure in different materials.
- Research and present real-world applications of pressure in technology or engineering.

Teacher Self-Evaluation:

WEEK 6: LESSON 5

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Pressure

Specific Learning Outcomes:

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

1.Identify the meaning of pressure.
2.Carry out activities to determine pressure in solids and liquids.
3.Discuss the relationship among pressure, area of contact and weight of solids.
4. Discuss the relationship between pressure and height of liquid.
5. Appreciate the application of pressure in solids and liquids.

Key Inquiry Question(s):
- What is pressure?
- How can we determine pressure in solids and liquids?
- What is the relationship among pressure, area of contact, and weight of solids?
- How does pressure relate to the height of liquid?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio-economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 147-160

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Understanding Pressure
- Define pressure and discuss its importance in various contexts.

Step 2: Determining Pressure in Solids and Liquids
- Conduct hands-on activities to measure pressure in different materials.

Step 3: Relationship Among Pressure, Area of Contact, and Weight
- Explore how pressure changes with variations in area of contact and weight of solids.
- Step 4: Relationship Between Pressure and Height of Liquid
- Investigate how pressure is influenced by the height of liquid in a container.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Assign students to research real-life examples where understanding pressure is crucial.
- Conduct a group experiment to compare pressure in different materials or scenarios.

Teacher Self-Evaluation:

WEEK 7: LESSON 1

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Pressure

Specific Learning Outcomes:

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

1. Solve numerical problems involving pressure in solids and liquids.
2.Identify applications of pressure in solids and liquids.
3.Appreciate the application of pressure in solids and liquids.

Key Inquiry Question(s):
- How do we solve numerical problems involving pressure in solids and liquids?
- What are the applications of pressure in solids and liquids?
- How can we use digital devices to search for more information on applications of pressure in solids and liquids?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 161-170

Organization of Learning:

Introduction (5 minutes):
- Review the previous lesson.

- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of key concepts.

Lesson Development (30 minutes):

Step 1: Introduce the concept of pressure in solids and liquids.

Step 2: Discuss the formula for calculating pressure.

Step 3: Solve numerical problems involving pressure.

Step 4: Explore applications of pressure in solids and liquids.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Provide real-life examples of pressure in everyday scenarios for students to analyze and discuss.
- Conduct hands-on experiments to demonstrate the effects of pressure in solids and liquids.
- Assign a research project where students investigate a specific application of pressure and present their findings to the class.

Teacher Self-Evaluation:

WEEK 7: LESSON 2

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Pressure

Specific Learning Outcomes:

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

1. Solve numerical problems involving pressure in solids and liquids.
2. Identify applications of pressure in solids and liquids.
3. Appreciate the application of pressure in solids and liquids.

Key Inquiry Questions:
- How do we solve numerical problems involving pressure in solids and liquids?
- What are the applications of pressure in solids and liquids?
- How can we use digital devices to search for more information on applications of pressure in solids and liquids?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication andcol-laboration** • **Imagination andcre-ativity** • **Critical thinking and Prob-lem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- eco-nomic is-sues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 161-170

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson.

- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of key concepts.

Lesson Development (30 minutes):

Step 1: Introduction to pressure in solids and liquids. Discuss the concept of pressure and its implications.

Step 2: Solving numerical problems involving pressure. Introduce the formula for pressure and practice solving various problems.

Step 3: Applications of pressure in solids and liquids. Explore real-life examples and discuss how pressure is utilized in different contexts.

Step 4: Using digital devices to research applications of pressure. Guide students in conducting independent research and sharing findings.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Conduct a hands-on experiment to demonstrate the effects of pressure in different materials.
- Have students design and present a project showcasing practical applications of pressure in everyday life.

Teacher Self-Evaluation:

WEEK 7: LESSON 3

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Pressure

Specific Learning Outcomes:

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

1.Solve numerical problems involving pressure in solids and liquids.
2. Identify applications of pressure in solids and liquids.
3. Appreciate the application of pressure in solids and liquids.

Key Inquiry Question(s):
- Solve numerical problems involving pressure in solids and liquids.
- Discuss the applications of pressure in solids and liquids.
- Use digital devices to search for more information on applications of pressure in solids and liquids.

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8, pages 161-170

Organization of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing the understanding of key concepts.

Lesson Development (30 minutes):

Step 1: Introduce the concept of pressure in solids and liquids.

Step 2: Discuss the formula used to solve problems involving pressure.

Step 3: Analyze and solve numerical problems related to pressure in solids and liquids.

Step 4: Explore real-life applications of pressure in solids and liquids.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Have students conduct experiments to visualize the effects of pressure in solids and liquids.
- Research and present on innovative applications of pressure in various industries.
- Create a poster or infographic showcasing the importance of pressure in our daily lives.

Teacher Self-Evaluation:

WEEK 7: LESSON 4

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Pressure

Specific Learning Outcomes:

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

1. Solve numerical problems involving pressure in solids and liquids.
2. Identify applications of pressure in solids and liquids.
3.Appreciate the application of pressure in solids and liquids.

Key Inquiry Questions:
- How do we solve numerical problems involving pressure in solids and liquids?
- What are some applications of pressure in solids and liquids?
- How can digital devices help us learn more about the applications of pressure in solids and liquids?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- economic issues**

Learning Resources:
- Spotlight Integrated Science Grade 8 pages 161-170.

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson on force and energy.
- Guide students to read and discuss relevant content from pages 161-170, focusing on pressure

in solids and liquids.

Lesson Development (30 minutes):

Step 1: Introduce the concept of pressure in solids and liquids.

Step 2: Explain the formula used to solve problems involving pressure.

Step 3: Work through example problems involving pressure calculations.

Step 4: Discuss real-world applications of pressure in solids and liquids.

Conclusion (5 minutes):

- Summarize key points related to pressure in solids and liquids.
- Conduct a brief interactive activity reinforcing the main topics.
- Provide a preview of upcoming topics or questions to consider for the next session.

Extended Activities:

- Create a poster illustrating different applications of pressure in everyday life.
- Conduct a hands-on experiment to demonstrate the effects of pressure on different materials.

Teacher Self-Evaluation:

WEEK 7: LESSON 5

SCHOOL	LEVEL	LEARNING AREA	DATE	TIME	ROLL
	GRADE 8	INTERGRATED SCIENCE			

Strand: Force and Energy

Sub Strand: Pressure

Specific Learning Outcomes:

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

1. Solve numerical problems involving pressure in solids and liquids.
2. Identify applications of pressure in solids and liquids.
3.Appreciate the application of pressure in solids and liquids.

Key Inquiry Question(s):
- How do we solve numerical problems involving pressure in solids and liquids?
- What are the applications of pressure in solids and liquids?
- How can we use digital devices to search for more information on applications of pressure in solids and liquids?

Core competencies	Values	PCIs
• **Learning to learn** • **Communication and collaboration** • **Imagination and creativity** • **Critical thinking and Problem solving**	• **Unity** • **Love** • **Social justice**	• **Safety** • **Socio- eco- nomic is- sues**

Learning Resources:
- Spotlight Integrated Science Grade 8 page 161-170

Organisation of Learning:

Introduction (5 minutes):
- Review the previous lesson.
- Guide learners to read and discuss relevant content from the learning resources, emphasizing

the understanding of the key concepts.

Lesson Development (30 minutes):

Step 1: Introduce the concept of pressure and its units of measurement in solids and liquids.

Step 2: Discuss the formula for calculating pressure in solids and liquids.

Step 3: Solve numerical problems involving pressure in different scenarios.

Step 4: Explore real-world applications of pressure in solids and liquids.

Conclusion (5 minutes):

- Summarize key points and learning objectives achieved during the lesson.
- Conduct a brief interactive activity to reinforce the main topics.
- Prepare learners for the next session with a preview of upcoming topics or questions to consider.

Extended Activities:

- Have students conduct experiments to observe the effects of pressure in everyday situations.
- Assign a project where students research and present on a specific application of pressure in the real world.

Teacher Self-Evaluation: