RATIONALISED CBE LESSON PLANS

GRADE : 5

TERM : THREE

YEAR :2025

LEARNING AREA: SCIENCE AND TECHNOLOGY

TEACHERS NAME:…….

SCHOOL:……

WEEK 1

LESSON 1, 2, 3 & 4

SCHOOL	LEARNING AREA	GRADE	ROLL	TIME
	Science & Tech	5		

STRAND: FORCE AND ENERGY **SUB-STRAND:** Floating and sinking

SPECIFIC LEARNING OUTCOMES: By the end of the lesson, the learner should be able to:

- Demonstrate floating and sinking of objects using different materials.
- Identify factors that affect the floating and sinking of objects in water.
- Appreciate the use of floaters as life savers.

KEY INQUIRY QUESTION(S):

- Which objects sink in water?
- Which objects float in water?
- Why do some materials float and others sink?

LEARNING RESOURCES:

- Super Minds Science and Technology Grade 5
- Science and Technology grade 5 curriculum design
- Basin with water, various objects (dry wood, stone, metals, plastic, feathers)

ORGANISATION OF LEARNING: Learners will work in groups for a practical experiment.

INTRODUCTION: The teacher will fill a basin with water and ask learners to predict what will happen when different objects are placed in it. This introduces the concepts of floating and sinking.

LESSON DEVELOPMENT: The learner is guided to:

- **STEP 1:** In groups, use different objects (dry wood, stone, metals, plastic, feathers) to demonstrate floating and sinking in water by placing each object in the basin and observing the result.
- **STEP 2:** Create a two-column chart to record their observations, listing objects that float and objects that sink.
- **STEP 3:** Discuss the factors that might affect floating and sinking, such as the material of the object (density), its shape, weight, and size.
- **STEP 4:** Try to make an object that sinks (like a small piece of modeling clay) float by changing its shape (e.g., into a boat shape).

CONCLUSION: The teacher will lead a discussion where groups share their findings. The teacher will explain that whether an object floats or sinks depends on its density compared to the density of water and its shape.

EXTENDED ACTIVITIES: Learners to find two objects at home that float and two that sink and record them in their notebooks.

ASSESSMENT METHODS:

- Oral questions
- Observation
- Written questions

REFLECTION ON THE LESSON:

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WEEK 2

LESSON 1, 2, 3 & 4

SCHOOL	LEARNING AREA	GRADE	ROLL	TIME
	Science & Tech	5		

STRAND: FORCE AND ENERGY **SUB-STRAND:** Floating and sinking

SPECIFIC LEARNING OUTCOMES: By the end of the lesson, the learner should be able to:

- Identify applications of floating and sinking in day-to-day life.
- Identify the effects of flooding and mitigation measures.
- Appreciate the use of floaters as life savers.

KEY INQUIRY QUESTION(S):

- How are floaters useful in day-to-day life?
- What are the effects of flooding?

LEARNING RESOURCES:

- Super Minds Science and Technology Grade 5
- Science and Technology grade 5 curriculum design
- Pictures/videos of ships, swimmers, life jackets, and floods

ORGANISATION OF LEARNING: Learners will work in groups for discussion.

INTRODUCTION: The teacher will review the concept of floating and sinking and ask learners to think of how this knowledge is used in real life.

LESSON DEVELOPMENT: The learner is guided to:

- **STEP 1:** Discuss the applications of floating and sinking in day-to-day life (e.g., swimming, diving, water transport like ships and boats, use of life savers/floaters).
- **STEP 2:** Discuss why a large, heavy ship made of metal can float (due to its shape and the large amount of water it displaces).
- **STEP 3:** Watch a video or look at pictures of floods and discuss the effects of flooding (e.g., destruction of property, loss of life, spread of diseases).
- **STEP 4:** Brainstorm mitigation measures for floods (e.g., planting trees, building dams, proper drainage, moving to higher ground).

CONCLUSION: The teacher will summarize the key applications of floating and sinking and reiterate the importance of flood mitigation measures for community safety.

EXTENDED ACTIVITIES: Learners to draw a picture of a boat and write a sentence explaining why it floats.

ASSESSMENT METHODS:

- Oral questions
- Observation
- Written questions

REFLECTION ON THE LESSON:

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WEEK 3

LESSON 1, 2, 3 & 4

SCHOOL	LEARNING AREA	GRADE	ROLL	TIME
	Science & Tech	5		

STRAND: FORCE AND ENERGY **SUB-STRAND:** Sound Energy

SPECIFIC LEARNING OUTCOMES: By the end of the lesson, the learner should be able to:

- Identify sources of sound in nature.
- Demonstrate the movement of sound in nature.
- Make a sound-producing instrument using locally available materials.
- Appreciate the role of sound in day-to-day life.

KEY INQUIRY QUESTION(S): How is sound produced?

LEARNING RESOURCES:

- Super Minds Science and Technology Grade 5
- Science and Technology grade 5 curriculum design
- Locally available materials (bottles, rubber bands, boxes, tins, seeds)

ORGANISATION OF LEARNING: Learners will work in groups for practical activities.

INTRODUCTION: The teacher will ask learners to close their eyes and listen for all the different sounds they can hear. This will be followed by a discussion on what causes sound, introducing the concept of vibrations.

LESSON DEVELOPMENT: The learner is guided to:

- **STEP 1:** Carry out activities to identify sources of sound, demonstrating that sound is produced by vibrations (e.g., plucking a rubber band, hitting a drum, blowing air in a bottle).
- **STEP 2:** Demonstrate that sound travels in all directions from a source by having one learner make a sound in the middle of a circle and others confirming they can hear it.
- **STEP 3:** Demonstrate the reflection of sound (echo) by clapping hands in a large hall or open space facing a large wall.
- **STEP 4:** In groups, use locally available materials to make a simple sound-producing instrument (e.g., a shaker from a tin with seeds, a guitar from a box and rubber bands).

CONCLUSION: Each group will demonstrate their homemade instrument to the class and explain how it produces sound through vibrations.

EXTENDED ACTIVITIES: Learners to make a simple musical instrument at home and bring it to school.

ASSESSMENT METHODS:

- Oral questions
- Written questions
- Observation
- Project assessment

REFLECTION ON THE LESSON:

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WEEK 4

LESSON 1 & 2

SCHOOL	LEARNING AREA	GRADE	ROLL	TIME
	Science & Tech	5		

STRAND: FORCE AND ENERGY **SUB-STRAND:** Sound Energy

SPECIFIC LEARNING OUTCOMES: By the end of the lesson, the learner should be able to:

- Identify sources of sound in nature.
- Demonstrate the movement of sound in nature.
- Appreciate the role of sound in day-to-day life.

KEY INQUIRY QUESTION(S): How does sound travel?

LEARNING RESOURCES:

- Super Minds Science and Technology Grade 5
- Science and Technology grade 5 curriculum design
- A large hall or open space

ORGANISATION OF LEARNING: Learners will work in groups for demonstrations.

INTRODUCTION: The teacher will review the concept that sound is caused by vibrations.

LESSON DEVELOPMENT: The learner is guided to:

- **STEP 1:** Carry out activities to identify sources of sound by observing vibrating air (e.g., when blowing across a bottle top) and vibrating strings (e.g., a guitar or a simple box guitar).
- **STEP 2:** Demonstrate that sound travels in all directions from a source by having learners stand in a circle around a sound source and confirm they can all hear it.
- **STEP 3:** Go to a large hall or an open area facing a forest or large building to demonstrate and experience the reflection of sound (echo).
- **STEP 4:** Discuss how sound travels through a medium (like air) as vibrations.

CONCLUSION: The teacher will summarize the key properties of sound learned: it is caused by vibrations, travels in all directions, and can be reflected.

EXTENDED ACTIVITIES: Learners to try and make an echo at home by shouting into a large empty container.

ASSESSMENT METHODS:

- Oral questions
- Written questions
- Observation

REFLECTION ON THE LESSON:

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LESSON 3 & 4

SCHOOL	LEARNING AREA	GRADE	ROLL	TIME
	Science & Tech	5		

STRAND: FORCE AND ENERGY **SUB-STRAND:** Sound Energy

SPECIFIC LEARNING OUTCOMES: By the end of the lesson, the learner should be able to:

- Identify the effects of loud sound.
- Outline the role of the government in addressing sound pollution.
- Appreciate the role of sound in day-to-day life.

KEY INQUIRY QUESTION(S): What are the effects of loud sound?

LEARNING RESOURCES:

- Super Minds Science and Technology Grade 5
- Science and Technology grade 5 curriculum design
- Pictures/videos of sources of noise pollution, digital devices

ORGANISATION OF LEARNING: Learners will work in groups for discussion.

INTRODUCTION: The teacher will make a very loud, unpleasant noise (e.g., scraping a chair on the floor) and ask learners how it made them feel. This introduces the topic of noise pollution.

LESSON DEVELOPMENT: The learner is guided to:

- **STEP 1:** In groups, discuss the effects of loud sound (noise pollution) on the environment and on people (e.g., can damage hearing, cause stress, disturb animals).
- **STEP 2:** Identify common sources of noise pollution in their community (e.g., traffic, construction, loud music).
- **STEP 3:** Discuss the role of the government and its agencies (like NEMA) in addressing sound pollution through laws and regulations.
- **STEP 4:** Use a simple programming tool like Scratch (if available) to create a simple sound-based game or animation.

CONCLUSION: The teacher will summarize the dangers of noise pollution and emphasize the importance of maintaining a quiet and peaceful environment for our health and well-being.

EXTENDED ACTIVITIES: Learners to identify one source of noise pollution near their home and suggest one way to reduce it.

ASSESSMENT METHODS:

- Oral questions
- Written questions

REFLECTION ON THE LESSON:

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WEEK 5

LESSON 1, 2 & 3

SCHOOL	LEARNING AREA	GRADE	ROLL	TIME
	Science & Tech	5		

STRAND: FORCE AND ENERGY **SUB-STRAND:** Sound Energy

SPECIFIC LEARNING OUTCOMES: By the end of the lesson, the learner should be able to:

- Identify the effects of loud sound.
- Outline the role of the government in addressing sound pollution.
- Appreciate the role of sound in day-to-day life.

KEY INQUIRY QUESTION(S):

- What are the effects of loud sound?
- What is the role of government in addressing sound pollution?

LEARNING RESOURCES:

- Super Minds Science and Technology Grade 5
- Science and Technology grade 5 curriculum design
- Digital devices, charts

ORGANISATION OF LEARNING: Learners will work in groups for reinforcement and creative activities.

INTRODUCTION: The teacher will review the definition of noise pollution and its common sources.

LESSON DEVELOPMENT: The learner is guided to:

- **STEP 1:** In groups, discuss and create a mind map on the effects of loud sound on humans and animals.
- **STEP 2:** Discuss the role of the government in addressing sound pollution, including setting noise level limits and designated zones.
- **STEP 3:** Create posters with slogans to raise awareness about noise pollution in the school.
- **STEP 4:** Use a tool like Scratch to create a simple sound game or an animation that has a message about reducing noise.

CONCLUSION: Groups will present their posters or digital creations to the class. The teacher will praise their efforts to advocate for a quieter environment.

EXTENDED ACTIVITIES: Learners to practice being mindful of the noise they make at home to avoid disturbing others.

ASSESSMENT METHODS:

- Oral questions
- Written questions
- Project assessment

REFLECTION ON THE LESSON:

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LESSON 4

SCHOOL	LEARNING AREA	GRADE	ROLL	TIME
	Science & Tech	5		

STRAND: FORCE AND ENERGY **SUB-STRAND:** Heat transfer

SPECIFIC LEARNING OUTCOMES: By the end of the lesson, the learner should be able to:

- Identify the modes of heat transfer in nature.
- Carry out experiments to identify good and poor conductors of heat.
- Classify conductors of heat into good or poor conductors.
- Appreciate the modes of heat transfer.

KEY INQUIRY QUESTION(S): Which are the modes of heat transfer in nature?

LEARNING RESOURCES:

- Super Minds Science and Technology Grade 5
- Science and Technology grade 5 curriculum design
- Heat source (candle/spirit lamp), metal rod, wooden stick, plastic ruler, wax, basin of water, potassium permanganate crystals.

ORGANISATION OF LEARNING: Learners will observe teacher demonstrations and work in groups.

INTRODUCTION: The teacher will ask learners how the handle of a spoon in a hot cup of tea gets warm. This introduces the concept of heat transfer.

LESSON DEVELOPMENT: The learner is guided to:

- **STEP 1:** Discuss the meaning of the terms **conduction** (heat transfer through solids), **convection** (heat transfer through liquids and gases), and **radiation** (heat transfer through empty space).
- **STEP 2:** Observe a teacher-led demonstration of **conduction**: heating one end of a metal rod with wax drops on it and watching them melt in sequence.
- **STEP 3:** Perform an experiment to identify good and poor conductors of heat by placing different materials (metal, wood, plastic) in hot water and feeling which one gets hot fastest.
- **STEP 4:** Observe a teacher-led demonstration of **convection**: gently heating a beaker of water with a potassium permanganate crystal at the bottom to see the colored currents rise and fall.
- **STEP 5:** Experience **radiation** by feeling the heat from a source (like a lit bulb or the sun) without touching it.

CONCLUSION: The teacher will summarize the three modes of heat transfer (conduction, convection, radiation) and the difference between good conductors (like metals) and poor conductors/insulators (like wood and plastic).

EXTENDED ACTIVITIES: Learners to identify one example of a good heat conductor and one example of a poor heat conductor used in their kitchen at home.

ASSESSMENT METHODS:

- Oral questions
- Written questions
- Observation

REFLECTION ON THE LESSON:

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WEEK 6

LESSON 1, 2, 3 & 4

SCHOOL	LEARNING AREA	GRADE	ROLL	TIME
	Science & Tech	5		

STRAND: FORCE AND ENERGY **SUB-STRAND:** Heat transfer

SPECIFIC LEARNING OUTCOMES: By the end of the lesson, the learner should be able to:

- Identify the modes of heat transfer in nature.
- Carry out experiments to identify good and poor conductors of heat.
- Classify conductors of heat into good or poor conductors.
- Appreciate the modes of heat transfer.

KEY INQUIRY QUESTION(S): How is heat transferred through materials in nature?

LEARNING RESOURCES:

- Super Minds Science and Technology Grade 5
- Science and Technology grade 5 curriculum design
- Chart, digital devices, materials for experiments

ORGANISATION OF LEARNING: Learners will work in groups for practical experiments.

INTRODUCTION: The teacher will review the three modes of heat transfer: conduction, convection, and radiation.

LESSON DEVELOPMENT: The learner is guided to:

- **STEP 1:** Discuss the meaning of the terms conduction, convection, and radiation.
- **STEP 2:** Perform experiments to demonstrate **conduction** by testing which materials (metal spoon, plastic spoon, wooden stick) conduct heat best when placed in a cup of warm water.
- **STEP 3:** Perform an experiment to demonstrate **convection** by observing the movement of small pieces of paper in water being heated from below.
- **STEP 4:** Perform an experiment to demonstrate **radiation** by placing their hands at different distances from a safe heat source (like a warm lamp) to feel the radiated heat.
- **STEP 5:** Classify the materials tested into good conductors and poor conductors (insulators).

CONCLUSION: Each group will present their findings from the conduction experiment. The teacher will summarize how all three modes of heat transfer are constantly at work in nature and our daily lives.

EXTENDED ACTIVITIES: Learners to explain why cooking pots are made of metal but their handles are often made of plastic or wood.

ASSESSMENT METHODS:

- Oral questions
- Written questions
- Observation

REFLECTION ON THE LESSON:

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WEEK 7

LESSON 1, 2, 3 & 4

SCHOOL	LEARNING AREA	GRADE	ROLL	TIME
	Science & Tech	5		

STRAND: FORCE AND ENERGY **SUB-STRAND:** Heat transfer

SPECIFIC LEARNING OUTCOMES: By the end of the lesson, the learner should be able to:

- Identify applications of heat transfer in day-to-day life.
- Identify safety precautions when handling heat.
- Make oven gloves and a fireless cooker using locally available materials.
- Appreciate the modes of heat transfer.

KEY INQUIRY QUESTION(S): How do we use heat in day-to-day life?

LEARNING RESOURCES:

- Super Minds Science and Technology Grade 5
- Science and Technology grade 5 curriculum design
- Digital devices, materials for making oven gloves (cloth, cotton wool) and a fireless cooker (basket, old cloths/blankets, charcoal dust).

ORGANISATION OF LEARNING: Learners will work in groups for discussion and practical projects.

INTRODUCTION: The teacher will ask learners to name activities they do every day that involve heat. This introduces the applications of heat transfer.

LESSON DEVELOPMENT: The learner is guided to:

- **STEP 1:** Discuss applications of heat transfer in day-to-day life (e.g., cooking, boiling water, ironing clothes, maintaining body temperature).
- **STEP 2:** Discuss safety precautions when handling heat and various ways of responding to fire emergencies (e.g., Stop, Drop, and Roll; using a fire extinguisher).
- **STEP 3:** In groups, use locally available materials (old cloth, cotton wool, needle, thread) to make simple oven gloves, applying the principle of insulation.
- **STEP 4:** In groups, use locally available materials (a basket, old blankets or cloths, charcoal dust) to make a fireless cooker (hay-box cooker), applying the principle of trapping heat.

CONCLUSION: Groups will display their finished oven gloves and fireless cookers. The teacher will explain how each project uses the principles of heat transfer (insulation) to work effectively and promote energy saving.

EXTENDED ACTIVITIES: Learners to discuss fire safety rules with their families at home.

ASSESSMENT METHODS:

- Oral questions
- Written questions
- Project assessment

REFLECTION ON THE LESSON:

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WEEK 8-9

SCHOOL	LEARNING AREA	GRADE	ROLL	TIME
	Science & Tech	5		

STRAND/THEME: REVISION / END OF YEAR ASSESSMENT **SUB-STRAND:** Revision and Assessment

SPECIFIC LEARNING OUTCOMES: By the end of the week, the learner should be able to:

- Recall and apply concepts learned throughout the term.
- Answer assessment questions correctly.
- Demonstrate proficiency in the topics covered.

KEY INQUIRY QUESTION(S): What are the most important concepts you have learned in Science and Technology this term?

LEARNING RESOURCES:

- Revision exercises
- Sample assessment papers
- Textbooks and notes from the term

ORGANISATION OF LEARNING: Learners will work individually.

INTRODUCTION: The teacher will provide an overview of the topics covered in Term 3 (Floating and Sinking, Sound Energy, Heat Transfer) and outline the schedule for revision and the final assessment.

LESSON DEVELOPMENT: The learner is guided to:

- **STEP 1:** Review all the key concepts, definitions, and experiments from the term.
- **STEP 2:** Complete revision exercises provided by the teacher, covering all topics.
- **STEP 3:** Participate in a Q&A session to clarify any remaining doubts or difficult concepts.
- **STEP 4:** Sit for the end-of-year assessment.

CONCLUSION: The teacher will mark the assessments and provide feedback to the learners. The teacher will congratulate the learners on their hard work and wish them a happy holiday.

EXTENDED ACTIVITIES: Over the holiday, learners can be encouraged to observe and identify examples of the science they have learned in their everyday lives.

ASSESSMENT METHODS:

- End of Year Assessment

REFLECTION ON THE LESSON:

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