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DepED
DEPARTMENT OF EDUCATION

Learning Activity Sheet for Science

Quarter 1
Lesson
3

Worksheet for Science Grade 4
Quarter 1: Lesson 3 (Week 3)
S.Y 2024-2025

Development Team

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LEARNING ACTIVITY SHEET 1 – DAY 1

Learning Area:	Science 4	**Quarter:**	1st Quarter
Lesson No.:	1	**Date:**	
Lesson Title/ Topic:	**Chemical Properties of Materials (Flammability)**		
Name:		**Grade & Section:**	

I. Activity No. 1: "Flame Test" (30 Minutes)

II. Objective(s):

At the end of the activity, the learners are expected to:

- Identify flammable materials and explain their properties.
- Recognize the importance of fire safety precautions and responsible behavior around flammable materials.

III. Materials Needed:

- Safety goggles (for each participant)
- Candle or tealight
- Matches or a lighter
- Small samples of various materials:
- Wood stick or toothpick
- Piece of paper
- Small piece of plastic (e.g., a plastic straw or bottle cap)
- Metal paperclip (optional, to demonstrate non-flammable materials)
- Fireproof surface (such as a ceramic plate or metal tray)

IV. Instructions:

Safety First: Before starting the activity, make sure all participants are wearing safety goggles and understand the importance of safety when dealing with fire.

- Work in group.
- Together with your teammates, perform the activity.
- Place the candle or tealight on a fireproof surface in a well-ventilated area. Ensure there are no flammable materials nearby.
- Conduct a flame test to observe how different materials react when exposed to fire.
- Start with the wood stick or toothpick. Hold one end of the stick with a pair of tongs or another safe tool. Light the other end of the stick with a match or lighter, and observe how it burns. Notice the color of the flame and any smoke or residue produced.
- Repeat the process with the piece of paper and the small piece of plastic. Hold each material with tongs and carefully bring it close to the flame of the candle. Observe and compare how each material burns.

- Based on your observations, answer the following questions:

  1. What did you notice about how each material burned?
     _____
     _____
     _____
     _____
  2. Did all materials burn in the same way?
     _____
     _____
     _____
     _____
  3. Why do you think some materials burned while others did not?
     _____
     _____
     _____
     _____
  4. Why is it important to be cautious around flammable materials?
     _____
     _____
     _____
     _____

- Present your findings to the class.

V. Synthesis/Extended Practice/Differentiation (if needed):

LEARNING ACTIVITY SHEET 2 – DAY 2

Learning Area:	Science 4	**Quarter:**	1st Quarter
Lesson No.:	1	**Date:**	
Lesson Title/ Topic:	**Chemical Properties of Materials (Reactivity to Other Materials)**		
Name:		**Grade & Section:**	

I. Activity No. 2: "Chemical Reactions Exploration" (30 Minutes)

II. Objective(s):

At the end of the activity, the learners are expected to:

- observe and understand reactivity between different materials.

III. Materials Needed:

- Safety goggles (for each participant)
- Several small containers or cups
- Various household materials for testing reactivity, such as:
- Vinegar
- Baking soda
- Lemon juice
- Steel wool (or any iron-containing object)
- Aluminum foil
- Salt
- Water
- Food coloring (optional)
- Stirrers or spoons for mixing
- Paper towels or cloth for cleaning spills
- Pen and paper for recording observations

IV. Instructions:

Safety First: Ensure all participants are wearing safety goggles and understand the importance of safety when handling chemicals. Adult supervision is necessary throughout the activity.

- Work in group.
- Together with your teammates, perform the activity.
- Set up the containers or cups on a flat surface.
- Fill each container with a small amount of one of the testing materials (e.g., vinegar, lemon juice, water).
- Add additional materials for testing reactivity, such as baking soda, salt, or food coloring, to separate containers as needed.
- Mix different combinations of materials in the containers and observe what happens. For example:
  - ✔ Mix vinegar with baking soda and observe the reaction.
  - ✔ Place a piece of steel wool in vinegar and note any changes over time.
  - ✔ Mix lemon juice with baking soda and observe the reaction.

- ✔ Add salt to water and stir to see if it dissolves.
- ✔ Wrap a small piece of aluminum foil around a wooden stick and place it in vinegar to observe any reactions.

- Based on your observations, answer the following questions:

1. What happened when you mixed certain materials together?
   _____
   _____
   _____
   _____
2. Did you observe any bubbles, color changes, or other reactions?
   _____
   _____
   _____
   _____
3. How did the materials behave differently when combined with each other?
   _____
   _____
   _____
   _____
4. Can you identify any patterns or similarities in the reactions you observed?
   _____
   _____
   _____
   _____
   _____
5. How might these reactions be useful in everyday life or in science?
   _____
   _____
   _____
   _____

- Present your findings to the class.

V. Synthesis/Extended Practice/Differentiation (if needed):

LEARNING ACTIVITY SHEET 3 – DAY 3

Learning Area:	Science 4	**Quarter:**	1ST Quarter
Lesson No.:	1	**Date:**	
Lesson Title/ Topic:	**Chemical Properties of Materials (Degradable and Biodegradable)**		
Name:		**Grade & Section:**	

I. Activity No.3: "Exploring Degradable and Biodegradable Materials" (15 Minutes)

II. Objective(s):

At the end of the activity, the learners are expected to:

- Identify materials that are degradable and biodegradable

III. Materials Needed:

- Samples of degradable materials:
  - ✔ Plastic drinking straws
  - ✔ Polystyrene foam (Styrofoam) packaging
- Samples of biodegradable materials:
  - ✔ Apple cores
  - ✔ Cotton balls
- Clear containers or jars
- Water
- Notebook and pen for recording observations
- Safety gloves (optional)

IV. Instructions:

- Work in group.
- Together with your teammates, perform the activity.
- Place the clear containers or jars on a table.
- Separate the samples of degradable and biodegradable materials into two groups.
- Observe each sample and describe its appearance and composition.
- Based on your prior knowledge, predict whether each sample is degradable, biodegradable, or neither.
- Fill each container with water, covering the samples inside.
- Carefully place one sample from each group (degradable and biodegradable) into separate containers.
- Record your observations over a designated period (e.g., 24 hours).
- Note any changes they observe in the samples, such as changes in texture, appearance, or size.

- Based on your observations, answer the following questions:

  1. Did any of the samples change over time? If so, how?
     _____
     _____
     _____
     _____

  2. Were there any differences between the degradable and biodegradable samples?
     _____
     _____
     _____
     _____

  3. What factors might have contributed to the observed changes?
     _____
     _____
     _____
     _____

  4. How do these observations relate to the concepts of degradability and biodegradability?
     _____
     _____
     _____
     _____

- Present your findings to the class.

V. Synthesis/Extended Practice/Differentiation (if needed):

ANNEX A

TEAM JOBS

Manager (red):

- Responsible for collecting and returning the team's equipment.
- Also tell the teacher if any equipment is broken or damaged.
- All members are responsible for cleaning up after an activity and getting ready to return.

Speaker: (blue)

- Responsible for asking the teacher or another team's speaker for help.
- If the team cannot decide how to follow a procedure, the speaker is the **ONLY** person who may seek help.
- The speaker shares any information obtained with all the team members.
- The teacher may speak with all the team members.
- Each team member should be able to report on the team's result, not just the speaker.

Director: (green)

- Responsible for making sure that the team understands the activity and helps team members to focus on each step to be completed.
- Helps team members to check that they have completed all aspects of the activity successfully.
- Provided guidance but is not the team leader.

Reports Coordinator: (yellow)

- Responsible for ensuring that team members have completed all the necessary reports, data collection, and relevant worksheets.
- Does not necessarily report on behalf of the team.
- Ensures that each member of the team has the necessary information so that they can report to the class if required to do so.