

FIRST QUARTER

LESSON 1: PROPERTIES OF SOME MATERIALS

DURATION: 5 days

I. Objectives:

1. Identify some properties of materials they use at home.
2. Classify properties of materials as to their uses.
- 3.. Make your own useful material/product using different materials.

II. A. Materials:

Old news papers

Glue or tape

Plastic straw

Different empty bottles

Scissors

Yarn

Plastic

Old t - shirt

B. References:

Curriculum Guide in Science 5

Code : S5MT –la-b-1

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http://www.bbc.co.uk/schools/teachers/ks2_lessonplans/science/characteristics_of_materials.shtml

http://downloads.bbc.co.uk/schools/teachers/ks2worksheets/bbc_teachers_ks2_science_worksheet_materials.pdf

C. Process Skills: Observing, identifying, describing, and investigating.

D. Values Integration: Awareness on the different useful properties of materials to use in daily living.

III. Learning Tasks:

A. Engagement :

Motivation/Review

1. Show pictures of everyday items used at home and ask the children what material each one is made from.
2. Let them write their answers on a large sheet of paper .
3. Ask: *What can you say about the materials used to make those products?*
4. What materials in your list are flexible?
5. Is the color of materials used important?
6. Which of those materials do you think have strength?
7. To recall the previous knowledge, ask: *What phases of matter those materials belong?*
8. To introduce the new lesson, say: *Look at the materials you have listed. What if I want to make a model of a bridge, which materials I should use to make it strong?*
9. Introduce some useful properties of some materials. (strength, flexibility, transparency)
10. Let them watch a video clip about different types of materials used to make some items/products.
11. Ask them to list some useful materials they learned from video clip on their notebook.

B. Exploration :

1. Divide the class into 5 (five) groups ,let them think of their group names related to some properties of materials.
2. Ask the learners about standards in group activities.
3. Provide the class with the materials to be used in the activity.
4. Ask the children to design an umbrella to keep off the rain out of the materials provided by the teacher.
5. Ask them first to brainstorm a list of possible materials they could make it from.
6. Explain that they should then go through the list and decide why it would not be sensible to make an umbrella from some of the materials.
7. Provide each group with the LM.
8. Instruct each group to perform Lesson1 : LM Activity 1 - “ Properties of some Materials”

9. Go around and follow-up the conduct of activity by each group.
10. Remind each group that they will be presenting their finished product in the class after finishing their activity.

C. Explanation:

1. Ask each group to present their output and answer the guide questions.
 What materials you used to make an umbrella?
 Why you chose those materials?
 Do you think your umbrella can be used during summer and rainy seasons?
 Can you give some useful properties of materials you used?
2. Ask each group to exchange their notebooks and check their answers in LM (Activity 1).

D. Elaboration/Extension/BIT

The term **material** also refers to the substances from which a product is made. Manufacturers are familiar with the properties of the materials they use. Below are some simple Properties of Materials found in products we use at home

Materials	Properties	Products
Metals	Conductors,strong, malleable,and magnetic properties	Metal pots ,pans,electrical wires,bag locks,refrigerator magnetic holders
Glass	Transparency	Windowpanes,bottles, vehicle windows, and light bulbs
Ceramics	Insulators and highly durable	Cover the entire exterior of space shuttle, vases, figurines, cups, and mugs.
Plastics	Heat insulation,durable,lightweight,corrosion resistant, and water proof	Styrofoam, car parts, synthetic fibers,toys, and nylon

Rubber	Flexible, elasticity, and electrical resistance	Belts, hoses, gaskets, shoes, slippers, clothing, furniture, and toys
wood	Versatile, heat and electrical resistance	Chairs, tables, cooking wares, and furnitures

E. Evaluation.

Identify the some properties of the following materials. Write your answer inside the table.

MATERIALS	PROPERTIES
metals	1.
ceramics	2.
rubber	3.
plastics	4.
wood	5.
glass	6.

IV. Assignment:

List ten household products you have at home and write some properties of each materials.

LESSON 2 : USEFUL AND HARMFUL PROPERTIES OF SOME MATERIALS

DURATION: 5 days

I. Objectives:

1. Determine whether the material is useful or harmful.
2. Group the materials according to their uses.
3. Practice safety precautions in the use of certain materials.

II. A. Materials:

Different household materials (fertilizers, insecticides, herbicides, alcohol, vitamins, etc.)

B. References:

Curriculum Guide in Science 5.

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C. Process Skills: Observing, identifying, describing, and investigating.

D. Values Integration: Awareness on the importance of proper storage and disposal of household materials

II. Learning tasks:

A .Engagement:

Review:

Elicit response from the pupils regarding the activity performed yesterday.

Ask: *From the lesson yesterday, name some materials you use in your daily living*

Lesson presentation:

Ask: *What household materials do you have at home? How would you classify them?*

Would you know that there are certain precautions to follow to keep us safe?

B. Exploration:

1. Divide the class into five groups.
2. Set standards to follow during group activity.
3. Provide the learners with the LM and instruct each group to perform Lesson 2 : LM Activity 1 - " Household Materials".(grouping of household materials according to their uses)
4. Discuss in detail whether a material is useful or harmful.
5. Ask the learners to read some safety precautions in handling household materials.
6. Let the pupils do the Activity. "Science Trail".(Each group will do the task in each base with different household materials, with emphasis on safety precautions in using materials)
8. Each group will be given answer sheet for their respective answers.
7. Allot ample time for the pupils to complete their task.
8. Remind the pupils that they will be presenting their observations and answers from the activity.

C. Explanation

1. Ask each group to present their answers/observations about the activity and the answer to their guide questions in a form of macro broadcasting.
2. Each group will be given time to brainstorm and prepare for their presentation.
3. Ask:

What are the importance of having knowledge about proper use of some household materials?

What are the harmful effects of some materials at home?

Why it is important to store all poisonous chemicals in safe containers and places?

1. Discuss the safety precautions in the use of certain materials.

D. Elaboration/Extension/BIT

Aerosols technically refers to airborne solid particles(also called dust or particulate matter or liquid droplets). In everyday language, aerosol refers to an aerosol spray can or its contents. In the early 1970's, scientists in the U.S. first started to express concern to the man-made chlorofluorocarbons (or CFCs) used in air conditioning, aerosol, foam blowing, and refrigeration industries were responsible for an apparent thinning of the ozone layer. The ozone layer absorbs radiation from the sun. The aerosol industry responded by phasing out the use of these CFCs and shifting to non – ozone depleting natural hydrocarbons.

Household materials are classified according to their uses such as: Food Preparation, Cleaning, Beautification, Building construction, and those found in Products. Other household Materials are pesticides,insecticides,herbicides,fertilizers,and vitamins.

Storage and Disposal of Household Materials

1. Store all poisonous chemicals in safe containers and places.
2. Keep flammable materials out of the reach of children
3. Clearly label all containers of chemicals to make sure they are easily and correctly recognized
4. Keep petroleum products in safe containers
5. Dispose of all empty cans, glasses, and plastic and Styrofoam products properly.
6. Thoroughly clean kitchen utensils and similar materials and keep them in a safe place, away from cockroaches and ants.
7. Dispose of fruit peelings, food scraps, and spoiled fruit and vegetables together with other biodegradable materials in a compost pit in the backyard.

E. Evaluation

A. On the blank beside each material, write useful or harmful. Give your reason.

1. Household

machines_____

2. Plastics_____

3. Preservatives_____

4. Insecticides_____

5. Sharp

tools_____

B. Give at least 5(five) proper ways in using household materials.

III. Assignment:

Make a sample inventory of household materials present in your home.

