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Physical Science Lesson Plan: Classifying Materials

Grade Level: K-2

Subject: Physical Science

Standard: 2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. [Observations could include color, texture, hardness, and flexibility. Patterns could include the similar properties that different materials share.]

Lesson Overview:

Students will go on a scavenger hunt to find objects with different observable properties (color, texture, hardness, flexibility) and classify them based on shared characteristics.

Materials Needed:

- scavenger hunt (see below)
- Small bags or trays for collecting objects (optional)
- Instructional graphic (see below)

Time Needed:

- Introduction & Demonstration: 5-10 minutes
- Scavenger Hunt: 15 minutes
- Assessment & Reflection: 10 minutes

Instruction:

1. Demonstration & Explanation (10 min)

- Show students a few example objects and model how to describe their properties (e.g., “This rock is hard, rough, and gray. This rubber band is stretchy and smooth.”)
- Explain that they will search for objects and classify them by properties like color, texture, hardness, and flexibility.

2. Guided Practice (Before Activity)

- Hold up an object and ask students to describe it using the four observable properties.
(any object such as a hair tie or a rock)
- Encourage discussion

Activity: Material Properties Scavenger Hunt**Instructions:**

- through the nature walk, find objects that check off each category of the scavenger
- Once they collect their items, they classify them per category and check them off

Formative/Summative Assessments:

1. Formative Assessment (During Activity)

- Observe students as they collect and classify objects.
- Ask guiding questions: Why did you classify this object here? How does this object compare to another one?

2. Summative Assessment (After Activity)

- Students present 2-3 objects and explain why they belong to a certain category.

Modifications & Accommodations:

- For Students Needing Extra Support: help your child and/or show them pictures
- For Advanced Learners: Challenge them to find patterns in the materials (ex: Why do certain objects share properties?), and introduce the idea of natural vs. man-made materials.
- For Students with Mobility Limitations: Have pre-selected objects at a table for them to observe and classify.

Closure & Reflection

- Discuss: What materials were the hardest? What was the most flexible?
- Connect to real-world applications: Why do we use certain materials for specific purposes?
- Review the key concept: Materials have observable properties that help us classify them.

SCAVENGER HUNT CHECKLIST

- ☐ something that is blue
- ☐ something that is red
- ☐ something that is green
- ☐ something that is yellow
- ☐ something with a rough texture
- ☐ something with a soft texture
- ☐ something with a bumpy texture
- ☐ something that is flexible
- ☐ something that is NOT flexible

Challenge

- ☐ Can you find something that has a soft texture that is green?
- ☐ Can you name an object's properties relating to color, texture, flexibility, AND hardness?

How many check-marks did you get? Challenge a friend!



CLASSIFYING MATERIALS



Subject **Physical Sciences**

Arkansas State Standard

Grade **K-2**

2-PS1-1

Objective

Students will go on a scavenger hunt to find objects with different observable properties (color, texture, hardness, flexibility) and classify them based on shared characteristics.

Materials & Resources

- scavenger hunt (digital)
- Small bags or trays for collecting objects (optional)
- Instructional graphic (digital)

Start by...

Introduce the topic: Grab any two objects (rock, leaf, hair tie, etc.). "What makes these objects different?"

- "Did you know that we can classify objects by multiple different properties?"
- Have your student brainstorm ideas to do this.

Scavenger Hunt Activity

- "Today, we are going to practice classifying materials by color, texture, hardness, and flexibility!"

Option 1:

- Follow the Scavenger Hunt Checklist's directions as you explore **ASUMH** campus or nature trails!

Option 2:

- (If available) Collect multiple objects in a bag/basket/tray, and classify them by color, texture, hardness, and flexibility at the end of your walk!

Questions to Ask Your Student

- "Can you find me an object that has a rough texture?"
- "Go pick up two different objects. How are the color/texture/flexibility/hardness the same? How are they different?"
- Which of these objects have a smooth/rough texture?
- Which of these objects have good/bad flexibility?
- Which objects are hard/soft?
- What are the colors of these objects?

Critical Thinking Question: Why does an object's properties matter?

PARENT CHEAT-SHEET



Vocabulary

classify: to put it into groups or categories based on how it's similar to other things

identify: to figure out or name exactly who or what it is

texture: what something feels like when you touch it, like smooth, rough, soft, or bumpy

flexibility: being able to bend or stretch easily and to adapt to changes like a character who can easily change their plans or a body that moves well

flexibility: how tough or resistant to scratches or dents a material is

Accommodations / Modifications

For Students Needing Extra Support: help your child and/or show them pictures

For Advanced Learners: Challenge them to find patterns in the materials (ex: Why do certain objects share properties? Why are classifying materials important? Can we use something that is flexible to build something like a house?), talk about the idea of natural vs. man-made materials.

For Students with Mobility Limitations: Have pre-selected objects at a table for them to observe and classify/ collect items for your student