Discover!

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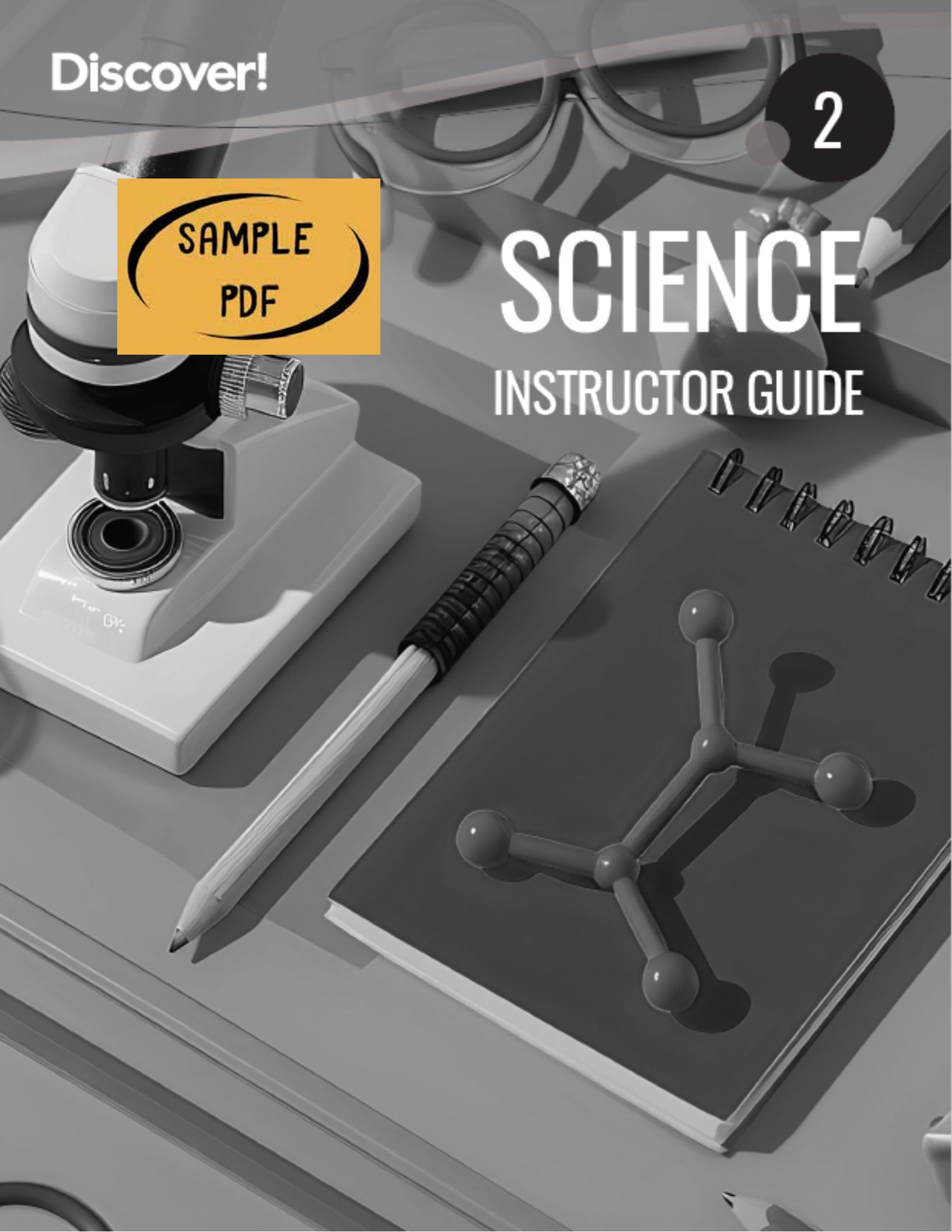
SAMPLE PDF

SCIENCE

INSTRUCTOR GUIDE



Classifying Matter

Lesson Objectives

By the end of this lesson, your student will be able to:

- identify the properties of matter
- classify objects based on the properties of matter
- describe matter by its observable properties

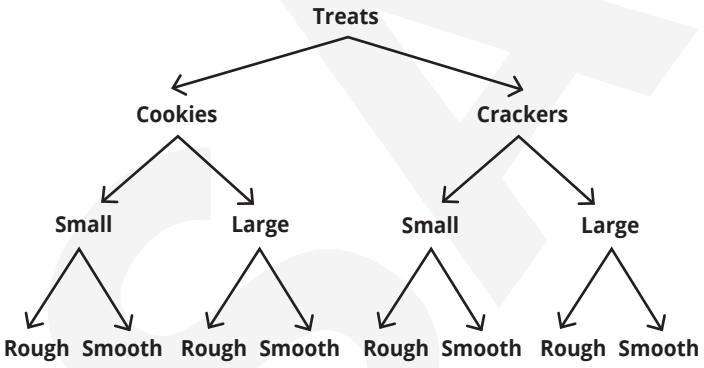
Supporting Your Student

Explore

In this story, the car starts to slide on the icy road. This is because the texture of the road goes from rough (under normal conditions) to smooth. The car tires do not have enough traction to keep rolling and so they begin to slide. Discuss with your student regular conditions on a day with nice weather. Ask your student what the street is like. Discuss that the road has a rough surface. Ask your student how the road is under icy conditions. Explain that roughness and smoothness are textures. Guide your student to find rough and smooth things around them.

Take a Closer Look *(Classifying Cookies and Crackers)*

In this activity, your student will classify cookies and crackers by using different properties of matter. Once they observe the cookies and crackers and fill out the table, they will separate the treats by type, size, and texture. They should have eight piles of cookies and crackers at the end. To make it more organized, have your student use a piece of paper to label each pile.



As an extension, you can have your student classify each cookie again by using two properties at once. For example, small and square cookies go on one pile while large and round cookies go on another pile. You can also add more types of cookies or crackers to make it more interesting and challenging.

Online Connection

When the temperature of a liquid or gas increases, the substance becomes lighter and floats upward. In the case of a gas, like air inside a hot-air balloon, the air is hot. Because it is hot, the air rises. This fills up the balloon until enough air is hot and the entire balloon floats into the sky. You can see this effect when boiling water. As the water starts to boil, steam rises and floats up.

Learning Styles

Auditory learners may enjoy finding objects around them and discussing the different properties of matter that each object has.

Visual learners may enjoy creating a checklist that includes each property of matter and checking off each item as they go around observing the properties in different objects.

Kinesthetic learners may enjoy creating a texture rubbing of objects found around them or performing additional experiments on liquids or with a balance to think about the density of those substances.

Extension Activities

Slime

Materials: one cup of washable white school glue, food coloring, a large bowl, one teaspoon of baking soda, a large spoon, two tablespoons of all-purpose solution

Directions:

1. Mix the glue and food coloring in a large bowl.
2. Add the baking soda.
3. Stir with a large spoon to mix the substance.
4. Add the all-purpose solution. If needed, you can add an extra tablespoon of the all-purpose solution.
5. Mix all the ingredients until the slime pulls away from the bowl. Knead the slime until it is no longer sticky.

Ask your student what properties they can identify

in the slime. Discuss the different properties they observe.

Graphic Organizer

Have your student create a graphic organizer that includes each property of matter found in the lesson, the definition, one example, and one drawing that represents the property.

Answer Key

Explore

The car started slipping on the road because the surface of the road was icy. Normally, the street is rough so that cars do not slip. But when the ice freezes, the road becomes smooth. The road would feel cold and slippery.

Write *(What is one example of a property of matter?)*

Answers will vary. Possible answer: One example of a property of matter is color.

Practice

D: mass
G: volume
C: state
F: shape
A: size
H: color
B: hardness
E: texture

Take a Closer Look *(Classifying Cookies and Crackers)*

Answers will vary, as it depends on the types of cookies and crackers used.

Show What You Know

1. True
2. True
3. C
4. Soft
5. Rough

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