

# Edible Asteroids Part I

## Objectives

- Students will analyze a piece of “asteroid” given to them
- Students will draw the “asteroid” given to them
- Students will describe the physical properties of the “asteroid”
- Students will develop and state a hypothesis of the type of “asteroid” they have been given

## Suggested Grade Level

K-3<sup>rd</sup>

## Subject Area

Science

## Timeline

One class period

## Standards

### Science as Inquiry

- Abilities necessary to do scientific inquiry
- Understanding about scientific inquiry

### Earth and Space Science

- Structure of the Earth system
- Earth’s history
- Earth in the solar system

### Science in Personal and Social Perspectives

- Natural hazards

### History and Nature of Science

- Science as a human endeavor

## Background

Making observations and analyzing the physical characteristics of objects is an important skill students must master in order to become effective scientists. The physical characteristics of an object can vary greatly. This lesson focuses on the most common physical characteristics that primary elementary students will encounter.

**Color**-Color is the first thing people notice when observing an object. Color can be an important characteristic when determining chemical composition.

**Shape**-Many times shape can help determine the chemical composition of crystals inside an object.

**Texture**-Texture is the characteristic appearance of an object, i.e. rough or smooth.

During this activity, students will be analyzing simulated asteroids (pieces of candy bars). If students haven't had a good introduction to observation in the scientific process, this would be a good time to introduce that skill.

Observing something means looking at the object and describing what it looks like. Students will draw the sample of their asteroid and color it. For younger students, the objective of this lesson is not to create a detailed drawing, but learning the skill of observation.

This lesson, like Part II, is primarily for honing the students' observation skills in the scientific process. This skill, above all others, should be the major focus of these two lessons.

### **Materials**

Various types of candy bars (preferably a different candy bar for each student), a small paper plate for each student, pencil, Asteroid Analysis worksheet, colored pencils or crayons

Note: If a variety of candy bars is difficult to find, the teacher may use other foods such as brownies, peanut brittle, cupcakes, Twinkies, etc.,

### **Lesson**

1. Review with students proper science lab procedures. **DO NOT EAT THE CANDY BARS!**
2. Inform students that today they have a special assignment. NASA has asked for their help in a very important science investigation. NASA needs their help analyzing various asteroid samples. It will be up to them to analyze and describe their particular sample.
3. Hand out the Asteroid Analysis worksheet.
4. Hand out a paper plate to each student.
5. Place an asteroid sample on the paper plate. Remind students not to touch it.
6. Have students start the Asteroid Analysis worksheet.
7. Students must draw their asteroid sample so that the inside of the sample can be analyzed.
8. After students have completed their analyses, have them share with the class the description of their sample. Make sure students use the vocabulary words of color, texture, and shape.

9. The teacher may include other physical characteristics depending on the ability of the students.
10. See if students can guess the name of the candy bar or food.
11. When the discussion is complete, let the students eat their entire candy bar or food.

### **Extensions**

Post the worksheets on a bulletin board and number them. Have students analyze each worksheet to see if they can guess what type of candy bar or food that was analyzed in the sample.

### **Evaluation/Assessment**

Grade the Asteroid Analysis worksheet. Did the student adequately fill in each part of the worksheet? Did the student take the time to properly draw and analyze each element of the sample?

### **Resources**

National Science Standards: <http://www.nap.edu/readingroom/books/nses/>

# Asteroid Analysis Worksheet

Name \_\_\_\_\_

Date \_\_\_\_\_

In the work space below, draw and color your asteroid sample. Make sure you use correct colors when drawing your sample.



Describe your sample.

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