

## Lesson Plan

### Satellite Design

**Book:** *Satellites*

**Series:** Space

**Level:** Beacon

### Objective

To help students practice using key details from a text about satellites to make inferences and applications, including designing a satellite of their own.

### Supplies

- *Satellites* book
- Whiteboard
- Pencils and paper

### Before the Activity

Read through the *Satellites* book, or assign it to students to read on their own.

### Activity

After reading the *Satellites* book, review its main ideas by asking the following questions:

- What are satellites? (Answer: objects in space that orbit other objects)
- What are some tasks that satellites commonly do? (Answer: They can collect data and send information.)
- According to the book, what are some things a satellite can collect data about? (Possible Answers: weather patterns, soil, objects in space)
- What other things does the book say people can use satellites to do? (Possible Answers: take pictures, bring TV or internet connection, study cities buried in dirt)

Next, ask students to pretend they are scientists. Each student will design a new type of satellite. They should write a paragraph that answers the following questions about it:

- What will your satellite help do?
- Where will your satellite go, and what data will it collect?
- What tools or equipment will it use?

Students should also draw what their satellite will look like. Remind them to include features such as antennas, sensors, or cameras. Students can refer to the book for ideas. But the paragraph should be written in their own words.

Give students several minutes to write and draw. Then, invite a few volunteers to share their creations with the class.

### **Evaluation**

Collect all students' papers at the end of class. Use the following system to award up to 6 points for the paragraph:

- 2 points for describing the satellite's purpose
- 2 points for describing how the satellite will move and collect data
- 2 points for choosing tools and equipment that will help with these tasks

Give students 2 points for including a drawing, or up to 8 points total.

### **Standards**

This lesson may be used to address the Common Core State Standards' reading standards for informational text, grade 4 (RI 4.1), and writing standards, grade 4 (W 4.4).