

## **Earth Supports Life!**

**Grade:** 6

**Standard:** S6E1: Students will explore current scientific views of the universe and how those views evolved.

c. Compare and contrast the planets in terms of ability to support life

**Essential Question:** What characteristics enable Earth to support life?

**Interest Approach:** Divide students into groups of two to four. Hand out one of the following discussion slips to each group, allowing the group to discuss and record answers for two minutes. For this exercise, let them know that creative answers are O.K.

Atmosphere – How would your life on Earth be different if pollution became so severe that the air was not safe to breathe?

Climate – What would you do if Earth’s climate changed to include extreme temperatures year-round? 130 degrees Fahrenheit? -10 degrees Fahrenheit?

Water – How would your life be different if you did not have access to fresh water (no sinks, showers, or even rivers nearby)? What would you eat and drink?

Sun (light and heat) – Who turned the lights off? Imagine what your life would be like if an asteroid hit earth, and the resulting dust cloud blocked light from the sun for several months. What would happen?

**Lesson:** Call class back together and discuss student answers. Explain that each question represents one of the reasons that life is possible here on Earth. While they might have come up with some creative answers to how life would be on Earth in different conditions, if these conditions did not exist at all, life on Earth would not exist. Discuss each of the five necessary components for life on earth. Compare to situations on other planets.

**Learning Activity:** Tell students they are going on a scavenger hunt into the school garden to find examples of how life in the garden depends on just the perfect combination of atmosphere, climate, water, and heat and light from the sun. First, instruct students to create a chart with the five elements. Working alone, or in partners or groups from before, students should find seven examples (at least one for each category) of how Earth supports life. For example, seeds need heat from the sun to germinate, plants need carbon dioxide to use energy, plants need light to make food, plants need water, etc. Examples can also include wildlife in the garden, or people that use or are in the garden. Examples may be written in sentence form in the chart, depicted through drawings, or both depending on teacher preference.

**Check for Understanding:** Back in the classroom, check for understanding by creating a master chart, calling on student or group observations for each category.