



**Schoolyard greening projects can address some of the following science “power standards”:**

**K.5.2.** Describe that plants and animals are alike in some ways and different in others (e.g., appearance and behavior).

**K.2.2.** Recognize that seasons repeat in predictable patterns over time.

**1.2.3.** Observe and measure that the sun supplies heat and light to the Earth and is necessary for most life.

**1.4.2.** Observe and describe that there can be differences, such as size or markings, among the individuals within one particular plant or animal group (e.g., maple trees, zebras). Variation is a normal characteristic of many kinds of living things.

**1.4.5.** Identify the external features that local plants and animals have (such as those found in schoolyards or in city neighborhoods) that enable them to survive in their environment.

**2.8.1.** Recognize and explain that living things are found almost everywhere in the world in habitats, such as the oceans, rivers, rainforests, mountain ranges, arctic tundra, farms, cities, and other environments. Recognize that some habitats are extreme, such as the very deepest parts of the oceans or inside hot springs.

**2.1.10.** Make simple line and bar graphs (e.g., track daily changes in outdoor air temperature).

**2.7.2.** Explain that food for almost all kinds of animals can be traced through a food web back to green plants.

**2.7.7.** Recognize there is a vast world of living things, called microorganisms, too small to see with the unaided eye.

**2.1.4.** Use tools — such as thermometers, magnifiers, rulers, or balances — to investigate, observe, measure, design, and build things.

**3.6.1** Recognize that plants go through predictable life cycles that include birth, growth, development, reproduction, and death.

**3.7.4** Recognize that food provides energy as well as materials for growth, maintenance, and repair of body parts.

**3.4.1** Recognize that energy is needed to carry out almost any kind of change.

**4.7.1** Explain that organisms interact with one another in various ways, such as providing food, pollination, and seed dispersal.

**4.7.6** Describe the many beneficial attributes of plants, including trees, in improving and sustaining an urban environment.

**4.5.3** Explain when light strikes a surface, it can be reflected, scattered, refracted, and/or absorbed.

**4.7.3** Describe how energy derived from the sun is used by green plants to produce chemical energy in the form of sugars (photosynthesis), and this energy is transferred along a food chain from producers (plants) to consumers to decomposers.

**5.1.1.** Recognize and describe how results of similar scientific investigations may turn out differently because of inconsistencies in methods, materials, and observations, or because of limitations of the precision of the instruments used.

**5.9.5.** Explain how changes in an organism’s habitat are sometimes beneficial and sometimes harmful, and how changes in the environment (drought, cold) have caused some plants and animals to die, migrate, or become extinct.

**5.9.2.** Identify organisms that are not native to the Washington, DC, area and how they undergo changes to increase their chance of survival in the area.

**6.1.10.** Construct and interpret a simple map.

**6.3.6.** Construct models or drawings to explain that the seasons are caused by the tilt of the Earth’s axis relative to the plane of its orbit and its revolution around the sun. Explain how this results in uneven heating of the various parts of Earth’s surface that varies over the course of the year.

6.1.8. Record and organize information in simple tables and graphs, and identify relationships they reveal. Use tables and graphs as examples of evidence for explanations when writing essays or writing about lab work, fieldwork, etc. Read simple graphs produced by others, and describe in words what they show.

6.6.7. Describe that most rainwater that falls in Washington, DC, will eventually drain into the Chesapeake Bay.

6.6.1. Explain that fresh water is limited in supply and uneven in distribution; describe why it is essential for life as we know it and also for most human activities, including industrial processes.

6.6.5. Investigate and describe how pollutants can affect weather and the atmosphere.

Older grades forthcoming...