

## Living Environment: K-4

**Standard 4:** Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

**Key Idea 1:** Living things are both similar to and different from each other and from nonliving things.

**Performance Indicator 1.1:** Describe the characteristics of and variations between living and nonliving things.

Kelder's Farm and Homegrown Minigolf is a perfect place to observe the things necessary for life: air, water, nutrients, etc.

**Performance Indicator 1.2:** Describe the life processes common to all living things.

While on the farm, students can see plants grow, flower, produce seeds, ripen, and eventually die, returning to the soil.

**Key Idea 2:** Organisms inherit genetic information in a variety of ways that result in continuity of structure and function between parents and offspring.

**Performance Indicator 2.1:** Recognize that traits of living things are both inherited and acquired or learned.

At homegrown Minigolf, many of the fruits and vegetables are grown in several varieties. Students can see the traits that are similar and different in various varieties of beans, tomatoes, cabbage, to name a few.

**Key Idea 4:** The continuity of life is sustained through reproduction and development.

**Performance Indicator 4.1:** Describe the major stages in the life cycles of selected plants and animals.

Plants can be seen in all stages of their life cycle, depending on the season. Homegrown Minigolf is an ideal environment for students to see young plants sprouting, mature plants flowering, and fruits and seeds forming, all identified with additional information.

**Key Idea 5:** Organisms maintain a dynamic equilibrium that sustains life.

**Performance Indicator 5.3:** Describe the factors that help promote good health and growth in humans.

A short walk through Homegrown Minigolf is an enjoyable way to see and taste a wide variety of the plants we use for food and shows that good health is a part of a well-rounded and happy life.

**Key Idea 6:** Plants and animals depend on each other and their physical environment.

**Performance Indicator 6.1:** Describe how plants and animals, including humans, depend upon each other and the nonliving environment.

Kelder's Farm and Homegrown Minigolf is the perfect place to see the co-dependence between humans, plants, and farm animals. We need fruits and vegetables in our diet, but many of these plants could not survive without being tended and cared for. The farm animals depend on us for food and shelter, and we depend on them for our food, pelts and leather.

**Performance Indicator 6.2:** Describe the relationship of the Sun as an energy source for living and nonliving cycles.

The value of open, sunny fields is clearly evident at Kelder's Farm and Homegrown Minigolf. Without the sun, none of these plants would grow, the fields and beds are placed for maximum exposure.

**Key Idea 7:** Human decisions and activities have had a profound impact on the physical and living environments.

**Performance Indicator 7.1:** Identify ways in which humans have changed their environment and the effects of those changes.

A trip to Kelder's Farm and Homegrown Minigolf is an excellent example of how the land in Ulster County has been tamed for farming.

This is also a good opportunity to talk about the importance of taking care of our environment as we use it. For example the pros and cons of organic cultivation, and the effect of eating locally produced food on global warming.