



## **Bugs on the Farm**

### **MA Curriculum Framework Standards**

#### **Grades PREK – 5**

#### **PREK**

##### **ESS2. Earth's Systems**

PreK-ESS2-1(MA). Raise questions and engage in discussions about how different types of local environments (including water) provide homes for different kinds of living things.

##### **LS1. From Molecules to Organisms: Structures and Processes**

PreK-LS1-1(MA). Compare, using descriptions and drawings, the external body parts of animals (including humans) and plants and explain functions of some of the observable body parts.

##### **LS2. Ecosystems: Interactions, Energy, and Dynamics**

PreK-LS2-1(MA). Use evidence from animals and plants to define several characteristics of living things that distinguish them from non-living things.

PreK-LS2-2(MA). Using evidence from the local environment, explain how familiar plants and animals meet their needs where they live.

PreK-LS2-3(MA). Give examples from the local environment of how animals and plants are dependent on one another to meet their basic needs.

#### **K**

##### **ESS2. Earth's Systems**

K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment.

##### **LS1. From Molecules to Organisms: Structures and Processes**

K-LS1-1. Observe and communicate that animals (including humans) and plants need food, water, and air to survive. Animals get food from plants or other animals. Plants make their own food and need light to live and grow.

#### **GR. 1**

##### **ESS1. Earth's Place in the Universe**

1-ESS1-2. Analyze provided data to identify relationships among seasonal patterns of change, including relative sunrise and sunset time changes, seasonal temperature and rainfall or snowfall patterns, and seasonal changes to the environment.

##### **LS1. From Molecules to Organisms: Structures and Processes**

1-LS1-1. Use evidence to explain that (a) different animals use their body parts and senses in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air, and (b) plants have roots, stems, leaves, flowers, and fruits that are used to take in water, air, and other nutrients, and produce food for the plant.

## **GR. 2**

### **LS2. Ecosystems: Interactions, Energy, and Dynamics**

2-LS2-3. Develop and use models to compare how plants and animals depend on their surroundings and other living things to meet their needs in the places they live.

## **GR. 3**

### **LS1. From Molecules to Organisms: Structures and Processes**

3-LS1-1. Use simple graphical representations to show that different types of organisms have unique and diverse life cycles. Describe that all organisms have birth, growth, reproduction, and death in common but there are a variety of ways in which these happen.

### **LS3. Heredity: Inheritance and Variation of Traits**

3-LS3-2. Distinguish between inherited characteristics and those characteristics that result from a direct interaction with the environment. Give examples of characteristics of living organisms that are influenced by both inheritance and the environment.

### **LS4. Biological Evolution: Unity and Diversity**

3-LS4-3. Construct an argument with evidence that in a particular environment some organisms can survive well, some survive less well, and some cannot survive.

3-LS4-4. Analyze and interpret given data about changes in a habitat and describe how the changes may affect the ability of organisms that live in that habitat to survive and reproduce.

## **GR. 4**

### **LS1. From Molecules to Organisms: Structures and Processes**

4-LS1-1. Construct an argument that animals and plants have internal and external structures that support their survival, growth, behavior, and reproduction.

## **GR. 5**

### **ESS3. Earth and Human Activity**

5-ESS3-1. Obtain and combine information about ways communities reduce human impact on the Earth's resources and environment by changing an agricultural, industrial, or community practice or process.

### **LS2. Ecosystems: Interactions, Energy, and Dynamics**

5-LS2-1. Develop a model to describe the movement of matter among producers, consumers, decomposers, and the air, water, and soil in the environment to (a) show that plants produce sugars and plant materials, (b) show that animals can eat plants and/or other animals for food, and (c) show that some organisms, including fungi and bacteria, break down dead organisms and recycle some materials back to the air and soil.

5-LS2-2. Compare at least two designs for a composter to determine which is most likely to encourage decomposition of materials.

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*Updated 1/15/18*