



# Discover Nature Schools *Nature Unleashed* unit for Grades 3-5

## Crosswalk to the Missouri Learning Expectations

**Arranged by Lesson** Missouri Learning Expectations supported by each lesson of the *Nature Unleashed* Unit. Topics covered in each lesson are listed below the lesson title.

### LESSON

### MISSOURI LEARNING EXPECTATION

#### Lesson 1

#### It's All Connected

Topics:

- Basic needs of organisms
- Living vs. non-living
- Organism, population, community, ecosystem

#### K.LS1.C.1

Use observations to describe patterns of what plants and animals (including humans) need to survive. [Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.]

#### Lesson 2

#### It's What's Inside that Counts

Topics:

- Basic needs of organisms
- Different environments support different organisms

#### K.ESS.3.A.1

Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.

#### 3.LS1.A.1 & 3.LS3.C.1

Construct an argument with evidence that in a particular ecosystem some organisms -- based on structural adaptations or behaviors -- can survive well, some survive less well, and some cannot survive at all. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]

#### 3-5.ETS1.A

Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

#### 3-5.ETS1.B

Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

## LESSON

### Lesson 3

#### Having What it Takes - to Survive!

Topics:

- Specialized structures of organisms and their function
- Internal and external cues impacting behavior

### Lesson 4

#### Chain of Foods

Topics:

- Food chain
- Energy flow
- Producer, consumer

## MISSOURI LEARNING EXPECTATION

### 3.LS3.B.1

Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving and finding mates. [Clarification Statement: Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.]

### 3.LS1.A.1 & 3.LS3.C.1

Construct an argument with evidence that in a particular ecosystem some organisms -- based on structural adaptations or behaviors -- can survive well, some survive less well, and some cannot. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]

### 4.LS1.A

Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and plant reproduction. [Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.]

### 4.LS1.D.1

Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways. [Clarification Statement: Emphasis is on systems of information transfer.]

### 3.LS1.A.1 & 3.LS3.C.1

Construct an argument with evidence that in a particular ecosystem some organisms -- based on structural adaptations or behaviors -- can survive well, some survive less well, and some cannot. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]

### 3.LS3.D.1

Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change. [Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.]

### 5.LS1.C.1

Support an argument that plants get the materials (i.e. carbon dioxide, water, sunlight) they need for growth chiefly from air and water. [Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil. Clarification Statement: [Do not assess photosynthesis.]

### 5.LS2.B.1

Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food.

### 5.PS3.D.1

Use models to describe that energy stored in food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. [Clarification Statement: Examples of models could include diagrams, and flow charts.]

## LESSON

## MISSOURI LEARNING EXPECTATION

### Lesson 5

#### You Eat What?!

Topics:

- Herbivore, carnivore, omnivore, decomposer
- Ecosystem roles

### 3.LS1.A.1 & 3.LS3.C.1

Construct an argument with evidence that in a particular ecosystem some organisms -- based on structural adaptations or behaviors -- can survive well, some survive less well, and some cannot survive at all. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]

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Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and plant reproduction. [Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.]

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Support an argument that plants get the materials (i.e. carbon dioxide, water, sunlight) they need for growth chiefly from air and water. [Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil. Clarification Statement: [Do not assess photosynthesis.]

### 5.LS2.B.1

Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food.

### Lesson 6

#### You Want Flies with That?

Topics:

- Predator-prey relationships

### K.ESS2.E.1

With prompting and support, construct an argument using evidence for how plants and animals (including but not limited to humans) can change the environment to meet their needs.

### K.LS1.C.1

Use observations to describe patterns of what plants and animals (including humans) need to survive. [Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.]

### 3.LS3.D.1

Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change. [Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.]

### 5.ESS3.C.1

Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

### 5.LS2.B.1

Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food.

## LESSON

## MISSOURI LEARNING EXPECTATION

### Lesson 7

#### It All Makes Sense

##### Topics:

- Ecosystem interactions
- Interdependence

### 2.LS2.A.2

Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.

### 3.LS1.A.1 and 3.LS3.C.1

Construct an argument with evidence that in a particular ecosystem some organisms -- based on structural adaptations or behaviors -- can survive well, some survive less well, and some cannot. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]

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Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.[Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.]

### 5.ESS3.C.1

Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

### Lesson 8

#### Humans are organisms, Too

##### Topics:

- Human activities - effects on environment

### K.ESS3.B.1

Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.

### 3.LS3.D.1

Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.[Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.]

### 5.ESS3.C.1

Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

These crosswalk publications were created as tools for teachers, curriculum coordinators, and school administrators to more effectively use *Nature Unleashed* lessons in their schools and classrooms. The Missouri Department of Conservation is grateful for the dedicated service of St. Louis area curriculum coordinators Joe Barton, Susan Raney, Melinda Troxel, and Skylar Wiseman who coordinated efforts with the Conservation Department's St. Louis region education consultants.



# Discover Nature Schools *Nature Unleashed* unit for Grades 3-5

## Crosswalk to the Missouri Learning Expectations

**Arranged by Missouri Learning Expectation** Lessons of the *Nature Unleashed* unit that support Missouri Learning Expectations.

### MISSOURI LEARNING EXPECTATION

#### **K.LS1.C.1**

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#### **K.ESS2.E.1**

With prompting and support, construct an argument using evidence for how plants and animals (including but not limited to humans) can change the environment to meet their needs.

#### **K.ESS3.A.1**

Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.

#### **K.ESS3.B.1**

Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.

#### **2.LS2.A.2**

Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.

### LESSON

#### **Lesson 1**

**It's All Connected**

#### **Lesson 6**

**You Want Flies with That?**

#### **Lesson 6**

**You Want Flies with That?**

#### **Lesson 2**

**It's What's Inside that Counts**

#### **Lesson 8**

**Humans are Organisms, Too**

#### **Lesson 7**

**It All Makes Sense**

## MISSOURI LEARNING EXPECTATION

### 3.LS1.A.1 & 3.LS3.C.1

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## LESSON

### Lesson 2

**It's What's Inside that Counts**

### Lesson 3

**Having What it Takes - to Survive!**

### Lesson 4

**Chain of Foods**

### Lesson 5

**You Eat What?!**

### Lesson 7

**It All Makes Sense**

### Lesson 3

**Having What it Takes - to Survive!**

### Lesson 4

**Chain of Foods**

### Lesson 6

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**Humans are Organisms, Too**

### Lesson 2

**It's What's Inside that Counts**

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**It's What's Inside that Counts**

### Lesson 3

**Having What it Takes - to Survive!**

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**Chain of Foods**

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**You Eat What?!**

### Lesson 6

**You Want Flies with That?**

## MISSOURI LEARNING EXPECTATION

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### 5.ESS3.C.1

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## LESSON

### Lesson 4

#### Chain of Foods

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#### You Want Flies with That?

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#### It All Makes Sense

### Lesson 8

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