



## Nature at Home

We hope to inspire kids of all ages to learn about the natural world and discover new connections to nature.



Welcome to the Dishman Hills Conservancy's Nature at Home Series

[dishmanhills.org/nature-at-home](http://dishmanhills.org/nature-at-home)

**Educators:** Go to page 2 to find the Nextgen Science Standards for grades 3-5 supported by Nature at Home.

**For Kids of All Ages:** We encourage you to start anywhere within the series. If you are deeply interested in science, start at “**Science Concepts**.” If you are a note taker and like to record your observations, then start with “**Journal Activities**.” Maybe you want a little of everything all at once. In that case start anywhere. Whatever your choice, enjoy your adventure!

Here are some recommended pathways through the Nature at Home series. It begins with a general overview of the Dishman Hills and moves on through discoveries, journal activities and, ultimately, a deeper look at the science behind the workings of the natural world.

- 1) Start with the content of the **Dishman Tours** folder where the *Walking in the Hills* video provides a good general overview. Follow this up with videos that visit the *Enchanted Ravine*, *West Ridge* and other areas.
- 2) Next stop, the **Discovery** folder. Here you will find an array of videos that provide food for thought on what you can look for while exploring the Dishman Hills (or any natural area). You can look close through a hand lens or far away with binoculars. Consider what you can learn from a rock or look closely at colors and wildflowers. If you are planning on visiting an outdoor area, this would be a good time to view the **Outdoor Safety Tips** folder.
- 3) Follow this with the **Nature Challenge** folder. Here you can hone your observation and deduction skills in fun ways that you can expand on when outside in the natural world.
- 4) Next stop, **Journal Activities**. This series of videos provides ideas and ways to record your thoughts and observations in nature. This is a great way to connect more deeply with your environment. Start with *Making a Nature Journal* and continue on to *Sit Spots* and *Sound Maps*.” Next view *Nature Detective*, *Soil Islands*, *Recipe for the Forest*, and *Birding Basics*.” These will provide ideas on ways you can use your journal to record your in-depth observations. From there you can “go deeper” with your observations and writing by viewing *Haikus*, *Limericks*, and *Six Word Stories*.
- 5) “Books and Stories” is your next recommended stop. Here you will find stories inspired by nature. These tales may provide inspiration for you in your own journal writings. They also serve as an opportunity to simply enjoy hearing a story. You might want to listen again, pausing the story to reflect on what the author thinks is important.
- 6) Now, head on over to **Science Concepts** and take a closer look at the habitats, geology, water resources, and other phenomena. These videos provide a deeper understanding of the Dishman Hills specifically, and the natural world in general. Perhaps the observations you have recorded in your journal, or made when watching other videos in this series, will guide your immediate interests. These videos are a great launching pad for deeper investigations into a variety of scientific topics.

## DISHMAN HILLS CONSERVANCY

### Nature at Home

Supporting science teaching standards in grades 3-5

The following is a list of Next Generation Science Standards (NGSS) that are supported by the Dishman Hills Conservancy's Nature at Home Series. Following these standards is a list of the videos offered and the suggested standards that can be supported by the videos and kids' flyers found at each link. It is noted that these resources can be utilized to engage your students in these standards as well as providing an opportunity to expand the learning opportunities into other areas of scientific study and exploration as well as social studies, arts and literature, mathematics, and literacy.

You may utilize this comprehensive list when evaluating the education opportunities provided, or browse the individual videos at the following link wherein you can access each video, the accompanying Kids' Flyer, and a brief list of the science standards supported by that content: [dishmanhills.org/nature-at-home](http://dishmanhills.org/nature-at-home)

### Grade 3 Disciplinary Core ideas:

#### PS2.A: Forces and Motion

Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object's speed or direction of motion. (Boundary: Qualitative and conceptual, but not quantitative addition of forces are used at this level.) (3-PS2-1)

The patterns of an object's motion in various situations can be observed and measured; when that past motion exhibits a regular pattern, future motion can be predicted from it. (Boundary: Technical terms, such as magnitude, velocity, momentum, and vector quantity, are not introduced at this level, but the concept that some quantities need both size and direction to be described is developed.) (3-PS2-2)

#### LS2.C: Ecosystem Dynamics, Functioning, and Resilience

When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die. (secondary to 3-LS4-4)

#### LS2.D: Social Interactions and Group Behavior

Being part of a group helps animals obtain food, defend themselves, and cope with changes. Groups may serve different functions and vary dramatically in size. (Note: Moved from K-2) (3-LS2-1)

#### LS4.C: Adaptation

For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3)

#### LS4.D: Biodiversity and Humans

Populations live in a variety of habitats and change in those habitats affects the organisms living there. (3-LS4-4)

#### LS1.B: Growth and Development of Organisms

Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. (3-LS1-1)

#### LS3.B: Variation of Traits

Different organisms vary in how they look and function because they have different inherited information. (3-LS3-1)

The environment also affects the traits that an organism develops. (3-LS3-2)

#### LS4.B: Natural Selection

Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing. (3-LS4-2)

#### ESS2.D: Weather and Climate

Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next. (3-ESS2-1)

Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. (3-ESS2-2)

#### ESS3.B: Natural Hazards

A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts. (3-ESS3-1) (Note: This Disciplinary Core Idea is also addressed by 4-ESS3-2.)

## Grade 4 Disciplinary Core ideas:

### PS3.A: Definitions of Energy

The faster a given object is moving, the more energy it possesses. (4-PS3-1)

Energy can be moved from place to place by moving objects or through sound, light, or electric currents. (4-PS3-2), (4-PS3-3)

### PS3.B: Conservation of Energy and Energy Transfer

Energy is present whenever there are moving objects, sound, light, or heat. When objects collide, energy can be transferred from one object to another, thereby changing their motion. In such collisions, some energy is typically also transferred to the surrounding air; as a result, the air gets heated and sound is produced. (4-PS3-2), (4-PS3-3)

Light also transfers energy from place to place. (4-PS3-2)

### PS3.C: Relationship Between Energy and Forces

When objects collide, the contact forces transfer energy so as to change the objects' motions. (4-PS3-3)

### PS3.D: Energy in Chemical Processes and Everyday Life

The expression "produce energy" typically refers to the conversion of stored energy into a desired form for practical use. (4-PS3-4)

### ESS3.A: Natural Resources

Energy and fuels that humans use are derived from natural sources, and their use affects the environment in multiple ways. Some resources are renewable over time, and others are not. (4-ESS3-1)

### ETS1.A: Defining Engineering Problems

Possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria). Different proposals for solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account. (secondary to 4-PS3-4)

### LS1.A: Structure and Function

Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. (4-LS1-1)

### LS1.D: Information Processing

Different sense receptors are specialized for particular kinds of information, which may be then processed by the animal's

brain. Animals are able to use their perceptions and memories to guide their actions. (4-LS1-2)

### ESS1.C: The History of Planet Earth

Local, regional, and global patterns of rock formations reveal changes over time due to earth forces, such as earthquakes. The presence and location of certain fossil types indicate the order in which rock layers were formed. (4-ESS1-1)

### ESS2.A: Earth Materials and Systems

Rainfall helps to shape the land and affects the types of living things found in a region. Water, ice, wind, living organisms, and gravity break rocks, soils, and sediments into smaller particles and move them around. (4-ESS2-1)

### ESS2.E: Biogeology

Living things affect the physical characteristics of their regions. (4-ESS2-1)

### ESS3.B: Natural Hazards

A variety of hazards result from natural processes (e.g., earthquakes, tsunamis, volcanic eruptions). Humans cannot eliminate the hazards but can take steps to reduce their impacts. (4-ESS3-2) (Note: This Disciplinary Core Idea can also be found in 3.WC.)

## Grade 5 Disciplinary Core ideas:

### PS1.B: Chemical Reactions

When two or more different substances are mixed, a new substance with different properties may be formed. (5-PS1-4)

No matter what reaction or change in properties occurs, the total weight of the substances does not change. (Boundary: Mass and weight are not distinguished at this grade level.) (5-PS1-2)

### PS3.D: Energy in Chemical Processes and Everyday Life

The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water). (5-PS3-1)

### LS1.C: Organization for Matter and Energy Flow in Organisms

Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion. (secondary to 5-PS3-1)

Plants acquire their material for growth chiefly from air and water. (5-LS1-1)

### LS2.A: Interdependent Relationships in Ecosystems

The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as "decomposers." Decomposition eventually restores (recycles) some materials back to the soil. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem

is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem. (5-LS2-1)

### **LS2.B: Cycles of Matter and Energy Transfer in Ecosystems**

Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Organisms obtain gases, and water, from the environment, and release waste matter (gas, liquid, or solid) back into the environment. (5-LS2-1)

#### **ESS2.A: Earth Materials and Systems**

Earth's major systems are the geosphere (solid and molten rock, soil, and sediments), the hydrosphere (water and ice), the atmosphere (air), and the biosphere (living things, including humans). These systems interact in multiple ways to affect Earth's surface materials and processes. The ocean supports a variety of ecosystems and organisms, shapes landforms, and influences climate. Winds and clouds in the atmosphere interact with the landforms to determine patterns of weather. (5-ESS2-1)

#### **ESS2.C: The Roles of Water in Earth's Surface Processes**

Nearly all of Earth's available water is in the ocean. Most fresh water is in glaciers or underground; only a tiny fraction is in streams, lakes, wetlands, and the atmosphere. (5-ESS2-2)

#### **ESS3.C: Human Impacts on Earth Systems**

Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments. (5-ESS3-1)

### **Videos and Suggested Learning Targets**

#### **Introduction**

Introduction: Nature At Home

#### **Dishman Hills Tours**

##### **Enchanted Ravine**

PS2.A: Forces and Motion

PS3.A: Definitions of Energy

ESS1.C: The History of Planet Earth

ESS2.A: Earth Materials and Systems

ESS2.E: Biogeology

LS2.A: Interdependent Relationships in Ecosystems

ESS2.A: Earth Materials and Systems

##### **Life in Spokane**

LS4.C: Adaptation

LS4.D: Biodiversity and Humans

LS1.A: Structure and Function

ESS2.E: Biogeology

LS2.A: Interdependent Relationships in Ecosystems

ESS2.A: Earth Materials and Systems

##### **Walk to the West Ridge**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

ESS2.D: Weather and Climate

ESS1.C: The History of Planet Earth

ESS2.A: Earth Materials and Systems

ESS2.E: Biogeology

LS2.A: Interdependent Relationships in Ecosystems

ESS2.A: Earth Materials and Systems

##### **Walking in the Hills**

LS1.D: Information Processing

ESS2.E: Biogeology

LS2.A: Interdependent Relationships in Ecosystems

ESS2.A: Earth Materials and Systems

#### **Science Concepts**

##### **Exploring the Fire Resistance of the Ponderosa Pine**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

LS4.C: Adaptation

LS4.D: Biodiversity and Humans

LS3.B: Variation of Traits

LS4.B: Natural Selection

ESS2.D: Weather and Climate

ESS3.B: Natural Hazards

LS1.A: Structure and Function

ESS2.E: Biogeology

LS2.B: Cycles of Matter and Energy Transfer in Ecosystems

ESS2.A: Earth Materials and Systems

##### **Exploring the Pond Habitats**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

LS2.D: Social Interactions and Group Behavior

LS4.C: Adaptation

LS4.D: Biodiversity and Humans

LS3.B: Variation of Traits

ESS2.D: Weather and Climate

LS1.A: Structure and Function

LS1.D: Information Processing

ESS2.A: Earth Materials and Systems

ESS2.E: Biogeology

LS1.C: Organization for Matter and Energy Flow in Organisms

LS2.A: Interdependent Relationships in Ecosystems

LS2.B: Cycles of Matter and Energy Transfer in Ecosystems

ESS2.A: Earth Materials and Systems

ESS2.C: The Roles of Water in Earth's Surface Processes

**Goldback Springs pH**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience  
LS4.C: Adaptation  
LS4.D: Biodiversity and Humans  
LS3.B: Variation of Traits  
ESS2.D: Weather and Climate  
LS1.A: Structure and Function  
ESS2.A: Earth Materials and Systems  
ESS2.E: Biogeology  
PS1.B: Chemical Reactions  
LS2.A: Interdependent Relationships in Ecosystems  
ESS2.A: Earth Materials and Systems  
ESS2.C: The Roles of Water in Earth's Surface Processes

**Habitats**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience  
  
LS2.D: Social Interactions and Group Behavior  
LS4.C: Adaptation  
LS4.D: Biodiversity and Humans  
LS3.B: Variation of Traits  
ESS2.D: Weather and Climate  
LS1.A: Structure and Function  
LS1.D: Information Processing  
ESS2.A: Earth Materials and Systems  
ESS2.E: Biogeology  
LS1.C: Organization for Matter and Energy Flow in Organisms  
LS2.A: Interdependent Relationships in Ecosystems  
LS2.B: Cycles of Matter and Energy Transfer in Ecosystems  
ESS2.A: Earth Materials and Systems

**Nature's Recycling: The Decomposers**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience  
  
LS4.C: Adaptation  
LS3.B: Variation of Traits  
LS1.A: Structure and Function  
ESS2.E: Biogeology  
LS2.A: Interdependent Relationships in Ecosystems  
LS2.B: Cycles of Matter and Energy Transfer in Ecosystems  
ESS2.A: Earth Materials and Systems

**pH Testing Basics**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience  
LS4.D: Biodiversity and Humans  
ESS2.D: Weather and Climate  
ESS2.A: Earth Materials and Systems  
PS1.B: Chemical Reactions  
ESS2.C: The Roles of Water in Earth's Surface Processes

**Pond Chemistry**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience  
LS4.C: Adaptation  
LS4.D: Biodiversity and Humans  
LS3.B: Variation of Traits  
ESS2.D: Weather and Climate  
LS1.A: Structure and Function  
ESS2.A: Earth Materials and Systems  
ESS2.E: Biogeology  
PS1.B: Chemical Reactions  
LS2.A: Interdependent Relationships in Ecosystems  
LS2.B: Cycles of Matter and Energy Transfer in Ecosystems  
ESS2.A: Earth Materials and Systems  
ESS2.C: The Roles of Water in Earth's Surface Processes

**Pond Succession**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience  
LS4.C: Adaptation  
LS4.D: Biodiversity and Humans  
LS3.B: Variation of Traits  
ESS2.D: Weather and Climate  
LS1.A: Structure and Function  
ESS1.C: The History of Planet Earth  
ESS2.A: Earth Materials and Systems  
ESS2.E: Biogeology  
PS1.B: Chemical Reactions  
LS2.A: Interdependent Relationships in Ecosystems  
LS2.B: Cycles of Matter and Energy Transfer in Ecosystems  
ESS2.A: Earth Materials and Systems  
ESS2.C: The Roles of Water in Earth's Surface Processes

**Trail Erosion**

LS4.D: Biodiversity and Humans  
ESS2.D: Weather and Climate  
ESS3.B: Natural Hazards  
ESS2.A: Earth Materials and Systems  
ESS2.E: Biogeology  
ESS2.A: Earth Materials and Systems  
ESS2.C: The Roles of Water in Earth's Surface Processes  
ESS3.C: Human Impacts on Earth Systems

**Water Cycle**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience  
LS4.D: Biodiversity and Humans  
ESS2.D: Weather and Climate  
ESS3.B: Natural Hazards

ESS1.C: The History of Planet Earth  
ESS2.A: Earth Materials and Systems  
ESS2.A: Earth Materials and Systems  
ESS2.C: The Roles of Water in Earth's Surface Processes

#### **Watersheds**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

LS4.D: Biodiversity and Humans

ESS2.D: Weather and Climate

ESS3.B: Natural Hazards

ESS1.C: The History of Planet Earth

ESS2.A: Earth Materials and Systems

ESS2.E: Biogeology

ESS2.A: Earth Materials and Systems

ESS2.C: The Roles of Water in Earth's Surface Processes

ESS3.C: Human Impacts on Earth Systems

#### **What We Can Learn From a Rock**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

LS4.C: Adaptation

LS4.D: Biodiversity and Humans

LS3.B: Variation of Traits

LS1.A: Structure and Function

ESS1.C: The History of Planet Earth

ESS2.A: Earth Materials and Systems

ESS2.E: Biogeology

LS1.C: Organization for Matter and Energy Flow in Organisms

LS2.A: Interdependent Relationships in Ecosystems

LS2.B: Cycles of Matter and Energy Transfer in Ecosystems

ESS2.A: Earth Materials and Systems

#### **Journal Activities**

##### **Making a Nature Journal**

LS1.D: Information Processing

##### **Nature Detective**

LS4.C: Adaptation

LS3.B: Variation of Traits

LS1.A: Structure and FunctionLS1.D: Information Processing

##### **Nature Journal - Soil Islands**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

LS4.C: Adaptation

LS4.D: Biodiversity and Humans

LS3.B: Variation of Traits

ESS2.D: Weather and Climate

LS1.A: Structure and Function

LS1.D: Information Processing

ESS1.C: The History of Planet Earth

ESS2.A: Earth Materials and Systems

ESS2.E: Biogeology

LS1.C: Organization for Matter and Energy Flow in Organisms

LS2.A: Interdependent Relationships in Ecosystems

LS2.B: Cycles of Matter and Energy Transfer in Ecosystems

ESS2.A: Earth Materials and Systems

ESS2.C: The Roles of Water in Earth's Surface Processes

##### **Nature Journal - Birding Basics**

LS4.C: Adaptation

LS3.B: Variation of Traits

LS1.A: Structure and Function

ESS2.E: Biogeology

ESS2.A: Earth Materials and Systems

##### **Nature Journal - Haiku**

LS1.D: Information Processing

ESS1.C: The History of Planet Earth

ESS2.A: Earth Materials and Systems

##### **Nature Journal - Limerick**

LS1.D: Information Processing

ESS2.A: Earth Materials and Systems

##### **Nature Journal - Six Word Stories**

LS4.C: Adaptation

LS3.B: Variation of Traits

LS1.A: Structure and Function

LS1.D: Information Processing

ESS2.E: Biogeology

LS2.A: Interdependent Relationships in Ecosystems

ESS2.A: Earth Materials and Systems

##### **Recipe for the Forest**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

LS4.C: Adaptation

LS4.D: Biodiversity and Humans

LS1.B: Growth and Development of Organisms

LS3.B: Variation of Traits

LS4.B: Natural Selection

ESS2.D: Weather and Climate

LS1.A: Structure and Function

LS1.D: Information Processing

ESS1.C: The History of Planet Earth

ESS2.A: Earth Materials and Systems  
ESS2.E: Biogeology  
PS3.D: Energy in Chemical Processes and Everyday Life  
LS1.C: Organization for Matter and Energy Flow in Organisms  
LS2.A: Interdependent Relationships in Ecosystems  
LS2.B: Cycles of Matter and Energy Transfer in Ecosystems  
ESS2.A: Earth Materials and Systems  
ESS2.C: The Roles of Water in Earth's Surface Processes

#### **The Sit Spot**

LS4.D: Biodiversity and Humans  
LS1.D: Information Processing  
ESS2.E: Biogeology  
ESS2.A: Earth Materials and Systems

#### **Sound Map**

LS4.D: Biodiversity and Humans  
LS1.D: Information Processing  
ESS2.E: Biogeology  
ESS2.A: Earth Materials and Systems  
ESS3.C: Human Impacts on Earth Systems

#### **Discovery**

##### **A Closer Look**

LS4.C: Adaptation  
LS1.A: Structure and Function  
ESS2.E: Biogeology  
ESS2.A: Earth Materials and Systems

##### **Birding with Binoculars**

LS4.C: Adaptation  
LS1.B: Growth and Development of Organisms  
LS3.B: Variation of Traits  
LS1.A: Structure and Function  
ESS2.E: Biogeology  
ESS2.A: Earth Materials and Systems

##### **Color Search**

LS4.C: Adaptation  
LS1.A: Structure and Function  
ESS2.E: Biogeology  
ESS2.A: Earth Materials and Systems

##### **Discovering Pinedrops**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience  
LS4.C: Adaptation  
LS3.B: Variation of Traits

LS1.A: Structure and Function  
ESS2.E: Biogeology  
LS1.C: Organization for Matter and Energy Flow in Organisms  
LS2.A: Interdependent Relationships in Ecosystems  
LS2.B: Cycles of Matter and Energy Transfer in Ecosystems  
ESS2.A: Earth Materials and Systems

#### **In Search of Wildflowers**

LS4.C: Adaptation  
LS1.A: Structure and Function  
ESS2.E: Biogeology  
ESS2.A: Earth Materials and Systems

#### **LAWS of Life**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience  
LS4.C: Adaptation  
LS4.D: Biodiversity and Humans  
LS3.B: Variation of Traits  
ESS2.D: Weather and Climate  
LS1.A: Structure and Function  
ESS1.C: The History of Planet Earth  
ESS2.A: Earth Materials and Systems  
ESS2.E: Biogeology  
PS3.D: Energy in Chemical Processes and Everyday Life  
LS1.C: Organization for Matter and Energy Flow in Organisms  
LS2.A: Interdependent Relationships in Ecosystems  
LS2.B: Cycles of Matter and Energy Transfer in Ecosystems  
ESS2.A: Earth Materials and Systems  
ESS2.C: The Roles of Water in Earth's Surface Processes

#### **Life on the Rocks**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience  
LS4.C: Adaptation  
LS4.D: Biodiversity and Humans  
LS3.B: Variation of Traits  
LS4.B: Natural Selection  
LS1.A: Structure and Function  
ESS1.C: The History of Planet Earth  
ESS2.A: Earth Materials and Systems  
ESS2.E: Biogeology  
LS1.C: Organization for Matter and Energy Flow in Organisms  
LS2.A: Interdependent Relationships in Ecosystems  
LS2.B: Cycles of Matter and Energy Transfer in Ecosystems  
ESS2.A: Earth Materials and Systems  
ESS2.C: The Roles of Water in Earth's Surface Processes

**Make At Home Exploration Tools**

LS1.D: Information Processing

ESS2.E: Biogeology

ESS2.A: Earth Materials and Systems

**Nature Detective: Exposed Rocks**

PS2.A: Forces and Motion

ESS2.D: Weather and Climate

ESS3.B: Natural Hazards

PS3.A: Definitions of Energy

PS3.B: Conservation of Energy and Energy Transfer

PS3.C: Relationship Between Energy and Forces

ESS1.C: The History of Planet Earth

ESS2.A: Earth Materials and Systems

ESS2.A: Earth Materials and Systems

ESS2.C: The Roles of Water in Earth's Surface Processes

**Nature's Time Machines**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

LS4.C: Adaptation

LS4.D: Biodiversity and Humans

LS3.B: Variation of Traits

ESS2.D: Weather and Climate

LS1.A: Structure and Function

ESS1.C: The History of Planet Earth

ESS2.A: Earth Materials and Systems

ESS2.E: Biogeology

LS1.C: Organization for Matter and Energy Flow in Organisms

LS2.A: Interdependent Relationships in Ecosystems

LS2.B: Cycles of Matter and Energy Transfer in Ecosystems

ESS2.A: Earth Materials and Systems

ESS2.C: The Roles of Water in Earth's Surface Processes

**Owls and Apples**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

LS4.D: Biodiversity and Humans

LS1.D: Information Processing

ESS2.E: Biogeology

LS1.C: Organization for Matter and Energy Flow in Organisms

LS2.A: Interdependent Relationships in Ecosystems

LS2.B: Cycles of Matter and Energy Transfer in Ecosystems

ESS3.C: Human Impacts on Earth Systems

**Ponderosa Pine Life Cycle Part One and Two**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

LS4.C: Adaptation

LS4.D: Biodiversity and Humans

LS1.B: Growth and Development of Organisms

LS3.B: Variation of Traits

LS4.B: Natural Selection

ESS2.D: Weather and Climate

LS1.A: Structure and Function

ESS2.E: Biogeology

PS3.D: Energy in Chemical Processes and Everyday Life

LS1.C: Organization for Matter and Energy Flow in Organisms

LS2.A: Interdependent Relationships in Ecosystems

LS2.B: Cycles of Matter and Energy Transfer in Ecosystems

ESS2.A: Earth Materials and Systems

**Ponderosa Pine Life Cycle Parts 1 and 2**

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

LS4.C: Adaptation

LS4.D: Biodiversity and Humans

LS1.B: Growth and Development of Organisms

LS3.B: Variation of Traits

LS4.B: Natural Selection

ESS2.D: Weather and Climate

LS1.A: Structure and Function

ESS2.E: Biogeology

PS3.D: Energy in Chemical Processes and Everyday Life

LS1.C: Organization for Matter and Energy Flow in Organisms

LS2.A: Interdependent Relationships in Ecosystems

LS2.B: Cycles of Matter and Energy Transfer in Ecosystems

ESS2.A: Earth Materials and Systems

**Spokane's Aquifer**

PS2.A: Forces and Motion

LS4.D: Biodiversity and Humans

ESS2.D: Weather and Climate

ESS3.B: Natural Hazards

PS3.A: Definitions of Energy

PS3.B: Conservation of Energy and Energy Transfer

PS3.C: Relationship Between Energy and Forces

PS3.D: Energy in Chemical Processes and Everyday Life

ESS3.A: Natural Resources

ETS1.A: Defining Engineering Problems

ESS1.C: The History of Planet Earth

ESS2.A: Earth Materials and Systems

ESS2.E: Biogeology

ESS2.A: Earth Materials and Systems

ESS2.C: The Roles of Water in Earth's Surface Processes

ESS3.C: Human Impacts on Earth Systems



### **The Power of Nature: Ice**

PS2.A: Forces and Motion

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

ESS2.D: Weather and Climate

ESS3.B: Natural Hazards

ESS2.A: Earth Materials and Systems

ESS2.B: Earth Materials and Systems

ESS2.C: The Roles of Water in Earth's Surface Processes

### **Nature Challenge**

#### **Nature Challenge: Rock or Wood**

LS1.A: Structure and Function

ESS2.A: Earth Materials and Systems

#### **Nature Challenge: What Happened to this Tree?**

LS4.C: Adaptation

LS1.A: Structure and Function

ESS2.E: Biogeology

LS2.B: Cycles of Matter and Energy Transfer in Ecosystems

ESS2.A: Earth Materials and Systems

#### **Nature Challenge: Who Ate the Balsamroot?**

LS4.C: Adaptation

LS1.A: Structure and Function

ESS2.E: Biogeology

LS1.C: Organization for Matter and Energy Flow in Organisms

LS2.A: Interdependent Relationships in Ecosystems

LS2.B: Cycles of Matter and Energy Transfer in Ecosystems

ESS2.A: Earth Materials and Systems

### **Outdoor Safety Tips**

#### **Basic Survival**

ESS3.B: Natural Hazards

LS1.D: Information Processing

ESS2.A: Earth Materials and Systems

#### **Stay Safe COVID-19 Precautions**

ESS3.B: Natural Hazards

ESS2.A: Earth Materials and Systems

### **Books and Stories**

#### **Bird In The Hand**

LS4.D: Biodiversity and Humans

ESS2.E: Biogeology

ESS3.C: Human Impacts on Earth Systems

#### **Fir Tree and Forest Mouse**

ESS2.D: Weather and Climate

ESS3.B: Natural Hazards

LS1.A: Structure and Function

ESS2.E: Biogeology

#### **Henry Builds a Cabin**

LS4.D: Biodiversity and Humans

ESS2.E: Biogeology

ESS3.C: Human Impacts on Earth Systems

#### **Henry Hikes to Fitchburg**

LS4.D: Biodiversity and Humans

ESS2.E: Biogeology

ESS3.C: Human Impacts on Earth Systems

#### **I'm in Charge of Celebrations**

ESS2.E: Biogeology

#### **The Story of Jumping Mouse**

ESS2.E: Biogeology

LS1.C: Organization for Matter and Energy Flow in Organisms

LS2.B: Cycles of Matter and Energy Transfer in Ecosystems

**This document will be updated as additional content is added. The series currently contains over 50 videos.**

**Last update 8/10/2020**

**If you have any questions you can contact us at [Education@DishmanHills.org](mailto:Education@DishmanHills.org)**