



## Rangers in the Classroom: Topic Descriptions

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### **Pre-K: Arctic Animals**

Arctic animals are amazing! Learn about animals that call the tundra their home and discover more about how they are highly adapted to live in extreme conditions.

### **K-1st: Survival Strategies**

Dig a little deeper into how plants and animals survive on the tundra! From hollow hairs to scooping hooves, we will learn about specialized design and behaviors that help organisms survive, and thrive, in a challenging environment.

### **1st and 2nd: There's No Place Like Home**

Explore oceans as homes through interactive activities and using iPads. Discover what we all need in our home and what animals require in their ocean homes.

### **2nd and 3rd: Tundra Ecology and Diversity**

The tremendous tundra! Learn more about the patterns, unique features, and diversity of this beautiful and extreme ecosystem.

Alaska Content and Performance Standards:

SA3 Students develop an understanding that culture, local knowledge, history, and interaction with the environment contribute to the development of scientific knowledge, and that local applications provide opportunity for understanding scientific concepts and global issues

SC3 Students develop an understanding that all organisms are linked to each other and their physical environments through the transfer and transformation of matter and energy

### **4th and 5th: Beringia – Footprints through time**

Bering Land Bridge National Preserve lies at the heart of the continental crossroads that profoundly influenced the distribution of life in the Western Hemisphere. Discover more about how and why animals migrated across the land bridge.

Alaska Content and Performance Standards:

SC1 Students develop an understanding of how science explains changes in life forms over time, including genetics, heredity, the process of natural selection, and biological evolution

SG4 Students develop an understanding that advancement in science depend on curiosity, creativity, imagination, and a broad knowledge base

### **3rd, 4th and 5th: Climate Quest**

Climate Quest is a fun-filled journey around the world! It will give the class a chance to visit and see some amazing things using iPads and to get a glimpse of how the world is changing. The goal during the quest will be to gather clues to see what is going on out there, why things are changing and what we might be able to do to help!

Alaska Content and Performance Standards:

Geography: A1; E5; F4. Science: [4] SA3.1; [5] SA 3.1; [5] SE3.1;

### **6th – 8th: Geology**

Granite tors, lava fields, maar lakes, and more! Bering Land Bridge contains internationally significant volcanic and geologic resources that illustrate the dynamic environment of the region. We will take a closer look at some of the geologic cycles and forces and examine how they have shaped and influenced the landscape.

Alaska Content and Performance Standards:

SD1 Students develop an understanding of Earth's geochemical cycles.

SD2 Students develop an understanding of the origins, ongoing processes, and forces that shape the structure, composition, and physical history of the Earth.

### **6th - 12th: Views of Climate Change in Alaska, the Arctic, and Beyond**

We will look at some of the effects of climate change in the Arctic through a game of Memory and discussion. Following that, with the help of the Fragile Earth app for iPads, we will take a closer, and very real, look at things that are happening in our backyard and across the globe.

Alaska Content and Performance Standards:

Science: C1; C3; [11]SC3.2; D1; SD3; [10] SD3.1; [11] SD3.1 Geography: A1; E5; F3; F4.

### **9th and 10th: Oceans**

The ocean that surrounds the Seward Peninsula is home to a tremendously productive and diverse set of species large and small. We will find out more about some of these species, their taxonomy, physiology, life cycle, and role in the larger ecosystem.

Alaska Content and Performance Standards:

SC2 Students develop an understanding of the structure, function, behavior, development, life cycles, and diversity of living organisms.

SC3 Students develop an understanding that all organisms are linked to each other and their physical environments through the transfer and transformation of matter and energy

### **11th and 12th: Climate Change**

Bering Land Bridge and the ecosystems of the arctic are experiencing unprecedented ecological shifts due to climate change. Explore the causes, local and regional effects, and steps that we can take to slow the process.

Alaska Content and Performance Standards:

SC 3 Students develop an understanding that all organisms are linked to each other and their physical environments through the transfer and transformation of matter and energy

SE 3 Students develop an understanding of how scientific discoveries and technological innovations affect and are affected by our lives and cultures.