



Grade 4 Teacher Resource- Build a Beringian Biome

This Booklet

Curricular Outcome: Science 4 “All living things sense and respond to their environment.”

Core Concepts:

Animals rely on their senses to gather information about their environment

Different animals have different adaptations for survival in various habitats

Habitats provide the resources that living things need to live

Different environments impact how an animal behaves

Big Questions:

How do animals use their senses for survival?

What does an animal need from its environment to stay alive?

How does an environment influence animal behaviour?

What do animals need to sense to survive?

Learning Outcomes:

Students will:

Identify characteristics of Beringian Ice Age environments

Explain how animals use their senses in relation to their environment

Connect animal behaviours to survival outcomes

Use creativity and scientific thinking to build an ecosystem

Introduction:

To introduce students to this activity, explain Beringia and what the landscape was like. Beringia was predominantly grassy and ice-free. Instead of deep snow and ice, the land was covered in dry plains with many grasses and sedges. While there may have been shallow wetlands in some areas, it was, for the most part, very cold and dry. Pictures can

be used to supplement this and give a visual example of the landscape. Also ask students if they know what animals lived in Beringia, and some of the challenges they may have faced.

From here, transition into discussing Beringian animals and their senses. For example, a woolly mammoth's sense of smell helps find food, and a wolf's hearing helps it locate prey. Ask students if they can think of any other animals and how they use their senses to meet their needs and survive.

Main Activity:

Students will select an Ice Age animal. At the teacher's discretion, students could also choose humans. Below is a list of recommended animals for the simplicity of the assignment:

Woolly Mammoth

Steppe Bison

Caribou

Wolf

Scimitar Cat

The selected animal will be the animal they construct and include in their shoebox biome. Students should take the time to research where the animal lives and what it needs to survive. After they have a basic framework, students should connect these needs to the five senses. A chart will be attached where students can explain how their animal meets their needs and survives.

Students will each need their own shoebox. Using paint, rocks, markers, popsicle sticks, or really any household item available, students will construct their Beringian biome featuring their animal. Students should include the landscape (weather conditions, mountains, rivers, grasslands, snow, plants, etc.), as well as features of their animal such as food sources, organisms they interact with, and even tracks or other signs of animal activity. A key guiding question students should ask themselves while building their biomes is "Could my animal survive if placed in this habitat?". This mindset will allow students to create the most realistic and detailed biome possible.

Presentation & Reflection:

Students will present their biome to the class or a small group. They can point out some of their favourite parts of their biome and answer the following questions:

1. What animal did you choose and why?
2. What does your animal need to survive?
3. How does your animal use each of its five senses?
4. What challenges does your animal face?

Alternatively, students can present from the perspective of their animal. Ex. “I am a woolly mammoth living in Beringia. Today I used my trunk to find grass under the snow...”

Another fun idea is a biome gallery walk. The biomes will be placed around the room, and students will roleplay as Beringian scientists and leave notes at each biome. This could include one thing they learned, an adaptation that helps the animal, and a question they would have. This can also lead to a great post-classroom discussion where students can discuss which was their favourite and why.

A reflection worksheet is also attached that students can fill out to show their learning about the five senses and Beringia.