Developed for the CHILD project funded through the United States Department of Education and Office of Indian Education

WHAT IS PUMICE?

Objectives:

Children will know: Children will learn ow pumice is formed

Children will do: Children will make theri own observations about pumice

Essential Questions:

- What is pumice?
- How can we identify pumice?

Standards:

M6. Sorts and groups objects.
SSC3. Asks questions and finds answers through active exploration of nature.
SSC 3. Describes changes in, makes predictions about, & describes relationships between living & non-living objects & natural events.

Materials:

- **Pumice**
- **Plastic Container**
- **Seltzer Water or Club Soda**
- **Picture of Novarupta eruption**
- **Picture of Valley of 10,000 Smokes**
- **Picture of Old Savonoski**

Alaska Native Values:

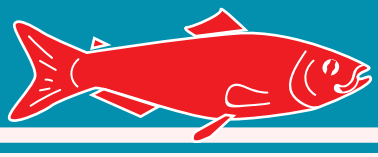
See Connections, Learning by doing, Ties to our homeland

Promoting Culture Self Assessment:

☐ 1. I display pictures, posters and other materials that reflect the cultures and ethnic backgrounds of children and families served in my early childhood program or setting.

☐ 6. I encourage and provide opportunities and experiences for children that support Alaska Native culture.

ACTIVITY



Engage

Have students sit in a circle. Hold up a piece of pumice. "Have any of you seen a rock like this before?" Pass the piece of pumice around. "This is a piece of pumice. Pumice is a special rock that forms during volcanic eruptions. Alaska has many volcanoes. One of the world's biggest eruptions happened not too far from here almost 100 years ago. This made all sorts of volcanic rocks, including pumice." Show a picture of the Valley of 10,000 smokes. "This is where the eruption was. The entire landscape changed from the eruption, and it now has all sorts of different rocks with many colors and is filled with pumice. Let's do an experiment to see what is so special about pumice."

Explore:

Activity: 10 minutes

Preparation: Have a container with water ready for experiment. Place a variety of rocks from the kit out along with the pumice.

"Let's do a little experiment. What do you think will happen when we drop these rocks in the water?" Wait for answers. "Let's try it out." Allow students to drop each rock in the water one by one but be sure to save the pumice for last. "Now we are down to our very last rock. What do you think will happen when we drop it in the water?" Have students drop in pumice. "Wow it floats! Why do you think it floats? Does it seem heavier or lighter than the other rocks?" Take a bottle or can of club soda or seltzer water. "Sometimes when volcanic eruptions happen, they blast rocks from out of the ground sort of like this." Shake can, aim away from students in a protected area, and open. Allow for foam to spray out. "This soda is just like a volcano. When all of this comes out of a real volcano, these foamy bubbles immediately harden and create pumice. That means pumice has tiny air holes in it that makes it able to float in water."

Explain:

"Our experiment helped us learn about how pumice is made in volcanic eruptions. If you dig in the ground you can sometimes see ash from these volcanic eruptions. People have lived alongside volcanoes here in Alaska for thousands of years. Stories have been passed down from generation to generation about how to survive in a big eruption. That's how the people that lived near the eruption of Novarupta lived. They listened to their elder's stories and knew the signs of a big eruption. They moved to a safe place. We can still sometimes find pieces of this big eruption just by looking outside and finding rocks like pumice. Does your family have any stories about an eruption or earthquake?"

Center Set Up:

Whole Group:

Display essential questions. Display pictures from kit. Set out a piece of pumice. Encourage students to look at it.

Sensory Play:

Set out a variety of rocks from the kit. Provide space for students pick up, touch and further explore the different rocks from this kit.

Dramatic Art and Play:

Hang up a picture of the Valley of 10,000 smokes. Have students collect rocks from outside. Have students paint the rocks to look like rocks from the Valley; red, purple, orange, and white.

Evaluation

Emerging:	**Developing:**	**Proficient:**	**Advanced:**
Student does not participate.	Student participates in discussion but does not complete activity.	Student participates in discussion and activity	Student participates in discussion, activity, and shares a story.