

### Lesson Plan: Animals of the North pole on sea ice floes

With this activity the kids will learn about the changes in the Arctic Sea ice and the impact these have on the life of animals living there, specifically on the polar bears and seals.

Children will develop their scientific skills of observation, prediction, and evaluation.

**The activity:** Kids become polar bears and seals and learn how to navigate melting sea ice floes

**Materials:** a globe or global map, ice cubes, jars or reused zip locks, newspaper

**Teacher:**

**Step 1:** Use a globe or a global map to present the North pole along with information about sea ice. Describe the Arctic sea ice like a blanket over the ocean keeping it cold throughout the year. Briefly describe the sea ice evolution cycle, where ocean water is frozen in Autumn, builds up with thicker ice in winter and part of it melts in the summer.

**Step 2:** Explain that in our lifetime, more sea ice is melting in the summer because of warmer temperatures across the world since we are creating and releasing more “heat” in the atmosphere. Activities such as excessive use of electricity, car emissions and food waste are contributing to this effect. This affects the animals that live in the Arctic and travel, feed and breed on sea ice. If the sea ice melts completely what is going to happen to them?

**Step 3:** Then use 2 or 3 ice cubes and place them in jars or (old, reused) zip lock bags. You can use one bag for each team or child. They will have to hold on to these bags throughout the activity. This will demonstrate how ice melts.

*Background:* Because the ice floes are melting, the bears must swim further distances to get from one ice floe to another, which is very exhausting. The polar bears tire out easily before they can find food for themselves and their cubs.

Many seal species give birth and nurse their pups on solid sea ice floes. These need to remain intact for several weeks until the pups are strong enough to survive in open water. With the sea ice loss, seals are facing challenges for themselves and their pups.

**Step 4:** Split the kids in small groups with the roles of either a polar bear or a seal. They will experience how the polar bears and seals that travel on different floes experience the faster melt rates.

Polar bears and seals are not “very good friends” so they cannot hang out on the same ice floe.

**Step 5:** Use pages of newspaper or construction paper to represent ice floes. Play some music or countdown from 20 and have children move around, jumping from one ice floe to another. Stop the music/counting periodically.

Each time remove one ice floe— explain that the “ice” is disappearing because the temperature is getting warmer. As you remove the “ice floes,” it will get harder and harder to find somewhere to stand, especially without being with a seal. Players are out if they cannot get on a piece of ice.

At the end there is no floe, and all the polar bears and seals are in the “ocean”.

Explain to children that polar bears and seals are experiencing the same problem, losing their living habitat.

Talk with the children and describe a few simple activities that we can all change to help the polar animals. Save energy!

Discuss how we can save energy: turning off lights and electronic equipment like TVs, video players, stereos, and computers when you aren't using them; plant trees; and use less hot water, walk short distances, use bikes or public transportations instead of cars.

-End of the activity-

I hope you all enjoy it 😊



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