



Arctic/Antarctic/Tundra/Winter Habitat *Preschool Activities*

INDOOR SNOWBALLS

Quick Facts

- Snow is translucent (or clear/see through), not white.
- There are at least 35 types of snowflakes

Literature Connection

The Story of Snow: The Science of Winter's Wonder by Jon Nelson

Materials

- Items of varying texture to act as “snowballs” e.g. fake snowballs, white washing poofs, wads of paper, rolling socks into balls, etc.
- Buckets.

Directions

Items can be placed in the science or math center for students to explore with dramatic play, to count, or to sort. Set it up so students toss snowballs into buckets with varying mouth widths and from varying distances.

Talk About It: Guiding Questions for Discussion

- Are all the snowballs the same color?
- Do they all feel the same? If not, how would you describe how they feel?

SNOW COMPARISON

Quick Facts

Snowflakes can form the same general shape but all are unique at the molecular level.

Individual snowflakes are small, but sometimes they stick together to create a much larger snowflake (as big as a dinner plate!)

Literature Connection

Snowballs by Lois Ehlert

Materials

- 1 cup of Cornstarch
- 1 cup of Conditioner (or lotion)
- Glitter (optional)

Directions

- Before exploring the premade snow ask students what they know about snow. How does it feel? Smell?
- Have students explore various snow recipes and make observations.
- Have them vote on which is the most “snow-like” and make a graph.

Talk About It: Guiding Questions for Discussion

- How are the snowballs you made similar to real snowballs?
- What do you have at home that you might be able to make snowballs out of?
- Why do you think snowballs stay together?

ANIMAL ADAPTATIONS: PENGUINS & POLAR BEARS

Objectives

To help students understand that animals adapt to their environments, particularly polar environments.

Quick Facts

- Polar Bears and penguins would never meet in the wild. Polar Bears live in the Northern Hemisphere, in the Arctic, and penguins live in the Southern Hemisphere including on Antarctica, as well as the coasts of Africa, Chile, and New Zealand.
- Some penguins live in warm climates. They tend to be smaller than penguins that live in colder climates because larger bodies lose heat more slowly than smaller ones.
- Penguins and polar bears have a layer of fat called blubber to keep warm.
- Polar bears also have small tails to reduce heat loss.

Literature Connection

- **Penguins Can't Fly** by Katherine Sully, illustrated by Rebecca Elliot
In this beautifully illustrated book, you'll meet Quentin and Billy. They're baby penguins and best friends who couldn't be more different. They'll learn why being different from each other—and other birds—isn't a bad thing at all. The book provides a great opportunity to talk about penguin adaptations to their environment as well.
- **And Tango Makes Three** written by Justin Richardson and Peter Parnell, illustrated by Harry Cole
This is the true story of three Central Park Zoo residents. When two male penguins, Roy and Silo, mate, a savvy zookeeper gives them the opportunity to raise their own chick by providing them with an egg that needed care.

Tech Connection

Penguin Web Cam: georgiaaquarium.org/webcam/african-penguin-cam/

Sensory Box

Materials

- Baking Soda
- Corn Starch
- Conditioner
- Shaving Cream
- Glitter (optional)
- Small Plastic Polar Animals (Penguins, Arctic Fox, Polar Bears, etc.)

Blubber

Materials

- Shortening
- Ziploc Bags
- Ice
- Bowls

Preparation

- Place shortening in one ziploc bag.
- Fit another bag inside of the shortening filled bag (in order to keep hands clean).
- Fill two bowls with ice.

Directions

Have students place one hand in the “blubber” (the double bags with shortening) and one hand directly in the ice water.

Talk About It: Guiding Questions for Discussion

- Which one is warmer?
- Why do you think one is warmer than the other?