

GETTING STARTED with POLAR BEARS

Your students are going to love learning all about polar bears through hands-on exploration with real world connections, and you are going to love all that is packed in this Polar Bear Unit! This overview is set up to show you everything that is included and how it can be used best. Pick and choose what works for you and your students.

POLAR BEAR science	
MATERIALS needed - Grounding books (see list) - Copy Paper - Scissors - Glue - Construction Paper - Sidewalk Chalk - Coloring Tools - An object to make a shadow	
M Monday	POLAR BEAR INTRODUCTION -Read a nonfiction grounding book. -Introduce groundings by completing the Polar Bear Facts PowerPoint. -Are you a polar bear? What would you do with your bear? -Yes, No, I don't know. -Comics. Each day please see our selection of videos, books, and websites.
T Tuesday	PARTS OF A POLAR BEAR
W Wednesday	POLAR BEAR LIFE CYCLE -Read a nonfiction polar bear book. -Introduce the Polar Bear Life Cycle poster. -Complete the Polar Bear Life Cycle worksheet and/or hat.
Th Thursday	POLAR BEAR FACT OR FICTION -Review the Polar Bear Facts PowerPoint. -Complete the Polar Bear Fact or Fiction activity as a whole group or individually. -Optional: Short fact portion of Friday's research craft.
F Friday	POLAR BEAR FACT OR RESEARCH CRAFT -Read a nonfiction polar bear book. -Students will complete the Polar Bear Craft and Fact book or research book.

LESSON PLANS

These comprehensive lesson plans are ready for you to integrate polar bears into every aspect of your classroom. Our plans are also perfect for supplementing an existing curriculum or pulling just-right engaging activities when you are short on time.

science: POLAR BEARS
Dear Families,
We are learning all about polar bears in the classroom. We are learning about where polar bears live, what they eat, and how they survive in their environment. We will be sharing what we learn with you.

At-Home Activity:
You can learn all about polar bears at home! Go to <https://polarbearsinternational.org/> to learn about and see the latest research on these arctic animals. You can also go to https://www.youtube.com/results?search_query=polar+bear+live to see the latest live stream videos of real polar bears! Your local zoo may also have a polar bear exhibit.

AT-HOME LETTER

Send home these notes and let families know what their children are learning about in science. This letter also includes ideas for families to extend the learning at home.

TEACHER GUIDE for POLAR BEARS

POLAR BEARS

- Polar bears are the only bear species that live in the Arctic.
- Polar bears are believed to have evolved from brown bears.
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WHERE DO POLAR BEARS LIVE?

- Polar bears live on sea ice in Alaska, Canada, Russia, Greenland, and Norway.
- A polar bear's home range can be gigantic, stretching over hundreds of miles, due to sea ice always moving and changing with the seasons.

DID YOU KNOW?

- Polar bears do not live in Antarctica, although many assume they do!

BEAR DIET

Polar bears are omnivores. They eat a variety of foods, including seals, walrus, and fish. They also eat berries and plants.

WEARS VS. OTHER BEARS

Polar bears have smaller heads and longer necks than other bears. They also have a layer of fat under their skin to help them survive in the cold.

TEACHER GUIDE

Everything you need to know about polar bears is ready for you in this guide. When students want to dig deeper, you will be prepared with fun facts to keep their interest and deepen their knowledge.

SCIENCE CENTER for POLAR BEARS
GETTING STARTED

...in just a short minute or two...
...to come up with a sign or chart...
...that it is time for the kids...
...to take the...
...also...
...up or a...
...Job hey!
...enthusiasm in the science...
...like others to go there

SHARING TIME
In a group setting of your choice ask "Who
were my scientists today?" just...
those who went to...
a choice...
...this unit...
...a lot of open-ended...
...questions

If a child makes an exciting discovery in the
science center, they will surely want to
share it with everyone, and...
At this time, you...
you...

SCIENCE CENTER

Use this guide for tips on how to set up your science center and keep students motivated to enter the science center each day to make new discoveries.

QUESTIONS TO ASK for POLAR BEARS

- Can you draw a picture of a polar bear and label its parts?
- How does a polar bear survive on other bears?
- What makes polar bears different from other bears?
- Freezing cold, icy water?
- Polar bears eat seals from the ice. How do you think they catch them?
- What do you think they catch?
- Why do you think they live in the cold?
- Does a polar bear have any other animals?
- A polar bear is a mammal. What other animals are mammals?

SCIENCE talk

How would you know...?
Why do you think that...?
What else might have caused...?
How can you...?
Recall in...
things?

Do you know if...?
How do you think you could...?
Why do you think that...?
Can you tell me about that...?
How does that work...?
Can you draw me a picture...?
your findings?

What would you change if...?
How is this similar to something else you know?
Can you think of another way...?
Create a new solution.
How would you handle this problem/challenge/question?

QUESTIONS

Encourage your students' natural curiosities with questions regarding polar bears. You may also print off the provided list of open-ended questions that can be used with any science lesson to encourage "science talk" with your class.

POLAR BEAR BOOKS
To help with the planning of your Polar Bear Unit, we have curated a list of our favorite polar bear BOOKS

Click anywhere on the page to be taken to our Amazon Favorites.

BOOK LIST

To make planning easy, we have curated a list of our favorite polar bear books that will engage your students while they learn new information.

POLAR BEARS VIDEOS
To assist with the planning of your Polar Bears Unit, we have curated a list of our favorite polar bears VIDEOS

POLAR BEARS

All About Polar Bears For Kids Polar Bears For Children

Polar Bears 101

MISSION: ANIMAL RESCUE
POLAR BEARS
Polar Bears Rescue 2016

Amazing Animals
Polar Bear | AMAZING ANIMALS

VIDEO LIST

To make planning easy, we have curated a list of our favorite polar bear videos. Each picture is linked to the corresponding video.

POLAR BEAR SONGS
To help with the planning of your Polar Bear Unit, we have curated a list of our favorite polar bear SONGS

The Polar Bear Song

Polar Bear Rolling Around Ft. Parry Gripp

Paw Paw Polar Bear

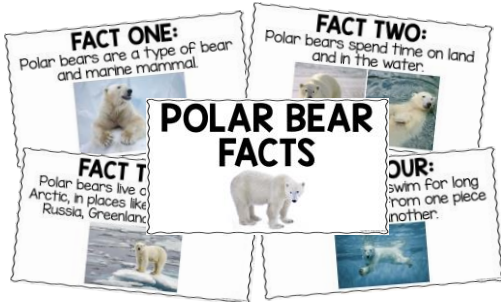
Paw Paw Polar Bear

SONG LIST

Our song list is linked and ready to use with your students. You can show them the video with the song, or simply play the song in the background during center time, dismissal, clean-up, or any other transition during the day.

LESSON CONTENT

for POLAR BEARS



POLAR BEAR FACTS POWERPOINT

This includes a PowerPoint to project on a smartboard and printable posters to use as a big book or display in your science center.



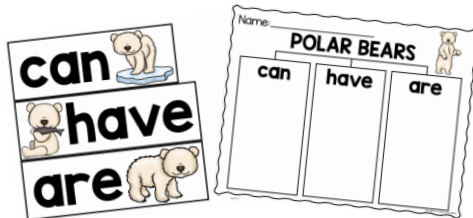
POLAR BEARS EMERGENT READER

Students can practice one-to-one correspondence while reading this easy reader. After reading the book in whole group, copies can be put in the reading center or sent home for extra practice.



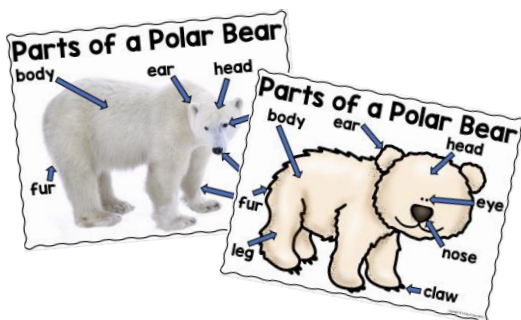
QUESTION OF THE WEEK

Choose from one of these questions to engage your students, pique their interest, and get them talking about polar bears!



CAN-HAVE-ARE ACTIVITY

After learning about polar bears, complete this Can-Have-Are chart as a whole group or independently.



PARTS OF A POLAR BEAR POSTERS

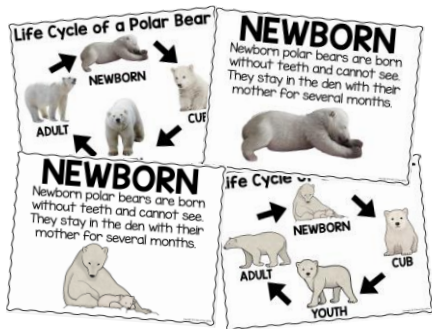
With both clipart and real-life options, use these posters to show your students the different parts of a polar bear.

PARTS OF A POLAR BEAR WORKSHEETS



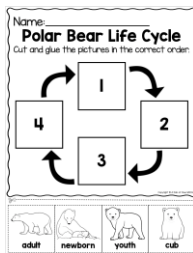
After teaching your students about the parts of a polar bear, use these different worksheet options for them to show what they know.

LIFE CYCLE POSTERS



Use these posters to teach your students about the polar bear life cycle. Use either or both versions, one with clipart and one with real-life photos.

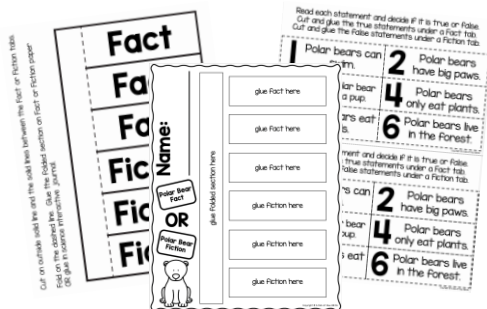
LIFE CYCLE WORKSHEET



Students can show what they know about the order of the polar bear life cycle with this activity.

POLAR BEAR FACT OR FICTION

After reviewing the Polar Bear Facts PowerPoint, students can complete this flip book activity, sorting fact from fiction.



POLAR BEAR FACTS OR ANIMAL RESEARCH CRAFT

Use the craft template and research sheet options to have your students show what they have learned about polar bears during the unit with this craft/research project combination.



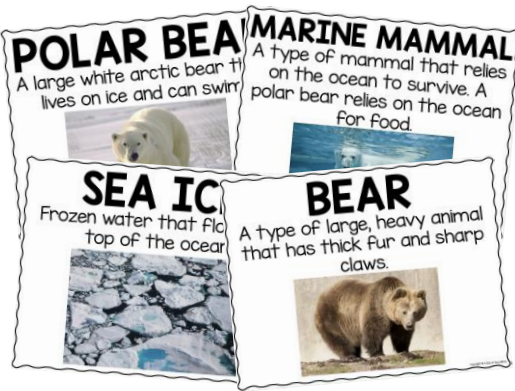
BONUS MATERIALS

for POLAR BEARS



WRITING CENTER

Set up your writing center with word cards and writing papers that meet the needs of your students. Need all uppercase letters or just lowercase? No writing lines or list writing paper? There is something for every learner.



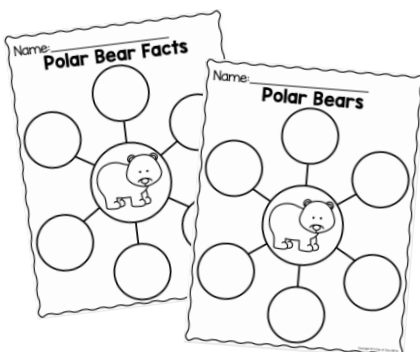
DEFINITION POSTERS

These posters use real-life pictures and simple definitions that are easy for students to understand. Hang them up in your science center, add new ones to your whole group area each day, or project on your smart board.



WORD WALL

Add the new vocabulary you are introducing to your students throughout the week to the word wall. Students can refer to these words throughout the year.



CIRCLE MAPS

Use these circle maps when introducing polar bears to see what your students know, or after you teach the unit for them to demonstrate their new knowledge. These can be used individually, as a graphic organizer, or as a whole group activity.



POLAR BEAR CRAFT

This polar bear craft is easy to make and doubles as a fine motor activity. Use this craft to culminate the unit or as an adorable bulletin board idea!



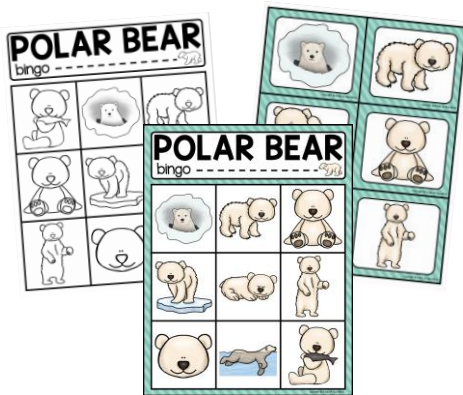
POLAR BEAR FINGERPLAY

Use this Fingerplay to transition throughout the unit. Put a copy in the library center for students to practice.



LITTLE POLAR BEAR EMERGENT READER

Students can practice one-to-one correspondence while reading this easy reader. After reading the book in whole group, copies can be put in the reading center or sent home for extra practice.

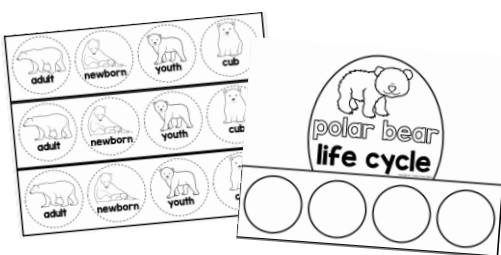


POLAR BEAR BINGO

Add this Polar Bear Bingo to your lesson plans as a fun way to practice listening skills. Prep for Fun Friday or have a volunteer play with students at a center. Bingo boards and calling cards are included in color or black & white.

LIFE CYCLE HAT

Students can show what they know about the order of the polar bear life cycle with this fun hat.



POLAR BEAR STEM 2

Polar bears stay warm in the freezing cold air and water because of their thick layer of blubber! Do this experiment to see how it feels to have blubber protect you from the cold.

YOU WILL NEED:

- Large container or bowl
- Ice cubes and water
- Vegetable Shortening or Butter
- Two Plastic Bags
- Optional Disposable Gloves

DIRECTIONS:

1. Fill the large bowl with ice and water.
2. Have students place their hand in a plastic baggy and stick their hand in the bowl of water and ask them how it feels.
3. Then have students stick their hand (gloved) into a plastic baggy that is filled w/ shortening or butter, and the vegetable shortening or butter, and the water again.
4. Ask students questions about how they feel. Different bags made your hands feel

POLAR BEAR STEM 1 QUESTIONS

1. Do you think your den would protect your polar bear?
2. What was the hardest part of building the den?
3. What materials would you have liked to have to help you build?
4. What was the easiest part?
5. Does the den have a place for the polar bear to enter and exit?
6. Will more than one polar bear fit in the den?
7. Why do you think polar bears dig dens?

STEM CENTERS

Use these STEM activity ideas throughout your animal study. Complete the activity as a whole group or place the materials in a center and let your students explore.

POLAR BEARS AND BROWN BEARS POWERPOINT

Use this bonus PowerPoint and posters to discuss the similarities and differences of polar bears and brown bears.

POLAR BEARS AND BROWN BEARS WORKSHEETS

After discussing the similarities and differences between polar bears and brown bears, students can show what they know using these worksheets.

HIBERNATE OR NOT SORT

Use this sort to discuss and learn about the different animals that hibernate, while also discussing those that migrate and the different ways animals adapt to their environments.

HIBERNATE WORKSHEET

After completing the whole group sort and discussing animals that hibernate, students can independently complete this sort worksheet to show what they have learned.

A polar bear is found in the Arctic, Alaska, Canada, and Russia. A brown bear is found in Canada, North America, northern Europe, and Asia.

Polar Bears and Brown Bears
How are they similar and different?

Polar bears have white fur, bear has silv

re large paws help them walk, bears have for digging.

Name: _____

Polar Bears and Brown Bears
Cut and glue the strips in the corner.

Polar Bears can	_____
Brown Bears can	_____
Both polar bears and brown bears can	_____

hibernate. _____

swim. _____

stand on 2 legs. _____

Polar Bears and Brown bears can _____

Do I hibernate?
yes no

brown bear	Frog
bee	snail

HIBERNATE
To sleep and rest in a safe place for a long period of time during the winter months.

DOES NOT HIBERNATE

polar bear	fox
elk	penguin

Name: _____

Hibernate or Not?
Cut and paste the pictures into the correct group.

HIBERNATE	DOES NOT HIBERNATE