

UNIT 1: Arctic *at a glance*

WORDS

LEVEL 1	LEVEL 2	LEVEL 3
cold snow warm winter	den huddle	arctic caribou glacier ice floe

SUGGESTED BOOKS

Expository	Narrative
<i>Ice is Nice</i> by Bonnie Worth	<i>A Polar Bear Journey</i> by Debbie Miller

DRILL AND PRACTICE

- ❖ Slap Jack
- ❖ Go Fish

CONCEPTUAL ACTIVITIES

- ❖ Polar Bear Crossing
- ❖ Blubber Experiment

COMMON CORE STANDARDS FOR SCIENCE

K	Strand 4 Life Sciences, Concept 3 Organisms and Environments: PO 1. Identify some plants and animals that exist in the local environment
1	Strand 4 Life Sciences, Concept 3 Organisms and Environments: PO 1. Identify some plants and animals that exist in the local environment
2	Strand 4 Life Sciences, Concept 1 Characteristics of Organisms: PO 1. Identify animal structures that serve different functions (e.g., sensory, defense, locomotion)

ARCTIC: WORDS AND DEFINITIONS

LEVEL 1 WORDS	DEFINITION
Cold	The way snow makes you feel
Snow	Soft, white pieces of frozen water that fall to the ground from the sky
Warm	Somewhat hot; not cool or cold
Winter	The coldest season of the year that is after autumn and before spring

LEVEL 2 WORDS	DEFINITION
Blubber	The fat on whales and some other animals that live in the water
Den	Home of some wild animals
Hare	a fast animal that looks like a rabbit
Huddle	To stand or sit close together in a group

LEVEL 3 WORDS	DEFINITION
Arctic	Very cold
Caribou	A type of deer that lives in the northern parts of the world
Glacier	A very large area of ice that moves slowly down a slope of valley
Ice floe	A large flat area of ice floating in the ocean

cold



the way snow makes you feel

snow



soft, white pieces of frozen water
that fall to the ground from the sky

warm



somewhat hot; not cool or cold

winter



the coldest season of the year that
is after autumn and before spring

den



home of some wild animals

huddle



to stand or sit close together in a group

arctic



very cold

caribou



a type of deer that lives in the northern parts of the world

glacier



a very large area of ice
that moves slowly down
a slope of valley

ice floe



a large flat area of ice
floating in the ocean

hare



a fast animal that looks like a
rabbit

blubber



the fat on whales and some
other animals that live in the
water

ARCTIC: ASSESSMENTS

WORD	PRE-INTERVENTION SCREENING	POST-INTERVENTION ASSESSMENT
LEVEL 1		
Cold		
Snow		
Warm		
Winter		
LEVEL 2		
Blubber		
Den		
Hare		
Huddle		
LEVEL 3		
Arctic		
Caribou		
Glacier		
Ice floe		

ARCTIC: INTERACTIVE BOOK READING QUESTIONS

Before reading the book, place each question on a sticky note and place it on the corresponding page.

Book 1: <i>Ice is Nice</i> by Bonnie Worth			
Reading	Page #	Question type	Question
1	12-13	competence	Why is the Arctic so cold? (2 or 3 possible answers)
1	26-27	abstract	What do you think the caribou eat during the winter?
1	32-33	relate	The penguins huddle to keep warm. How do you keep warm?
2	10-11	competence	How are glaciers made?
2	22-23	relate	Would you like to live in the Arctic during the winter or the summer?" Why?
2	36-37	abstract	How do penguins use ice floes to get from one place to another?

Book 2: <i>A Polar Bear Journey</i> by Debbie Miller			
Reading	Picture	Question type	Question
1	polar bear in tunnel	competence	What do the polar bear's paws help with? (to make a tunnel)
1	mother and cubs swimming	relate	Do you like to play on slides?
1	"During August and September"	abstract	Why do flocks of birds migrate south?
2	"Each day that follows"	competence	Why did the mother and cubs leave their den in April? (search for food)
2	cub slips into ice	relate	Have you ever walked on something slippery? Was it easy or hard?
2	polar bears sleeping huddled together	abstract	Why do the polar bear and her cubs huddle together?

ARCTIC: CONVERSATION PROMPTS

Use the space provided to script an anticipated conversation with your student.
Consider the following:

- What will you do if the student responds with only one word?
- What will you do if the student responds off topic?
- What will you do if the student doesn't respond at all?

Prompt 1: Have you ever played in the snow or seen it snow outside? Tell me about it (if student has not experienced snow, share a brief experience of your own referring to the pictures). What would you like to do in the snow? Why?

Materials needed: pictures of snow and snow activities

Turn	Script	Conversational Strategy
Teacher		
Student		
Teacher		
Student		

Prompt 2: Imagine you had to take a journey through the Arctic. Tell me about 3 things you would take with you on your journey, and why you would take them.

Materials needed:

Turn	Script	Conversational Strategy
Teacher		
Student		
Teacher		
Student		

Prompt 3: Cubs are born in their den and stay there for several months before seeing the outside. Imagine you are a new born cub in your den. What kind of things would you do in the den and would you like being in there for so long? Why?

Materials needed:

Turn	Script	Conversational Strategy
Teacher		
Student		
Teacher		
Student		

ARCTIC: DRILL AND PRACTICE

ACTIVITY: Slap Jack

Purpose	To provide practice on the target vocabulary words and definitions multiple times.
Objective	The child will express target words and definitions in response to the teacher prompts.
Materials	<ul style="list-style-type: none"> • One set of target word cards • Fly swatter (optional)
Procedure	<ol style="list-style-type: none"> 1. Put the cards out on the table, giving the word and definition for each card. 2. The teacher says a definition and the student has to slap or hit with a fly swatter the word that matches the definition 3. The child then has to say the word and the definition for the card that she slapped. 4. After the teacher has said all of the definitions, the teacher and student switch roles. 5. The student gives the definition and the teacher slaps the word that matches the definition.

ACTIVITY: Go Fish

Purpose	To provide practice on the target vocabulary words and definitions multiple times.
Objective	The child will express target words and definitions in response to the teacher prompts.
Materials	<ul style="list-style-type: none"> • 2 sets of target word cards
Procedure	<ol style="list-style-type: none"> 1. Explain the directions for Go Fish. 2. Each player gets four cards. The remaining cards are placed in the Go Fish pile. 3. Look for a match. If there is a match, then the player with the match has to say the vocabulary word for the match and give the quick definition for the word. The teacher can help with the word and the definition if the student doesn't know it. 4. Player 1 tries to make a match by asking the other person "Do you have _____?" 5. Then, the Player 2 asks "What does that mean?" and the first player has to give a definition for the word. 6. If Player 2 has the card, it is given to Player 1. If Player 1 doesn't have the card, Player 2 says "Go Fish" and Player 1 player picks a card from the deck. 7. Then Player 2 gets a turn to ask. 8. Continue this procedure taking turns asking for a card until all the cards are chosen.

ARCTIC: CONCEPTUAL ACTIVITIES

ACTIVITY: Polar Bear Crossing	
Purpose	To engage the student in a conversation about the topic while engaging in an activity.
Objective	Child will express target words and definitions in response to teacher prompts.
Materials	<ul style="list-style-type: none"> • Vocabulary cards and books available as models and reminders for student • Paper • Crayons • Markers • Construction paper • Tissue paper • Cotton balls • Glue • Tape • Flashlight (optional) • Other arts and crafts materials
Procedure	<ol style="list-style-type: none"> 1. Prompt: Imagine you are a polar bear that has gone out to hunt seals for your cubs. After your hunt you have to cross the ice floes to get back to your cubs. 2. The student will be a Polar Bear and be given the task to move from the <i>ice floes</i> to the <i>glacier</i> to be reunited with her cubs. The teacher will be the sun. 3. Place designated spots for the ice floes and glacier throughout the room. 4. As the sun (teacher) shines on the floes, they will separate farther and farther, making it more difficult to get to the glacier. 5. Conversation: <ol style="list-style-type: none"> a. Tell me about what you had to do. b. What made it difficult to cross?

ACTIVITY: Blubber Experiment	
Purpose	To engage the student in a conversation about the topic while engaging in an activity.
Objective	Child will express target words and definitions in response to teacher prompts.
Materials	<ul style="list-style-type: none"> • Vaseline or shortening • Ziplock bag (quart or gallon size) • Tub • Ice water
Procedure	<ol style="list-style-type: none"> 1. Turn one of the ziplock bags inside out and place it inside another bag. Make sure you have the "zippers" lined up correctly so that you will be able to zip the two bags together. Fill the space in between the two bags with a thick layer of shortening or Vaseline, then zip the edges together. This makes a type of glove with an opening for your hand to go in. The fat molecules in Vaseline and shortening make them act a little like blubber. 2. Make a "control" glove by putting the other two ziplock bags inside each other. This will give you the same amount of plastic, but with no insulating "blubber" layer. 3. Put your hand in the control glove and stick it in the ice water. Time how long you can keep it there before it gets too cold for you. 4. Now put your hand in the glove with the blubber in between the bags and submerge it in the water. Time how long you can keep it there. Can you hold your hand in the water longer? 5. Conversation: <ol style="list-style-type: none"> a. Why do you think the glove with the blubber (you could say "this glove" instead of explicitly saying blubber so that student has a chance to say the word) kept your hand warmer? b. Why is blubber important for animals in the Arctic? c. Since humans don't have blubber, how can they keep warm in the Arctic?