

Having Fun With Habitats

Special Area: Integrating Literature Across the Curriculum

Grade Level: First Grade (Habitats) and Fourth Grade (Writing and Research)

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Length of Unit: Seven lessons, about 7.5 hours total for the unit

I. ABSTRACT

Science comes alive when literature is placed in the classroom on a daily basis. Using fiction and nonfiction literature opens the windows of learning in a more enjoyable and educational way. Hands-on experiments and activities lead the way for a more productive and successful understanding of content material.

Note: Our first grade and fourth grade classes worked cooperatively on these lessons and have benefited from the research and writing they did together. The fourth graders were able to use their knowledge of writing to help the first graders plan and organize their own research paragraph.

II. OVERVIEW

A. Concept Objectives

1. Students will understand the importance of animal habitats and why we should help preserve them. (Arkansas State Science Standards 1, 2, 4, 8)
2. Through the immersion of fiction and nonfiction literature, investigation on habitats will begin within cooperative groups. (Arkansas State Reading Standards 9-12)
3. Students will gain an awareness of the use of Venn diagrams, KWL charts, and four-square paragraph organizers in order to guide them through the writing process. (Arkansas State Language Arts Standards 4-7)

B. Content from the *Core Knowledge Sequence*

1. Living Things and Their Environments (Habitats), page 37
2. Specific habitats and what lives there, for example:
Forest (oak trees, squirrels, raccoons, snails, mice)
Meadow and prairie (wildflowers, grasses, prairie dogs)
Underground (fungi, moles, worms)
Desert (cactus, lizards, scorpions)
Water (fish, oysters, starfish)
Arctic (polar bears, penguins, seals)
Savanna or grasslands (lions, zebras, elephants)
Rainforest (monkeys, snakes, leopards)
3. Writing (first grade)- Produce a variety of writings- for example, brief stories, descriptions, journal entries- with spelling sufficient to be able to read the words himself or herself. (pg. 24)
4. Writing and Research (fourth grade)- Produce a variety of types of writing- including stories, reports, summaries, descriptions, poems, letters- with a coherent structure or story line. (pg. 87)

C. Skill Objectives

1. Students will define habitats and biomes.
2. Students will create a list of habitats using fiction and nonfiction books.
3. Students will watch a video (United Streaming- *Homes for Living Things*) to observe various contents within a habitat.

4. Cooperative learning groups will be formed among 1st and 4th graders.
5. Cooperative learning groups will choose a habitat to research using fiction and nonfiction books.
6. Students will make KWL charts for polar bears and penguins.
7. Students will listen and take notes as the books *Polar Bears* and *Penguins* are read aloud.
8. Students will finish the KWL charts on polar bears and penguins.
9. Students will participate in a hands-on scientific experiment- *Polar Bears: Blubber Mitten Activity*.
10. Students will compare and contrast polar bears and penguins using a Venn diagram.
11. Students will write a paragraph on comparing and contrasting polar bears and penguins using the four square method along with the Venn diagram.
12. Students will write a story of their chosen habitat depicting certain environmental factors such as temperature, water amount, food, soil, sunlight, and interaction with other organisms.
13. Students will use the correct writing process when writing their habitat story.
14. Students will share their habitat stories aloud. (Illustrations optional)
15. Students will create a shoe box diorama of their chosen habitat displaying certain environmental factors such as food, soil, sunlight, water amount, plants, and animals.

III. BACKGROUND KNOWLEDGE

- A. For Teachers
 1. Hirsch, Jr. E.D. *What Your First Grader Needs to Know*
 2. Hirsch, Jr. E.D. *What Your Fourth Grader Need to Know*
 3. Hirsch, Jr. E.D. & Wright, Souzanne A. *Core Knowledge Teacher Handbook Grade 1*
 4. *Harcourt Science Teacher's Guide Grades 1 and 4*
- B. For Students
 1. Students should have background knowledge about plants and how they grow; animals and their needs; seasons and weather.

IV. RESOURCES

- A. Video- *Homes for Living Things*, United Streaming (Lesson One)
- B. Gibbons, Gail. *Polar Bears* (Lesson Three)
- C. Gibbons, Gail. *Penguins* (Lesson Three)
- D. Experiment- *Polar Bears: Blubber Mitten Activity* (Lesson Three)
- E. Gould, Judith S. & Gould, Evan Jay. *Four Square Writing Method for Grades 1-3* (Lesson Four)
- F. Moore, Jo Ellen. *Habitats: ScienceWorks for Kids Series* (Lesson Seven)

V. LESSONS

Lesson One: What Are Habitats? Do You Know What Habitats Include? (approximately 1 hour)

- A. *Daily Objectives*
 1. Concept Objective(s)
 - a. Students will understand the importance of animal habitats and why we should help preserve them. (Arkansas State Science Standards 1, 2, 4, 8)
 2. Lesson Content
 - a. Living Things and Their Environments: Habitats

- b. Specific habitats and what lives there, for example:
 - Forest (oak trees, squirrels, raccoons, snails, mice)
 - Meadow and prairie (wildflowers, grasses, prairie dogs)
 - Underground (fungi, moles, worms)
 - Desert (cactus, lizards, scorpions)
 - Water (fish, oysters, starfish)
 - Arctic (polar bears, penguins, seals)
 - Savanna or grassland (lions, zebras, elephants)
 - Rainforest (monkeys, snakes, leopards)
- 3. Skill Objective(s)
 - a. Students will define habitats and biomes.
 - b. Students will create a list of habitats using fiction and nonfiction books.
 - c. Students will watch a video (United Streaming- *Homes for Living Things*) to observe various contents within a habitat.

B. *Materials*

- 1. www.unitedstreaming.com (video- *Homes for Living Things*)
- 2. *What Your First Grader Needs to Know*, pages 272-286
- 3. *What Your Fourth Grader Needs to Know*, page 345
- 4. *Core Knowledge Teacher Handbook Grade 1*, pages 321-329
- 5. Fiction and nonfiction books:
 - a. Pfeffer, Wendy. *A Log's Life*
 - b. Schwartz, David. *In the Forest*
 - c. Schwartz, David. *In the Meadows*
 - d. Pfeffer, Wendy. *Wiggling Worms at Work*
 - e. Schwartz, David. *Underfoot*
 - f. Mann, Rachel. *Desert Life*
 - g. Gise, Joanne. *Desert Animals*
 - h. Cherry, Lynne. *The Sea, The Storm, and The Mangrove Tangle*
 - i. Schwartz, David. *At the Seashore*
 - j. Fowler, Allan. *Arctic Tundra: Land with No Trees*
 - k. Allan, Doug. *The Penguin in the Snow*
 - l. Welvaert, Scott. *Lions*
 - m. Niz, Xavier. *Elephants*
 - n. Brett, Jan. *The Umbrella*
 - o. Fowler, Allan. *Save the Rainforest*

C. *Key Vocabulary*

- 1. Habitat- the environment in which an animal or plant lives
- 2. Biome- the entire community of living organisms within a major region

D. *Procedures/Activities*

- 1. Explain to the students that today they will begin learning about many exciting habitats. Ask them if they know what habitats are. Define habitat. A habitat is the environment in which an animal or plant lives. Tell them to think of where they live (their own home) as a habitat.
- 2. Ask the students to define the word biome. A biome is the entire community of living organisms within a major region. A biome would be your town or city.
- 3. Ask the students to help create a list of habitats on the wipe-off board .
- 4. Explain to the students that changes to an environment alter and sometimes eliminate particular habitats (such as forest fires, flooding, drought) and this is why we should help preserve them.
- 5. Watch the video *Homes for Living Things* (United Streaming). This will give the students a better understanding of habitats.

6. Set up habitat books (grouped and labeled) and assign cooperative learning groups to work on their group's choice of habitat.
- E. *Assessment/Evaluation*
1. Students will answer questions orally and create a list of facts about their habitats.
 2. Students will be evaluated on their habitat dioramas using the rubric from Appendix A.

Lesson Two: Let's Investigate Habitats (approximately 2 hours)

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Through the immersion of fiction and nonfiction books, research will begin within cooperative learning groups of 1st and 4th graders. (Arkansas State Science Standards 1,2, 4, 8 and Arkansas State Reading Standards 9-12)
 2. Lesson Content
 - a. Living Things and Their Environments: Habitats
 - b. Specific habitats and what lives there, for example:
 - Forest (oak trees, squirrels, raccoons, snails, mice)
 - Meadow and prairie (wildflowers, grasses, prairie dogs)
 - Underground (fungi, moles, worms)
 - Desert (cactus, lizards, scorpions)
 - Water (fish, oysters, starfish)
 - Arctic (polar bears, penguins, seals)
 - Savanna or grassland (lions, zebras, elephants)
 - Rainforest (monkeys, snakes, leopards)
 - c. Investigation (taking notes)
 3. Skill Objective(s)
 - a. Students will be placed into cooperative learning groups among 1st and 4th graders.
 - b. Students will investigate various habitats cooperatively within their groups using fiction and nonfiction books.
- B. *Materials*
1. Pfeffer, Wendy. *A Log's Life*
 2. Schwartz, David M. *In the Forest*
 3. Schwartz, David M. *In the Meadows*
 4. Pfeffer, Wendy. *Wiggling Worms at Work*
 5. Schwartz, David M. *Underfoot*
 6. Mann, Rachel. *Desert Life*
 7. Gise, Joanne. *Desert Animals*
 8. Cherry, Lynne. *The Sea, The Storm, and The Mangrove Tangle*
 9. Schwartz, David M. *At the Seashore*
 10. Fowler, Allan. *Arctic Tundra: Land with No Trees*
 11. Allan, Doug. *The Penguin in the Snow*
 12. Welvaert, Scott. *Lions*
 13. Niz, Xavier. *Elephants*
 14. Brett, Jan. *The Umbrella*
 15. Fowler, Allan. *Save the Rainforest*
- C. *Key Vocabulary* (None)
- D. *Procedures/Activities*
1. Remind the students to find these five environmental factors when investigating

- their habitat: food supply, water amounts, temperature, soil type, and interaction with other organisms.
2. Explain to the students that they should include any interesting or unusual facts about their habitat.
 3. Give each group books on their habitat so they can begin their investigation.
 4. Remind the 4th graders to skim, scan, read, and take notes. First graders will look for pictures which will help create the habitat diorama.
- E. *Assessment/Evaluation*
1. The students will be assessed on the completion of their notes with the five environmental factors. They should include two interesting/unusual facts and the food chain.
 2. The students will be evaluated on their habitat dioramas using a rubric from Appendix A.

Lesson Three: Let's Compare Polar Bears and Penguins (approximately 1.5 hours)

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Students will gain an awareness of the use of KWL charts and four square paragraph writing organizers in order to guide them through the writing process. (Arkansas State Language Arts Standards 4-7)
 2. Lesson Content
 - a. Living Things and Their Environments: Habitats
 - b. Specific habitats and what lives there
 - c. Arctic habitat
 3. Skill Objective(s)
 - a. Students will make KWL charts for polar bears and penguins.
 - b. Students will listen and take notes as the books *Polar Bears* and *Penguins* are read aloud.
 - c. Students will finish the KWL charts on polar bears and penguins.
 - d. Students will participate in a hands-on scientific experiment (*Polar Bears: Blubber Mitten Activity*).
 - e. Students will compare and contrast polar bears and penguins using a Venn diagram.
 - f. Students will write a paragraph on comparing and contrasting polar bears and penguins using the four square method along with the Venn diagram.
- B. *Materials*
1. See Appendix B- KWL for Polar Bears. Copy one for each student.
 2. See Appendix C- KWL for Penguins. Copy one for each student.
 3. Gibbons, Gail. *Polar Bears and Penguins*
 4. *Polar Bear: Blubber Mitten Activity*
- C. *Key Vocabulary*
1. Rookeries- a colony of penguins that is formed once a year
 2. Creches- (kresh) a group of baby chick penguins
 3. Blubber- a thick layer of fat which helps to keep some animals warm
- D. *Procedures/Activities*
1. Use a KWL chart on the wipe-off board and begin filling it out on polar bears.
 2. Next, read the book *Polar Bears* by Gail Gibbons.
 3. Go back to the polar bear KWL chart and finish filling it out.
 4. Then take out the KWL chart for penguins and begin filling it out.
 5. Read the book *Penguins* by Gail Gibbons aloud.

6. Go back to the penguin KWL chart and finish filling it out.
 7. Now, we are ready for a scientific activity. Be sure to go over the steps of the scientific method. Then tell the students that our purpose today is to see how animals adapt to the arctic.
 8. Science activity- the *Polar Bears: Blubber Mitten Activity* will be set up in different stations in the room. See Appendix D for the procedure.
 9. See Appendix D- *Polar Bears: Blubber Mitten Activity*.
 10. Students will do the activity applying the scientific method.
- E. *Assessment/Evaluation*
1. Students will successfully complete KWL charts on polar bears and penguins.
 2. Students will use the scientific method to predict and check their predictions in the *Polar Bears: Blubber Mitten Activity*.
 3. Students will be evaluated on their habitat dioramas using a rubric from Appendix A.

Lesson Four: Let's Compare and Contrast Polar Bears and Penguins (approximately 1.5 hours)

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Students will gain an awareness of the use of a Venn diagram, which can guide them in comparing and contrasting things.
 - b. Using the four square method writing organizer, students will be successful in forming correct paragraphs. (Arkansas State Language Arts Standards 4-7)
 2. Lesson Content
 - a. Living Things and Their Environments: Habitats
 - b. Specific habitats and what lives there
 - c. Arctic habitat (compare/contrast polar bears and penguins)
 3. Skill Objective(s)
 - a. Students will use their KWL charts on polar bears and penguins to assist them in forming a Venn diagram.
 - b. Students will write a comparison paragraph on polar bears and penguins using the four square method writing organizer which is created from the Venn diagram.
- B. *Materials*
1. See Appendix E- Venn diagram. Copy one for each student
 2. See Appendix F- Four square writing organizer. Copy one for each student.
 3. Notebook paper and pencils
- C. *Key Vocabulary* (None)
- D. *Procedures/Activities*
1. Pass out Venn diagram sheets to all students. Tell the students they are going to compare and contrast polar bears and penguins.
 2. Ask the question "Where do polar bears and penguins live?" Fill in the Venn diagram on the wipe-off board. Have students fill in their Venn diagrams with you. Use the polar bears and penguins KWL charts to help guide you in filling out the Venn diagram.
 3. Ask about what food polar bears and penguins eat and fill in the Venn diagram.
 4. Let the students help you fill in the other information about polar bears and penguins in the Venn diagram on the board.
 5. Students will be filling in their Venn diagram sheets in whole group.

6. Next, pass out the four square sheet to everyone.
 7. Explain to the students that they will need to put a topic sentence in box number 1. Next, write a detail sentence in boxes 2, 3, and 4. Tell the students to write a feeling sentence in box 5. Remind the students that the sentences they make must come from information on the Venn diagram.
 8. Once the students have their four square sheet filled out they will be ready to write their paragraph on notebook paper.
 9. Students will write their 5 sentence paragraph correctly using the four square organizer to guide them.
- E. *Assessment/Evaluation*
1. Students will complete the Venn diagram and the four square successfully.
 2. Students will write a comparison paragraph correctly using the four square writing organizer as a guide.
 3. Students will be evaluated on their habitat dioramas using a rubric from Appendix A.

Lesson Five: Let's Write Habitat Stories! (approximately 1.5 hours)

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Students will gain an understanding of how important habitats are through the investigations on their particular habitat.
 - b. Students will create their chosen habitat story. (Arkansas State Language Arts Standards 4-7)
 2. Lesson Content
 - a. Living Things and Their Environments: Habitats
 - b. Specific habitats and what lives there
 3. Skill Objective(s)
 - a. Students will write a story about their chosen habitat depicting certain factors such as temperature, water amounts, food, soil type, sunlight, and interaction with other organisms.
 - b. Students will use the correct writing process when writing their habitat stories.
- B. *Materials*
1. Investigation notes
 2. Paper
 3. Pencils
 4. See Appendix G- Story Graphic Organizer
- C. *Key Vocabulary* (None)
- D. *Procedures/Activities*
1. Students will write a story about their chosen habitat using the correct writing process.
 2. The story must include at least three environmental factors studied throughout this unit.
 3. The characters should be animals native to the student's chosen habitat.
 4. Students will include at least two new facts learned in this unit.
- E. *Assessment/Evaluation*
1. Students will be assessed on their habitat stories using the guidelines from Appendix G.
 2. Students will be evaluated on their habitat dioramas using the rubric from Appendix A.

Lesson Six: Story Time! (approximately 1 hour)

- A. *Daily Objectives*
 - 1. Concept Objective(s)
 - a. Students will gain an understanding of how important habitats are through the investigations on their particular habitat.
 - b. Students will share the stories written on their chosen habitats with the class. (Arkansas State Language Arts Standards 4-7)
 - 2. Lesson Content
 - a. Living Things and Their Environments: Habitats
 - b. Specific habitats and what lives there
 - 3. Skill Objective(s)
 - a. Students will share aloud their habitat stories with the class.
- B. *Materials*
 - 1. Habitat stories
 - 2. Illustrations
 - 3. See Appendix H- Story Checklist/Proof
- C. *Key Vocabulary* (None)
- D. *Procedure/Activities*
 - 1. Tell the students it is story time. Let's get comfortable and sit back as we travel through the various habitats of the world.
 - 2. Let each cooperative learning group present their exciting stories to the class.
 - 3. Students may wish to display the illustrations of their stories.
- E. *Assessment/Evaluation*
 - 1. Students will be orally assessing their peer's habitat stories using the guidelines from Appendix H.
 - 2. Students will be evaluated on their habitat dioramas using the rubric from Appendix A.

Lesson Seven: Let's Create Habitat Dioramas! (approximately 1.5 hours)

- A. *Daily Objective*
 - 1. Concept Objective(s)
 - a. Students will process information about their habitat and demonstrate their knowledge through the diorama habitat they create.
 - b. Students will display dioramas on completion of the unit. (Arkansas State Language Arts Standards 4-7 and Arkansas State Science Standards 1, 2, 4, 8)
 - 2. Lesson Content
 - a. Living Things and Their Environments: Habitats
 - b. Specific habitats and what lives there
 - 3. Skill Objective(s)
 - a. Students will create a shoe box diorama of their chosen habitat, displaying certain environmental factors such as food, soil type, sunlight, water amount, plants, and interaction with other organisms.
 - b. All habitat dioramas must be given a title with other items labeled.
- B. *Materials*
 - 1. Shoe boxes
 - 2. Assorted colors of construction paper
 - 3. Scissors
 - 4. Glue/glue sticks
 - 5. Tape
 - 6. Crayons/markers

7. Animal cut-outs
 8. Cotton balls
 9. Plastic plants or animals (optional)
 10. Pencils
 11. Habitat books
 12. See Appendix A- Group Project, Habitat Diorama Rubric
- C. *Key Vocabulary*
1. Diorama- a miniature 3-dimensional scene
- D. *Procedure/Activities*
1. Explain to the students what the diorama should look like.
 2. Be sure to tell the students that this will be their cumulative activity for this unit.
 3. Students may use the nonfiction and fiction books or their notes as a guide.
 4. Give every student a shoe box to begin the activity.
 5. Remind students of the colors needed for the different items a habitat includes.
 6. Students will begin working cooperatively within their groups to make their dioramas.
 7. Remind students to title their habitat and label items in the diorama.
 8. Display and share habitat dioramas in the classrooms.
- E. *Assessment/Evaluation*
1. Students will be assessed on the new knowledge gained after studying habitats by questioning their peers within the group.
 2. The students will be evaluated on their habitat dioramas using a rubric from Appendix A.

VI. CULMINATING ACTIVITY one day-1.5 hours

- A. **Day One:** Students will share their habitat dioramas with the class. Habitat dioramas will be put on display in the classrooms.
- B. Teachers may want to invite the local newspaper reporter to come in and do a story on the students' habitat dioramas.

VII. HANDOUTS/WORKSHEETS

- A. Appendix A: Group Project, Habitat Diorama Rubric (Lesson 7)
- B. Appendix B: KWL Chart for Polar Bears (Lesson 3)
- C. Appendix C: KWL Chart for Penguins (Lesson 3)
- D. Appendix D: Polar Bears, Blubber Mitten Activity (Lesson 3)
- E. Appendix E: Venn Diagram, Animals of the Arctic (Lesson 4)
- F. Appendix F: Four Square Writing Organizer from *Four Square Writing for Grades 1-3*, by Judith S. and Evan Jay Gould (Lesson 4)
- G. Appendix G: Story Graphic Organizer (Lesson 5)
- H. Appendix H: Story Checklist/Proof (Lesson 6)

VIII. Bibliography

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Appendix A

Name(s) _____

Type of habitat selected _____

Group Project: Habitat Diorama

1. I followed the teacher's directions. 1 2 3 4 5

2. My diorama is very neat. 1 2 3 4 5

3. My diorama is labeled. 1 2 3 4 5

4. My diorama includes trees or plants
 native to the habitat I selected. 1 2 3 4 5

5. My diorama includes animals native to
 the habitat I selected. 1 2 3 4 5

6. My diorama shows if the climate
 is wet or dry, hot or cold. 1 2 3 4 5

7. I worked well with my partner on
 this project. 1 2 3 4 5

The thing I enjoyed most about creating this diorama was

_____.

Final Score: _____

Advanced
Proficient

Basic
Below Basic

Appendix B

Name _____

Polar Bears

What I Know	What I Want to Know	What I Learned

Appendix C

Name _____

Penguins

What I Know	What I Want to Know	What I Learned

Appendix D

EXPERIMENT

Polar Bears: Blubber Mitten Activity

To find out what it's like to have a layer of blubber to keep warm, try this easy Blubber Mitten Experiment.

Materials needed:

- Crisco (or other shortening)
- 2 ziplock sandwich bags
- A bowl of ice water with ice cubes

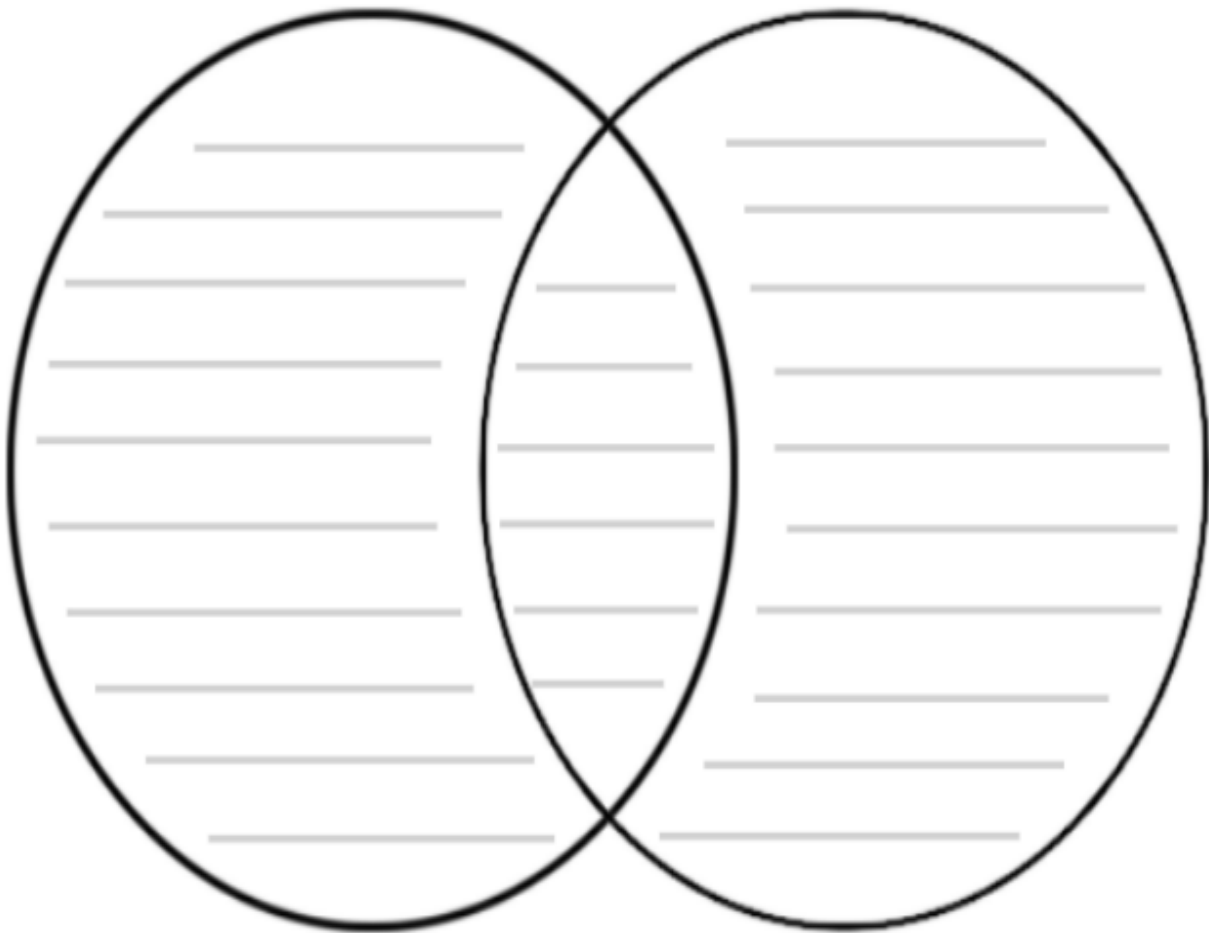
Procedure:

1. Fill one of the zipper bags about 1/3 full of shortening, then turn the remaining zipper bag inside out. Place it carefully inside the bag with the shortening so that you are able to zip the one bag to the other. This creates a "blubber mitten" for you to put your hand in.
2. Put your bare hand in the bowl of cold water and see just how cold it is!
3. Next, place your hand in the "blubber mitten" and now place your mittened hand in the ice water. How cold does the water seem with the "blubber mitten" on? Do you think a nice layer of blubber would be great protection against cold? Walrus, whales, and seals also have wonderful layers of blubber which help to keep them warm.

Appendix E

ANIMALS OF THE ARCTIC HABITAT

Compare and contrast polar bears and penguins.



Appendix F

**Four Square Writing Organizer from
Four Square Writing Method for Grades 1-3 by Judith S. and Evan Jay Gould**

2	3
1	
4	5

--	--

Appendix G

Name _____

Habitat Story Planning Sheet

Beginning
Middle
End

--

Appendix H

Name _____

Habitat Story Checklist/Proof Sheet

Setting (chosen habitat)	
Characters (at least 2)	
Problem (environmental)	
Events (at least 3)	
Resolution of problem	

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