Ice Age, Hunters, Land Bridge, and Woolly Mammoths

Grade Level: Grade 1
Presented By: Nancy Long and Donna Bennett
Length of Unit: 9 Days

I. ABSTRACT
The unit focuses on the Ice Age. The unit details daily teaching strategies and includes hands-on activities to aid in the understanding of the time period.

Teaching strategies include a daily Earliest Explorer’s Log for journal entries, appropriate literature connections for each of the eight lessons, graphic organizers, paleontologist dig for mammoth bones, comparing and contrasting provisions of today and yesteryear, art work to include the animals of the Ice Age in their environment, and recording of events in their Earliest Explorer’s journal along the move.

II. OVERVIEW
A. Concept objectives for this unit:
   1. Students will gain an understanding of the Ice Age and of factors associated with it.
   2. Students will gain an understanding of land bridges and of how they appeared.
   3. Students will develop an awareness of how and why the earliest man traveled to North America.
   4. Students will develop an awareness of the animals that lived during the Ice Age.

B. Content covered from Core Knowledge Sequence:
   1. Earliest People
   2. Crossing land bridge from Asia to North America
      a. hunting
      b. farming
   3. Geography
      a. Locate Asia and North America
      b. Locate Beringia

C. Skills
   1. Map and Globe
   2. Time and Chronology
   3. Reference Skills
   4. Life Science – animals and the basic need of living things
   5. Earth Science – weather/climate
   6. Locate Beringia

III. BACKGROUND KNOWLEDGE
A. For Teachers:
   1. What Your First Grader Needs To Know by E.D. Hirsch, Jr.

B. For Students:
   1. The students will have a basic understanding of the continent of North America.
   2. The students will have a basic understanding of the geography terms land, ocean, glacier

IV. RESOURCES
V. LESSONS
Lesson One: Ice Age

A. Objectives/Goal
1. Students will gain an understanding of the Ice Age and of factors associated with it.
   Students will also gain an understanding of land bridges and of how they appeared.

B. Materials
1. World Map
2. Globe
3. Pictures
4. Term cards
5. Journal
6. KWL Chart

C. Key Vocabulary
1. Ice Age—a time period that glaciers covered much of North America and Europe. This period lasted until about 10,000 years ago.
2. Glaciers—large sheets of ice that do not melt. They move like very slow rivers pulled by their own weight. Many valleys on our continent were carved out by glaciers long ago, when the climate was colder.
3. Ice Caps—great chunks of ice formed during the Ice Age.
4. Beringia—a resultant land bridge during the Ice Age.
5. Asia—World’s largest continent that joins Europe to the west
6. North America—The third largest continent(after Asia and Africa) comprising Canada, the United States, Mexico, and Central America.
7. Land Bridge—a narrow strip of land that connected Asia and North America. It was like a bridge across the water.

D. Procedures/Activities
1. Using the KWL Chart (See Appendix A) students discuss what they know and what they would like to find out about the Ice Age.
2. Utilizing world maps, globes, and pictures, discuss concept of the Ice Age, its possible causes, and the resultant land bridge formed between Asia and North America.
3. Share the information of Geological Time Scale at the web site: www.zoomdinosaurs.com
4. Read to students basic Ice Age information from The Ice Age: A New True Book.
5. Go outside and dig a section of the ground. Be sure it includes grass and layers of dirt. Place the section in an aluminum pie pan. Cover this with water and then freeze.
overnight. Allow the students to observe the earth and discuss how this might represent land during the Ice Age.

E. Assessment and Evaluation
1. Teacher Observation of student participation. The students should be able to connect the idea that the ice formed over the grass represents the ground covering during the ice age known as a glacier.
2. Journal entry in Earliest Explorer’s Journal (Appendix C) about the Ice Age and how things looked. Specifically, the students should list (by words or pictures) three facts that they have learned about the period of the Ice Age.

Lesson Two: Land Bridge
A. Objectives/Goal
1. Students will gain an understanding of land bridges and how they appeared.

B. Materials
1. Maps to color
2. Glue
3. White or iridescent glitter
4. Book Discovery of the Americas
5. Crayons

C. Key Vocabulary
1. Beringia—the resultant land bridge formed during the Ice Age.

D. Procedures/Activities
1. Review Ice Age concepts learned on Day One. The teacher will have students locate the area where the Ice Caps and Beringia were located during the Ice Age on the wall map.
2. Show the children an instructional map colored by the teacher to help locate the glacier and land bridge.
3. Have students color a map showing the Ice Caps and Beringia during the last great glacial periods. (See Appendix B)
4. Apply white or iridescent glitter to areas of glacial coverings.

E. Assessment and Evaluation
1. Teacher will assess map by appearance of neatness and following directions from sample created by teacher in lesson
2. Students will enter an entry in the Earliest Explorer journal by writing or drawing representations of two facts learned about land bridges and ice caps.

Lesson Three: Hunters
A. Objectives/Goal
1. Students will develop an awareness of how and why the earliest man traveled to North America.

B. Materials
1. Pictures (Discovery of the Americas, Time-Life: The First Americans)
2. The First Americans: A History of U.S.
3. KWL Chart
4. Term Cards
5. Manilla paper
6. Markers or crayons
7. Brown construction paper
8. measuring tape

C. Key Vocabulary
1. Migration—to move from one country or location to another.
2. Mastodon—any of several extinct animals resembling an elephant
3. Bison—a large animal with a big, shaggy head, a humped back, and short horns, found in North America; a buffalo.
4. Woolly Mammoth—a very large, hairy animal with huge tusks found during the Ice Age. Hunters used to hunt and trap these animals for food and fur.
5. Woolly Rhinoceros—a large animal found during the Ice Age used for food.

D. Procedures/Activities
1. Using pictures from The Discovery of the Americas, and Time-Life: The First Americans, discuss the Beringia migration and what it must have been like. Read aloud from The First Americans: A History of U. S. while showing pictures.
2. Share the information at the website of Ice Age mammals: www.EnchantedLearning.com and the Mammoth migration map at school.discovery.com/schoolhouse.html
3. Read The First Dog.
4. Discuss Term cards.
5. Take the children outside and using the measuring tape, measure the true size of the woolly mammoth or woolly rhinoceros.
6. Have children draw a scene with markers of how they think the land looked during this time. With Brown construction paper, the students will draw animals from the Ice Age. Then they are to glue them on the scene they have created.

E. Assessment and Evaluation
1. Teacher observation: The teacher will assess the scenes according to how the land looked during the ice age.
2. Journal entry in Earliest Explorer’s Journal about how man traveled to the area. Specifically, the students will write a sentence describing the travels of an early explorer.

Lesson Four: Paleontologist
A. Objectives/Goal
1. Students will gain an understanding of the Ice Age and of factors associated with it.

B. Materials
1. One large Chinet paper plate for each child
2. One Chinet paper bowl for each child.
3. Markers
4. glue
5. yarn

C. Key Vocabulary
1. Fossils—the remains or traces of an animal or a plant from millions of years ago, preserved as a rock.
2. Paleontologist—a scientist that deals with fossils and other ancient life forms.
3. Archaeologist—a scientist that learns about the past by digging up old buildings and objects and examining them carefully.

D. Procedures/Activities
1. Explain the importance of having correct information from long ago during the ice age so that we can learn more about the time period.
2. Discuss the job of a paleontologist and of an archaeologist and how we depend upon these people with these skills to share information from the Ice Age with us.
3. Check out the websites listed in the reference section of the unit
4. Explain to the students that the pictures that are found on the sites are what a paleontologist/archaeologist would be looking for. We are aware of what things were like back then because of the work that these scientists do.
E. **Assessment and Evaluation**

1. Teacher observation: The teacher will ask the students questions about the job of an archaeologist and paleontologist to ensure students understanding of the skill.
2. Journal Entry in Earliest Explorer’s journal about going on a paleontologist dig. Specifically, the children will illustrate their understanding of a paleontologist’s job.

F. **Extension Activities**

1. Children glue or tape a bowl in the center of a paper plate for the “paleontologist” hat.
2. The children will paint or color the hat to look like an “official” piece of equipment.
3. Attach yarn to the paper plate to enable the hat to be held on. (Save this hat for the next lesson.)

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**Lesson Five: The Great Mammoth Dig**

A. **Objectives/Goal**

1. Students will gain an understanding of the Ice Age and of factors associated with it.

B. **Materials** Per child:

1. One paper plate
2. One chocolate chip, One toothpick
3. Paleontologist hat

C. **Key Vocabulary**

1. paleontologist-use from previous lesson
2. extinct-when a type of animal or plant has died out.

D. **Procedures/Activities**

1. The teacher will display pictures and examples of people in occupations wearing protective gear or wear. (Firemen, police officers, surgeons, welders, construction workers, chefs, etc.)
2. Ask the students why the workers are wearing these type of uniforms and explain the importance of why each one wears protective clothing and articles.
3. Ask the students to determine what a paleontologist should wear and explain the correct protective wear for that occupation and why it is necessary.
4. Have each child wear the paleontologist hat from Lesson 6. Distribute one paper plate, one chocolate chip cookie, and one toothpick to each child.
5. Students try to remove mammoth fossils (chocolate chips) from the ground (cookie) without breaking the fossil or the ground.
6. Give students about 10 minutes to complete this activity.
7. Discuss the paleontologist’s job and how difficult it is to remove the “fossil” without damaging it.

E. **Assessment and Evaluation**

1. Teacher observation: The teacher will listen to responses at the end of the lesson about the difficulty of the paleontologist’s job and the importance of it.
2. Journal entry in Earliest Explorer’s journal. Specifically, have the children draw themselves as a paleontologist on a dig.

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**Lesson Six: Story Bags**

A. **Objectives/Goal**

1. Students will develop an awareness of the animals that lived and materials found during the Ice Age.

B. **Materials**

1. Brown paper lunch sack
2. Rebus clip art (See Appendix D)
3. Crayons
Lesson Seven: Sharing Story Bags

A. Objectives/Goal
1. Students will gain an understanding of the Ice Age and of factors associated with it.

B. Materials
1. Story Bags
2. Earliest Explorer’s Journal
3. “Woolly Rhino Bones” (Large Pretzel Sticks)
4. “Woolly Mammoth Juice” (Apple Juice)

C. Key Vocabulary
1. Review of all terms introduced in unit.

D. Procedures/Activities
1. Remind the children of the Jan Brett story, The First Dog. The little boy carries his Woolly Rhino bones on his hunt. Give the children a large stick pretzel and a cup of juice.
2. Ask for a volunteer to start the story bag – the children can pull a rebus clip art from the bag and share a fact they have learned from this unit.
3. After several children have shared the story bag, then allow them to share their journal writings.

E. Assessment and Evaluation
1. Teacher observation: The teacher will determine the knowledge learned by accurate descriptions of the clip art and for accurate answers given when asked questions about the objectives from the unit.

Lesson Eight: Nightly News

A. Objectives/Goal
1. Students will gain an understanding of the Ice Age and factors associated with it.

B. Materials
1. Video Camcorder
2. KTV Television Script (Appendix E)
3. pencils

C. Key Vocabulary
1. All vocabulary previously presented during unit.
D. Procedures/Activities
1. The students will review information learned during this unit. (The teacher may assist by using story bags from previous lesson.)
2. The students will be divided into cooperative groups of four.
3. The children will create scripts by utilizing facts learned in the unit. They will record the pertinent information on the “KTV Television Script.” (Appendix E)
4. The children will be taken to the in-house television studio to create a news story from their script.
5. The teacher will video each group’s newscast.

E. Assessment and Evaluation
1. Teacher will view videos for factual information.
2. Teacher will assess the television scripts for correct information.
3. Students will vote on most creative news story by focusing on information given that is correct but presented in the form of a story or of something funny happening. Ex: Paleontologist Bennett was going on a dig when she suddenly found a huge glob of brown hair. After further investigation she realized that it was woolly mammoth hair!!

VI. CULMINATING ACTIVITY
The students will view their newscasts from Lesson Eight. As they are watching the videos, they will also be given “woolly mammoth hair” to eat. (brown cotton candy)

VII. HANDOUTS/STUDENT WORKSHEETS
A. Appendix A: KWL Chart
B. Appendix B: Map
C. Appendix C: Explorer’s Journal
D. Appendix D: Rebus Clip Art
E. Appendix E: Television Script
F. Appendix F: Background Information on the Ice Age

VII. BIBLIOGRAPHY
J. http://culter.colorado.edu:1030/~saelias/elias.html
L. http://www.mammothsite.com
N. http://www.ugs.state.ut.us/iceage.htm
Appendix A – Ice Age, Hunter, Land Bridge, and Woolly Mammoth

Ice Age

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<tr>
<th>K</th>
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<td>What I Know</td>
<td>What I Want To Learn</td>
<td>What I Have Learned</td>
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Appendix B – Ice Age, Hunter, Land Bridge, and Woolly Mammoth
Appendix C – Ice Age, Hunter, Land Bridge, and Woolly Mammoth
Appendix D – Ice Age, Hunter, Land Bridge, and Woolly Mammoth
Appendix E – Ice Age, Hunters, Land Bridge and Woolly Mammoth

RTV Television Script

Anchors:

WHO:

WHAT:

WHEN:

WHERE:

WHY:
Appendix F

Background Information on the Ice Age

1. The Ice Age
   a. Definition, causes, and geographical results
      (1) Over the past 3 ½ million years, a series of ice caps alternately appeared and retreated over some portions of the earth’s surface.
      (2) At maximum periods of glaciation, 1/3 of the earth’s surface was covered by ice caps up to 2 miles thick, including northern Europe, Asia, South Africa, and much of North America, down to the Ohio River Valley.
      (3) The cause of these periods of glaciation is still unknown, but one major theory is that the earth’s temperature during these periods was affected by changes in its orbital path and the tilt of its axis.
      (4) An important effect of extended periods of glaciation is the dropping of ocean levels caused by ocean water changing to ice, with the resultant exposure of land bridges between large landmasses.
      (5) One such land bridge was the one between Asia and North America called Beringia, at what is now known as the Bering Straits. At its greatest period of exposure, Beringia is thought to have been almost 1000 miles across at its widest point.
   b. Impact of land bridge on animal migration
      (1) Before man lived in the Western Hemisphere, incredible numbers of species of wild animals, many now extinct, roamed freely over the continents of North and South America.
      (2) After the emergence of Beringia, animals migrated across the area both from Asia to North America.
      (3) About 20,000 years ago, Stone Age Man’s life centered on “the hunt.” His livelihood depended on the supply of the particular migrating animals that he hunted.
      (4) With the last retreating glaciers, excessively hairy animals like the mastodon and woolly mammoth migrated northwards with the retreating ice caps. Many men who hunted them found new types of animals to hunt like antelope, bison, and horse. But a few Stone Age men trailed after the mastodons and mammoths across Asia, over Beringia, into what is now Alaska.
      (5) Without knowing it, these early hunters following the herds of migrating animals became the first humans to set foot on the continent of North America.
      (6) Around 10,500 years ago, these men had colonized the New World all the way from Alaska to the tip of South America.