**Name:** Andrea MacMurray **Grade/Developmental Level:** 2/3 Grade

**Subject Area:** Science-Bear Insualtion

**Length of Time:** 40 Minutes **Date Taught:** 11/9/10

**Purpose:** To help the children physically feel how fat helps bears keep warm in the winter.

**Curriculum Standards:** Life Science - LS1– All living organisms have identifiable structures and characteristics that allow for survival (organisms, populations, & species).

Living Things and Organization

***Second Grade***

1. S:LS1:2:2.1 Recognize that plants and animals have features that help them survive in different environments.

***Third Grade***

1. S:LS1:4:2.1 Recognize that living organisms have certain structures and systems that perform specific functions, facilitating survival, growth and reproduction.
2. S:LS1:4:2.3 Identify and explain how the physical structures of an organism (plants or animals) allow it to survive in its habitat/environment (e.g., roots for water; nose to smell fire).
3. S:LS1:4:2.4 Identify the basic needs of plants and animals

in order to stay alive (i.e., water, air, food, space).

**Objectives:**

1. The children will be predicting which hand (fat insulated/non insulated) will be warmer.
2. The children will be physically feeling how fat insulates bears.
3. The children will be discussing/verbalizing their findings to the class.

**Background Knowledge Needed:** What have the children been learning about bears so far in this unit? What do children know about bear’s fat/insulation?

**Materials Needed:**

1. 2 Bowls of Ice Cold Water
2. 1 Small Can of Crisco ©
3. Ziploc © Bags
4. Knit Gloves
5. Whiteboard
6. Whiteboard Markers

**Student Grouping:** Whole class group activity

**Preparation for Experience:**

1. Prior to science have two bowls with ice water
2. Fill a Ziploc© bag with Crisco©
3. Write on whiteboard “Which do you think will be warmer” “Knit Glove or Fat Insulated”

**Outline of Experience:**

**Introduction:** What do you think keeps bears warm during the winter? Is it their fur? Is that enough to keep them warm? What else keeps bears warm during the winter?

**Body of the Lesson**:

Bears are insulated with fat to help keep them warm and to feed their bodies during the long winter. (I am hoping that the class will come up with that statement, through discussion) We are going to do an experiment to see if fat keeps you warmer or if fur (knit glove) keeps you warmer. Let’s predict which one we think will be warmer. I want you to come up to the board and put a check under the section that you think will be warmer. Now in this bag is the bears fat (Crisco©) we are going to seal the bag and place it in another bag. In the other bag there is a knit glove you are going to put the glove on one hand inside on bag and the other hand inside the bag with the fat, (not actually touching the fat). Then you are going to take each hand that is covered with bags and place them in bowls full of ice cold water. You are going to be able to feel which hand is cooler. Everyone will get a turn to do the experiment.

**Conclusion**: Now that everyone has had a turn to do the experiment lets discuss our findings. \_\_\_\_\_\_\_\_\_ what did you discover. I will record what each child discovers on the board. We can then go over the list as a group.

**Assessment Plan**:

I will know that my objectives have been met when I observe the children making predictions on the white board. I will be able to see if the child predicts the fat covered hand will be warmer of the fur hand will be warmer. I will be able to witness the children taking part in the experiment. I will be seeing how they take part. What do they discover? I will be learning what the children discovered from the experiment through the closing discussion. The children will be verbalizing what they found out.

**Child Guidance/Classroom Management Plan:** I will explain to the children what the activity is, make sure that they all know that everyone will get a turn, and we need to wait patiently for our turn. I will talk about what they can do when they are waiting for their turn such as quietly talking with their neighbor, making predictions, and discussing their findings.

**Extension Plan:** The children could then extend this activity into a writing activity. They could write about what they did and what they found out. They could draw what they did to help expand their writing or just draw what they did and what they found out.