**Science Project**

Andrea MacMurray

11/19/10

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 The topic that I choose for science is animals. I need to know how much experience or exposure to animals my students have had. Did they study particular animals before? Have the children learned about classification of animals? If yes what do they remember? If no, how do they classification animals? Are there any animals that they need to learn more about? What did they learn about animals? Can we build upon that knowledge? All these answers will help me better design my science curriculum for the students.

 To prepare to teach my science unit on animals I talked with my cooperating teacher about what units he plans to teach this year. Mr. Thomas was preparing to start the bear unit that the class will be working on though January. I familiarized myself with the materials and learning experiences that the children will be doing in the next few weeks. I looked through the materials to see where I could add an enrichment learning experience for the children. Since the children will be studying bears this year and other animals, I decided to start by reviewing classification of animals myself. This helped my review the various types of animals and where animals fit. I learned that some animals to not specifically fit in one category. I decided that the children could benefit from an activity that would help them review the classification of animals. We then would move into an activity that relates to what they are learning. We are going to do an experiment to learn about bears and how they keep warm during the winter.

To begin the unit about animals I developed a learning experience for the children that involved technology and animal classification. Through my research I came upon a website that had a game that helped review the classification of animals. I decided that the children could benefit from playing this game. This would be a fun, but still educational tool to help the children review classification. The benefits of this learning experience are the children are physically touching and moving the characteristics of animals to the corresponding animal. The children could extend this activity to home, in door recess, free time, before/after school care, etc… We then would then get into the bear unit.

For the next learning experience the children took part in a class experiment. We started off the experiment with a class discussion. The topic was bears. How do they keep warm during the winter? What keeps them warm during the winter? I then explained to the children the experiment. We tested what keeps bears warmer during the winter fur or fat. The children were able to make a prediction before doing the experiment. To conclude the experiment the children took part in a class discussion to discuss their findings. Did they predict what happened? If not, why not?

For my third learning experience the children I developed a learning experience that would reinforce the concept of bears for the children. The children will be working with partners, researching a bear, and creating a mask to resemble the bear that they researched.

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

**Subject Area:** Science Classification of Animals

**Length of Time:** 20 Minutes **Date Taught:** 10/28/10

**Purpose:** To review classification of animals.

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

***Second Grade***

1. S:LS1:2:1.1 Differentiate between living and nonliving things; and categorize objects in each group using the significant observable characteristics they share, such as color, shape and size.

***Third Grade***

1. S:LS1:4:1.1 Recognize and identify the various ways in which living things can be grouped.
2. S:LS1:4:1.2 Sort/classify different living things using similar and different characteristics; and describe why organisms belong to each group or cite evidence about how they are alike or not alike.

**Objectives:**

1. The children will be using the smart board to play a game which classifies animals.
2. The children will be sorting characteristics of animals.
3. The children will see and drag characteristics to the corresponding animal.

**Background Knowledge Needed:** What do the children know about animals? How do the children classify animals? In order to do this lesson I needed to review classification of animals. These are a few facts to help me help the children.

Reptiles:

* Cold blooded
* Hard skinned
* Dry skin
* Scales
* Usually lay eggs sometimes live young
* Four legs or no legs

Amphibians:

* Cold blooded
* Live in water and land
* Webbed feet
* Moist skin
* Lay many eggs

Fish:

* Cold blooded
* Fins
* Scales
* Gills (breath underwater)
* Lay many eggs

Birds:

* Warm blooded
* Hollow bones
* Feathers
* Wings
* 2 legs
* Lay eggs

Mammals:

* Hair or fur
* Give birth to live young
* Receive nutrients from mother’s milk
* Lungs
* Warm blooded

**Materials Needed:**

1. Smart Board

**Student Grouping:** Whole class group activity

**Preparation for Experience:**

1. Have smart board set up depicting

<http://www.sheppardsoftware.com/content/animals/kidscorner/games/animalclassgame.htm>

**Outline of Experience:**

**Introduction:** Who knows what a reptile is? (mammal, bird, fish, amphibian,)

**Body of the Lesson**:

Give each child a turn to practice dragging characteristics of each animal on the smart board. The children will be able to see when a characteristic of a certain animal does not fit and they will have the opportunity to see what characteristics fit with which animals. I will carry out the lesson by inviting \_\_\_\_\_\_\_\_\_\_\_ to choose a characteristic on the smart board and drag it to the animal. I will dictate to the class what the child is doing so they are visually seeing it and auditory hearing it. For instance “\_\_\_\_\_\_\_\_\_\_\_ you are dragging the characteristic gills to fish. Oh looks like that fits.” Now it is \_\_\_\_\_\_\_\_\_\_\_\_\_ turn. Come on up.

**Conclusion**: Play a quick game of: who am I? Choose (reptile, amphibian, fish, bird, mammal) characteristic.

Example: I have two legs, I lay eggs, and I am warm blooded who am I? (Bird)

I am cold blooded, have webbed feet and I live in water and land who am I? (Amphibian)

**Assessment Plan**:

I will know that my objectives have been met through observation of the smart board game. I will be able to assess the activity through participation of the conclusion game of who am I. I am able to assess if the children grasped the concept of the various characteristics of animals though observing them play the game on the smart board and observing them with the conclusion game.

**Child Guidance/Classroom Management Plan:** I anticipate that this will get rowdy. The children will be excited to use the smart board and to play a game on the smart board. I will need to make sure to make it clear in the beginning that all of the children will get a turn to drag characteristics on the smart board to the animal. Some children will have trouble with speaking out of turn. I will practice proximately I will move my body to the area of the room that is in need of my presence. I will also use gestures such as quiet signal or looks when I need children to be look at me or the child who is at the smart board.

**Extension Plan:** The children could then extend this activity into a writing activity. They could write the characteristics for each animal and draw each animal. The children would be reinforcing what they have just reviewed and working on writing skills.

10/29/10

Learning Experience Reflection: Science Classification

 This learning experience started out really well, considering that this was going to be a very rowdy activity. The children have not had a ton of experience with the smart board yet therefore; doing a science activity on the smart board to them was very exciting. The beginning part where we read over each type of animal (mammal, fish, reptile, amphibian, and bird) went really well. The children took turns reading individually to the class as well as the class reading as a whole. The text was hard for the children to read but they managed quite well. I made sure to point out to them that the pictures are clues about the text. I then proceeded to go around the desk’s letting each child come up to the smart board and color in the buckets for each animal for the game. Then we began the game this started off quite well but after going around about twice, the children began to lose focus.

I did halt the learning experience at least one time saying that we are getting to loud and silly and we cannot learn like that. I practiced proximity and would go walk over to the area of the room that needed my attention but the hard part about that was that the child up at the smart board often needed my assistance as well. I gave a few verbal reminders to certain children. When one child was at the smart board I tried to refocus the group by asking questions this worked a little bit. There was a lot of chatter between a couple of students which made it hard to refocus as well as one student reading which resulted in her missing a turn at the smart board. As the students would drag characteristics of animals to certain buckets I would rephrase it to the class so that they were visually seeing the characteristics being dragged and verbally hearing it. For the first few turns of the game I had the children tell us what they did and this pretty much carried out throughout the entire game. The game came to a natural end and I asked the class a couple of conclusion questions to assess what they had learned from this activity. For the first question I posed the question and then gave them ample time to get the answer in their head. I then said 1, 2, 3 say together now. They all knew it. The next question I did much like the first however, this time I only called on one student. The student knew the answer. That told me that the children met my objectives.

My objectives were: The children will be using the smart board to play a game which classifies animals, the children will be sorting characteristics of animals, and the children will see and drag characteristics to the corresponding animal. All of the children got a chance to use the smart board. They all worked on dragging items and clicking. The children were sorting various characteristics of animals they got to visually see the animal characteristics and from narration hear what the characteristics were as well.

Next time I do this activity I will need to shorten it. The children got bored waiting for their turn. If I had not gone in order it would not have been so predictable and hopefully the children would have stayed more engaged because they do not know when their turn would be. Towards the end I was trying to give all the children an equal turn at the smart board but I now realize that if there is no learning going on anymore I need to halt the learning process and change it. I could have taken oven the dragging and have a student tell me what to do. The children were getting too silly at the smart board and me taking it over may have or may not have helped calm the silliness. Reading of the characteristics went so well, next time I could give the children a handout and a highlighter. They could highlight the characteristics that we have done and follow along. This would help the child stay focused on the task at hand.

The children either learned a lot or reviewed from prior knowledge. It was a nice warm up activity to help get the children get thinking about animals. I like that we did this on the smart board because it incorporates technology into the classroom. The children can now go back to this game on the computer and play it individually. I could at the end of a unit have them each play this game individually and use it as a form of assessment to see how much they have learned. Overall, activity went great and now I have reflected on a few more ways to make it even better!

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

**Subject Area:** Science-Bear Insulation

**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 insulated bears to keep warm.
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 and make sure that they all know they 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.

11/9/10

Learning Experience Reflection: Science – Bear Insulation

 The activity went quite smoothly. I had envisions of it getting too out of control and hectic from the excitement of doing an experiment. However, the students managed to do very well with the experiment. All of the children participated in this experiment. They were focused during journal write where they wrote down their predictions. They patiently waited their turn to do their experiment. This experiment really went well.

 Upon discussing this experiment with Mr. Thomas we decided to do the experiment a couple of the children at a time while the others wrote their predictions and we intended /suggested that they wrote their conclusions in their journals. However, all of the children wrote their predictions but none of the children wrote their conclusions down. This could have been due to the short time at the end of the experiment. Having the children do the experiment two at a time in a different area of the room allowed for the children who were not doing the experiment to still have a fresh idea about what was going to happen. If I were to do it in circle like I had planned everyone would have seen the conclusion the first time and their predictions might have been jaded. Journal writing helped the children focus and develop their ideas.

 I began the experiment by asking the children to brainstorm what they think helps bears keep warm in the winter. I got a lot of answers: fur, hibernation, body heat, etc… towards the end of brainstorming “BA” came up with fat as a combination with fur. I then told them that they were going to conduct an experiment to figure out what helps keep bears warm in the winter. You are going to pick two ideas from the list and make a prediction of what you think will happen. I took a few students at time over to one part of the room to do the experiment while the others were still writing their predictions down in their journals. Mr. Thomas helped support the hypothesis aspect of the learning experience plan. He wrote on the board “I predict that \_\_\_\_\_\_\_\_\_\_\_ will keep a bear warmer in the winter.” The children copied that into their journal filling in the blank. This was the first time this year that the children have worked with experiments, hypothesis, and variables. Mr. Thomas informed me that now that we have talked about hypothesis we could scaffold this and only give them part of the sentence such as “I predict that \_\_\_\_\_\_\_\_\_\_\_\_.” The children then would fill in the rest.

 Two by two the children came over and carried out the experiment. I asked them what your prediction is or tell me about what you think keeps bears warmer in the winter; is it their fur or is it their fat. Three of the student’s hypotheses were that the fur would be warmer. They got to see firsthand that indeed the fat was warmer than the fur. It is completely different feeling that the fat is warmer, than me just telling them that fat is warmer. “JP” was one of the students who thought that fur was warmer because of a variable with the experiment she still thought the fur was warmer. We then realized that the fat had spread and was not completely covering her hand. We fixed that and tried again. This gave us a talking point to bring up with the class at the end. “HL” thought that fur was warmer than fat, he did the experiment and agreed that fat was indeed warmer but he still did not believe that fur was not warmer. He had a hard time making the connection of the experiment to an actual bear. We concluded the experiment by talking with the class about their hypothesis’ how predictions are not wrong scientist need to make predictions in order to learn. Because of “JP’s” experience we had a talking point about how you can only have two variables in one experiment for it to be accurate. We then talked about how scientists not only do the experiment one time they do it many times to see if they get the same answer to make sure their conclusion is accurate.

 My objectives were for the children to be predicting what they thought was warmer fur or fat, be physically feeling whether the fur or the fat was warmer, and to be discussing what their findings were. The children informally discussed with their peers about their findings, they made predictions in their journals and had the opportunity to discuss their findings with the class at the end. All of the children got to physically feel whether fur or fat was warmer. I was able to document the children’s learning by photocopying the children’s journals in which they wrote down their predictions. I was able to observe the children taking part in the experiment. I overhead many conversations about what they thought was going to be warmer and their excited conversations’ after finding out what happens.

 I learned that to do this learning experience the children need time to absorb the experiment and they cannot do this while everyone else is watching and waiting for their turn. The children, who are waiting, would then draw conclusion before they have even done the experiment and that is not the purpose. I learned that the children need time to predict and reflect. This helps the children go full circle from beginning to end. What I predict will happen, what I did, what happened, why I think that happened. These questions will help the children sort through what they have just done. Next time I do this experiment I will give the children ample time to brainstorm and predict what they think is going to happen. I will then allow for one or two children to do the experiment at a time. While two children at a time are doing the experiment I will have the rest of the children do DEAR. After children have done the experiment I will have the children write in their journals what they did, what they found out, why they think that happened. If this was early in the year I may create a worksheet that the children can fill out. It would contain prompts to help the children sort through what they thought was going to happen and what did happen. This activity went smoothly next time I would just add more time for predictions and reflections.

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

**Subject Area:** Science-Bear Masks

**Length of Time:** 40 Minutes **Date Taught:** 11/16/10 & 11/18/10

**Purpose:** To help the children differentiate between different types of bears.

**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:LS1:2:1.2 Recognize plants and animals as living things and describe how they are alike and different.
2. S:LS1:2:2.1 Recognize that plants and animals have features that help them survive in different environments.
3. S:LS1:2:3.1 Recognize that parents and offspring of many species closely resemble one another; and describe the similarities in appearance of given plant and animal families.
4. S:LS1:2:3.2 Recognize that living things have a life cycle, during which they are born, grow, and die.

***Third Grade***

1. S:LS1:4:1.2 Sort/classify different living things using similar and different characteristics; and describe why organisms belong to each group or cite evidence about how they are alike or not alike.
2. S:LS1:4:2.1 Recognize that living organisms have certain structures and systems that perform specific functions, facilitating survival, growth and reproduction.
3. S:LS1:4.2.2 Identify and describe the function of the plant structures responsible for food production, water transport, support, reproduction, growth and protection.
4. 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). [LS1(K-**4**)FAF-**4**]
5. S:LS1:4:2.4 Identify the basic needs of plants and animals in order to stay alive (i.e., water, air, food, space).
6. S:LS1:4:3.2 Recognize that living organisms have life cycles, which include birth, growth and development, reproduction, and death; and explain how these life cycles vary for different organisms.

**Objectives:**

1. The children will be tracing and cutting out bear masks.
2. The children will be researching various types of bears.
3. The children will be writing facts associated to the bear they chose to make a mask out on the back of their mask.
4. The children will create masks with the characteristics of the bears they chose to research.

**Background Knowledge Needed:** What have the children been learning about bears so far in this unit? Do the children know that there are different types of bears? Have the children done research projects before? Do the children know what a fact is or a characteristic? Who does the child work well with in class? Who will the child not work well with?

**Materials Needed:**

1. Books and magazines with pictures of different kinds of bears

2. Construction paper and oak tag

3. Yarn or string

4. Hole Punch

5. Bear Fact Note Taking Worksheet

**Student Grouping:** Partners

Bonnie, Haley C

Andrew, Haven

Emerson, Ethan

JoDee, Hailey T

**Preparation for Experience:**

1. Prior to science have tracers cut out and ready for the children to use
2. Locate the oak tag, yarn and hole punch.
3. Photocopy 8 copies of the Bear Facts Worksheet

**Outline of Experience:**

**Introduction:** Who can tell me a type of bear? Does anyone know another kind of bear? (I will be writing their answers on the board.) There are eight types of bears.

1. Giant Panda

2. Sun Bear

 3. Spectacled Bear

4. Sloth Bear

5. Polar Bear

6. Asiatic Black Bear

7. American Black Bear

8. Brown Bear

 Today you will be learning about different types of bears. You will be working in partners to research one bear.

**Body of the Lesson**:

AGENDA

1. Types of Bears
2. Bear Fact Worksheet
3. Partners
4. Choose a Bear and Research it
5. Trace and Cut Out Bear Mask
6. Color
7. Write Facts on the Back
8. Share with the Class

There are eight types of bears in the world. Today you will each be choosing a different bear and researching the specific characteristic to that bear. You will want to jot notes down on your bear facts worksheet, such as size, color, etc… You will be creating a mask that resembles your bear and your facts will be written on the back. You will research the bear’s individual characteristic. What makes this bear different from other bears? What do you find interesting. You will have the classroom library and the internet for your resources. On the computer’s I have found a couple of websites that will be helpful in finding facts about bears. The websites are written on the board. If you need help finding them or typing them in please raise your hand. The classroom library book and magazines are a great resource there is a lot of information within the library. Look to find your bear!

**WEBSITES**

<http://kids.poisson.org.uk/bears/types.htm>

**Conclusion**: Now that everyone has finished creating their masks, we are going to meet in a circle and share our masks. We will share what we learned about our bears.

**Assessment Plan**:

I will know that my objectives have been met when I observe the children researching their bears. I will be able to know what the children learned through their masks. The conclusions circle will be another assessment strategy I will be able to hear what the children learned. They will have the opportunity to tell me and their classmates in their own words what they have learned.

**Child Guidance/Classroom Management Plan:** I will be walking around assisting the children in finding information. I will remind them if they are getting off track, that they have a job to do and they need to get it done.

**Extension Plan:** This could extend into a bulletin board where the children’s masks and facts are on display. They could show this to families and friends and educate them on bears. The children could create habitats of their bears. They could use materials that they find around the rural setting of the school.

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_

**Bear Facts**

Type of bear you are researching:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Size:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Habitat:

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Diet:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cubs:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11/16/10

Learning Reflection: Science-Bear Masks

 This learning experience went really well! The children worked efficiently and cooperatively with their partners to research their bear. The majority of the groups split the work load up. Half the time one person would read the information from the computer and the other half of the time the partner would write down the facts. Half way through the research they split. The children were focused and excited to learn about their bears! This activity ended up being a three plus day learning experience.

**Day One**

 I began today’s bear learning experience by inviting all of the children to join me in a circle on the rug. I asked them what they thought we were going to study today. (I held up a bear mask backwards.) They all shouted bears. I briefly then explained to the children that they would be working in partners researching one bear and then making a mask to represent that bear. I asked the students to list the types of bears that they knew. The children came up with black bear, brown bear, panda bear, and polar bear. I then introduced these bears to the class sun bear, spectacled bear, sloth bear, and the Asiatic bear. I then went over the ‘Bear Facts’ research worksheet. I pointed to words and asked different students to read them. I asked the class what you might write down under color, size, cubs, habitat, etc… It was during that time that I realized that I needed to regain the children’s focus, I varied my voice level. Varying my voice level helped tremendously! The children were so focused and tuned in to what I was saying. I then informed the class of their partners. I told them that needed to get with their partner and come up with a 1st, 2nd, and 3rd choice of bear to research. ‘HT’ and ‘JP’ choose the Sun Bear, ‘EM’ and ‘EZ’ choose the Spectacled Bear, ‘AD’ and ‘HL’ choose the Polar Bear, and ‘BA’ and ‘HC’ choose the panda bear. The children then worked with their partners on laptops in various parts of the room. We only got to the research aspect of the learning experience today.

 The children during the initial instruction time were pretty focused. During research time with their partners they were unbelievable! They worked tremendously hard. They were so excited to learn about their bears! Prior to the learning experience I changed the resource options that the children would have. I decided that the website that I had found is so nice; I would use that website for the research. The website included information about all eight bears, and was written on the children’s level. The website is easy to navigate for the children. I did cut out the masks for the children. However, we talked about the differences in bears and how they could tailor the mask to look like the bear they are studying. I did this because the lack of time. Everything else went as planned.

 Next class I plan to have the children finish their research and begin their masks. I have decided that my overall objective is for the children to learn about bears. They are doing this through their research. I am going to have the children design their masks to look like their bear and pick two facts that they learned, found interesting, is strange, etc… We are then going to meet together and share what we have learned. This activity will conclude with a bulletin board in the hallway. The children’s masks will be displayed with their two facts.

 My objectives were for the children to be researching bears and transcribing what they are reading about their bears to their ‘Bear Facts’ worksheet. Another objective was for the children to design and create a mask with the characteristics of the bear that they researched with a partner. Today I observed the children working cooperatively with their partners researching bears. They took turns writing and reading from the website. Part two of the learning experience will consist of the mask creation. I was able to see what the children had researched through their ‘Bear Facts’ worksheet as well.

**Day Two**

 Today I continued the bear research project with the children. I started the learning experience off by pulling up the web page depicting it on the smart board. I highlighted one section; then asked one of the students to read the section as I pointed to each word. I said “Okay so for diet I am going to write this information down. I asked a student to slowly read the sentences to me so I could copy.” Mr. Thomas then came over saying “Here I just printed the information. You do not need to take all the time to write it.” I then posed the question to the class whose research is it? Did I do the work? Did the person who wrote the website do the work? We took the time to explore the acknowledgments page. Discovering what resources the author of the website used. The children came to the conclusion that the author wrote the website and I had copied from the author. We determined that we needed to make it our own, by putting sentences into our own words. I then took ideas from the students on how they would rearrange the sentences into their own words. They came up with: Black bears eat lots of different things, depending on what they can find. , Black bears eat insects, berries, baby deer, baby moose, and salmon. , Black bears eat a variety of foods such as, insects, berries, baby deer, baby moose, and salmon. , Depending on what is available black bears eat berries, insects, deer, moose, and salmon.

 We then went over the agenda.

1. Write 1 fact in your journal
2. Self Edit
3. Check with an adult
4. Write your fact on a sentence strip

I read the agenda to the students and then asked question about each one. I posed the question “What does write one fact in your journal mean \_\_\_\_\_\_\_\_\_?” I then would call on various students rephrasing their answers and repeating it back to the class. I did this for all four parts of the agenda; making sure to discuss how to write on a sentences strip.

 Day two went well. Most of the children did not finish their sentence strip during the allotted time. However, the majority of them managed to get it done during some other time today; whether it was during fix and finish time or optional DEAR time. I think that teaching the children how to research and put it in your own words went really well. This will really help them in the future.

**Day Three**

 Day three will consist of the students creating their bear masks. One or two students will need to finish up on their sentence strips. Due to scheduling conflicts I will not be in the classroom on the day that they create the masks. They will be designing and implementing a mask that resembles the characteristics of the bear that they have been researching.

 Next time I do this learning experience it has to be a two part if not three part learning experience. The first day would consist of pre-teaching how to research and the actual research. The second part would consist of picking one fact and writing it on a sentence strip. The third part would consist of the mask creation. The children on the final part would be creating their masks to resemble the bear that they have been studying. I think it would be beneficial to mention during morning meeting that “later this morning class you will be working with partners on a science research project. You are going to research a bear and create a mask.” Prior to letting the children research I would demonstrate what researching is. Can you copy something directly from a book or a website and call it your own? Why not? I would probe a classroom discussion and demonstration on how to take notes and how to research. This would ultimately help the children research more efficiently. I would keep the introduction similar to how I had it where the children are listing bears that they know. However, I would like to read them a short story that includes different bears. Just so it gets the students thinking about different bears. That would lead into listing the bears. I would then go over the worksheet. Asking the students to read parts of the worksheet, posing question about what the worksheet is asking for or meaning when they say that. I would then put the children and partners and ask them to think of their 1st, 2nd, and 3rd choice. We would then go around to the groups, each group telling me their 1st choice, if we need to we will do the 2nd, and 3rd. Today however, we did not need to. I would then hand out the ‘Bear Fact’ worksheets and let the children get researching, much like today.

 I have learned that children have a lot of background knowledge to draw upon. They may need probes to remind them of their prior knowledge. During my animal classification learning experience many of the children had information to draw from. “EM” asked about platypuses. During the bear fat experiment “HL” provided the class with his knowledge of polar bears hair. The children’s personalities and individualities truly come out during science experiments.

 I learned that you need to choose partners and groups for your students very carefully. Who you partner up can make or break a learning experience. I too learned about bears. I had to do background research in order to be able to accurately teach the lesson. Science experiments require more individualized attention. I learned that I need to prepare for this. While conducting the experiment with a group of children I also need to have something that the other children should be working on. My science unit taught me that I truly need to budget my time and plan accordingly.

**Resources**

Harlan & Rivken (2008). *Science Experiences for the Early Childhood Years.* New Hampshire

Curriculum Framework: K-12 Science Literacy. (June 2006).

http://www.education.nh.gov/instruction/curriculum/science/documents/framework.pdf