**EduTOOLBOX – Pre-K Science Experiment Lesson Plan**

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| **Lesson Title:** | Blubber Mitt |
| **Lesson Objective:** | Students will learn how polar animals stay warm in a frigid environment through hands on exploration. |
| **Aligned Standard(s):**  **(TN-ELDS)** | PK.ESS3.01b: Observe and discuss how humans and animals respond to changes in weather. |
| **Assessment Method:** | Teachers will document student learning using photos, videos, and anecdotal notes. |

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| **Intentional Vocabulary:** | Blubber  Frigid |
| **Materials Needed:** | “What Can Live in the Snow” by John-Paul Wilkins  2 sandwich sized Ziploc bags  Crisco baking stick  Large bowl of ice  Duct Tape (optional) |

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| **Lesson Procedures and Questioning** | | |
| **Lesson Section** | **Detailed Procedure** | **Questioning Sequence** |
| **Introduction:** | Introduce the book “What Can Live in the Snow” to students. Read/picture walk through the story, thinking aloud, asking and answering questions. | * What do you notice about the weather in this story? * How do you think the animals feel? |
| **Exploration:** | Talk about the story and how animals in the Arctic stay warm. Explain that students will create a “blubber mitt” to explore how the animals stay warm.  When discussing water temperature, use the word “frigid”, directly explaining what it means and repeating often. Encourage the students to use the word “frigid”.  Make a blubber mitt by putting the baking stick of Crisco into a Ziploc bag. Turn the other Ziploc bag inside out and place inside the first bag so that the Crisco is enclosed between the two bags and the bags will zipper together. This allows you to put your hand in the “mitt” without getting covered in Crisco! Squish it around so that the Crisco is evenly spread throughout.  Now allow the students to experiment by wearing the blubber mitt on one hand and putting both hands into the bowl of ice. The hand wearing the blubber mitt will not feel any cold! This demonstrates how polar animals stay warm in their frigid environment. | * How would you describe this water? * How do the animals in the Arctic stay warm? * How does the ice water feel on your hand without the mitt? * How does the ice water feel on your hand with the mitt? * What would happen if we put our hand in the ice water without the mitt? Could we leave it there for a long time? * What would happen if we left our hand without the mitt in the water for a long time? * What else could we use to keep our hand warm in ice water? |
| **Closing:** | Lead a discussion to reflect on student learning. Explain that these materials will be at the science/exploration area during center time. | * What happened when you put the mitt on? * How does the mitt show us how animals in the Arctic stay warm? |

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| **Extending the Learning:** | Place the story, blubber mitt, and ice bucket in the science/exploration area allowing students to explore independently. |
| **Considerations for Learning:**  *possible challenges, management issues, and safety considerations* | *Remind students of safety rules for science experiments before beginning the lesson. Remind students that nothing should ever go in their mouth or ears unless specifically instructed to do so. Optional duct tape can be used to ensure that the mitt is sealed tightly, avoiding any leaking. Some fingernails may accidentally tear the Ziploc bag, so be prepared with extra.* |