# **Bachelor of Education (Elementary) &**

# **Bachelor of Education (Secondary) STEM**

# **Lesson Plan**

| **Lesson Title:** | Adaptations | **Lesson #** | 6 | **Date:** | March 3, 2023 |
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| **Name:** | Erin Slizak | **Subject:** | Science | **Grade(s):** | Kindergarten |

**Rationale:**

| This lesson shows students how adaptations help animals through winter. This is a hands-on activity that will be interesting for students and hopefully will stick in their memory as they recall information about animals in winter. |
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**Core Competencies:**

| **Communication** | **Thinking** | **Personal & Social** |
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| **Communicate :**   * Students engage in informal, structured conversations in which they listen, contribute, develop understanding and relationships, and learn to consider diverse perspectives.   **Collaborate:**   * Students combine their efforts with those of others to accomplish their learning and tasks effectively. | **Critical thinking:**   * They think to consider purpose and perspectives, locate evidence, use explicit or implicit criteria, make defensible judgments or assessments, and draw conclusions. * Students use critical thinking to develop ideas. Their ideas can lead to product design.   **Creative thinking:**   * Students may generate creative ideas through free play, engagement with the ideas of others, consideration of a problem or constraint, and/or because of their interests and passions. | **Social responsibility :**   * Students become aware of and take responsibility for their social, physical and natural environment by working independently and collaboratively for the good of others, communities and the environment. |

**Big Ideas (Understand)**

| Daily and seasonal changes affect all living things. |
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**Learning Standards**

| (**DO)** | (**KNOW)** |
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| **Learning Standards - Curricular Competencies** | **Learning Standards - Content** |
| **Sciences :**   * Demonstrate curiosity and a sense of wonder at the world. * Observing objects and events in familiar contexts * Handle materials safely * Transfer and apply acquired knowledge to new situations * Share observations and ideas orally | * adaptations of local plants and animals * climate changes * seasonal changes * Living things change to adapt to daily and seasonal cycles. |

**Instructional Objectives & Assessment**

| **Instructional Objectives (students will be able to…)** | **Assessment** |
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| * After the lesson, students will understand that the fat of animals in winter helps them stay warm. | * Observation, exit ticket: The teacher will observe the students during the activities and take notes on their understanding. |

**Prerequisite Concepts and Skills:**

| Students should know what are adaptations and some animals that have adaptations for winter |
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**Indigenous Connections/ First Peoples Principles of Learning:**

| Learning takes time and patience. |
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**Universal Design for Learning (UDL):**

| group work  using a stopwatch  oral instructions |
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**Differentiate Instruction (DI):**

| For the student who does not like to speak, the teacher will ask him yes or no questions to check if he understands / to evaluate him |
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**Materials and Resources**

| big bowl  ice  Crisco  plastic gloves  small sheets for exit tickets (21)  sheets of colored paper  sticks with color changing material  pictures with hidden animals  vocabulary words to trace  markers  water (to erase the sheets with the vocabulary words) |
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**Lesson Activities:**

| **Teacher Activities** | **Student Activities** | **Time** |
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| Introduction (anticipatory set – “HOOK”):  Ask the students “What are adaptations? Who can give me an example?”  Explain that I have a very fun activity. So you must listen to me very carefully. Also, not everyone can do it at the same time so you have to be patient.  Explain the solo activities:  While you wait to do the activities I have things to do. At the first station (station 1b), there are vocabulary words. Find a marker from your baskets and trace the words on the sheets. When you're done with a word, spray it off and do another.  Second station (station 2b) there are pictures with animals hidden in them. Find the animals. | Students raise their hands to answer the question.  Students listen to instructions | 5 |
| Body:  Divide the students into two groups. Put group 1 at station 1a and group 2 at station 2b  Group 2 looks for the animals in the photos.  Group 1 is with the teacher. Each student puts their hand in the ice water. They evaluate the degree of cold from 1 to 5 and write it on their exit ticket. Then, we put on plastic gloves and grease on our hands. They put their hands back in the ice water and rate the degree of coldness from 1 to 5.  We discuss whether it is hotter with the fat or without the fat. The teacher explains that before winter the animals have to eat a lot to store fat for the winter because they will be warmer if they have more fat.  We change stations. Group 1 goes to station 1b, group 2 goes to station 2a, the teacher goes to station 2a.  Students at Station 1b trace the words.  At station 2a students look at the popsicle sticks on the colored sheets and see if they are easy or difficult to see. Then, we put the popsicle sticks in cold water and we compare if the popsicle sticks camouflage better.  The teacher explains that animals make adaptations during the winter. Some change their color to be more able to hide.  We change stations. Group 1 at station 2a, and group 2 at station 1b. Do the activities and change again. Group 1 at station 2b and group 2 at station 1a with the teacher. | The pupils sit at the table and look for the animals in the photos  Each student puts their hand in the ice water. They evaluate the degree of cold from 1 to 5 and write it on their exit ticket.  Students put on plastic gloves and grease is put on the hand. They put their hands back in the ice water and rate the degree of coldness from 1 to 5.  Students discuss whether it is warmer with fat or without fat  Students change stations  Students sit down and trace the words  Students hold the sticks to see if they blend into the paper.  The students put the sticks in cold water and compare them if the sticks fit better.  Students change stations and do activities | 10  10  20 |
| Closure:  Everyone goes to the carpet. Ask the students “What is an adaptation that we saw today?” | Students raise their hands to give examples of adaptations | 5 |

**Organizational Strategies:**

| Front load instructions  turn off the lights to make everyone stop |
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**Proactive, Positive Classroom Learning Environment Strategies:**

| practical activities  students lead the discussion |
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**Extensions:**

| We can talk about the other adaptations (fur becoming thicker, squirrels hiding their food, etc.)  This lesson also leads into camouflage lessons very well |
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**Reflections (if necessary, continue on separate sheet):**

| The students loved the activities and I think it really conceptualised the ideas covered. They were able to feel for themselves how the fat kept them warmer, and they could see how changing your colour during winter could help camouflage.  After doing this activity I realised I needed to schedule a little bit more time, there was enough time for each activity, however we needed more time for the final discussion |
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