# Bachelor of Education (Elementary) &

# Bachelor of Education (Secondary) STEM

# Unit Plan Template

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| **Unit Title:** | Animals in Winter | **Number of Lessons** | 8 | **Time**  **(in weeks):** | 4 |
| Name: | Erin Slizak | Subject(s): | Science | Grade(s): | Kindergarten |

Rationale

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| This unit is important because it teaches students about seasonal changes. It teaches them that animals change and react to the changing seasons just like us. Additionally, it teaches important concepts such as hibernation, migration, and adaptation. |

Overview:

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| In this unit, we are going to look at hibernation, migration, and adaptations one by one. Students will learn what these words mean, and which animals participate in what. In addition, students will get specific examples of how animals react to winter. Finally, we will synthesize all the information by putting it together and seeing what it is like to be a winter animal. |

CORE COMPETENCIES

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| Communication | Thinking | Personal & Social |
| Communicating:   * Students engage in informal, structured conversations in which they listen, contribute, develop understanding and relationships, and learn to consider diverse perspectives.   Collaboration   * 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

(multiple subject areas for integrated unit)

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| Subject Name: Science | Subject Name: PHE | Subject Name |
| Daily and seasonal changes affect all living things. | Daily physical activity helps us develop movement skills and physical literacy, and is an important part of healthy living. |  |

LEARNING STANDARDS

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| Curricular Competencies | Content |
| Science:  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 | * the basic needs of plants and animals * adaptations of local plants and animals * climate changes * seasonal changes * living things change to adapt to daily and seasonal cycles. |
| PHE:  Develop and demonstrate a variety of fundamental movements in a variety of physical activities and environments.  Engage in moderate to vigorous intensity physical activity daily. | * proper technique for fundamental movement skills, including non-locomotor, locomotor, and manipulative skills * how to participate in different types of physical activity, including individual and pair activities, rhythmic activities and games. |

Prerequisite Concepts and Skills:

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| Students should know how to cut and paste  Students must know the rules of the gymnasium. |

Teacher Preparation Required:

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| Lesson # | Teacher Preparation Required (See Unit Plan Sample) |
| Lesson 1 | Cards with animals on them (bear, bat, frog, chipmunk, monarch, robin, beaver, rabbit) and put them in an envelope.  Cards with "Hibernate" and "Does not hibernate".  Coloring sheet with animals  Coloring utensils for students |
| Lesson 2 | Popsicle sticks  modeling clay  pipe cleaners  Etc.  Little toy bears |
| Lesson 3 | Cards with animals (monarch, robin, moose, whale, bear, chipmunk, squirrel, dog) and put them in an envelope.  Cards with "migrates" and "does not migrate".  Coloring sheet with animals  Coloring utensils for students |
| Lesson 4 | Fan  long sheets of paper  Markers or pencils for drawing |
| Lesson 5 | Cards with animals on them (rabbit, squirrel, beaver, dog, whale, monarch, moose, bear) and put them in an envelope.  Cards with "fits" and "does not fit".  Coloring sheet with animals  Coloring utensils for students |
| Lesson 6 | Pictures (if possible laminated) of acorns, hide the acorns at recess.  Tree figurines (medium size if possible, not tiny), hang trees at playtime. |
| Lesson 7 | Coloring pages they worked on  Scissors  Glue  Science notebook  Cards from previous lessons  Magnets for animal cards  Past worksheets |
| Lesson 8 | Make sure we have gym time for the day  Know what the commands mean |

Cross-Curricular Connections:

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| PE is incorporated by having students pretend to be animals in the gymnasium.  Art is integrated by asking students to draw |

Aboriginal Connections/ First Peoples Principles of Learning:

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| Ultimately, learning contributes to the well-being of the individual, the family, the community, the earth, the spirits and the ancestors: learning how animals prepare for winter helps students to better understand them and feel closer to them. Thus, one can hope that they will think more often of the animals and will want to help them.  Learning is holistic, reflective, reflective, experiential and relational (focusing on connectivity, reciprocal relationships and a sense of belonging): in this unit, some activities are based on student action and experimentation. |

Universal Design for Learning (UDL)

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| Most lessons are done in groups.  A timer is used to indicate transitions  Students have several ways to demonstrate their knowledge.  Oral directions  Written and visual representation of the material  Kinesthetic learning |

Differentiated Instruction (DI):

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| These activities are good for my non-verbal student, there are no assessment pieces done orally.  For students who have difficulty with scissors, the animals can be pre-cut for them.  For students who have difficulty moving, they can move less in the gymnasium or decide with the teacher who was last in each round. |

Overview of Lessons:

Lesson 1

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| Name &Time (Minutes Allotted): | Hibernation - What is it? And who does it? (15-20) |
| Learning Standards: Curricular Competencies | Demonstrate curiosity and a sense of wonder at the world.  Observing objects and events in familiar contexts  Make connections between personal knowledge and learning.  Respond to verbal and non-verbal instructions from the teacher.  Interact with others while respecting communication strategies  Use unconventional writing and drawing to convey a message. |
| Learning Standards: Content | the basic needs of plants and animals  adaptations of local plants and animals  climate changes  seasonal changes  Living things change to adapt to daily and seasonal cycles. |
| Instructional Objectives | After one lesson, students will be able to identify hibernating animals from a list. |
| Assessment: | What: Coloring sheet  How: The teacher walks around and observes who colors the correct animals. |
| Teaching Strategies: | Each student has their own square on the mat which is their personal space, students move and engage in learning while standing and sitting. |
| Materials: | Cards with animals (bear, bat, frog, chipmunk, monarch, robin, beaver, rabbit).  Cards with "Hibernate" and "Do not hibernate".  Coloring sheet with animals  Coloring utensils for students |
| Lesson Activities: | |
| Introduction/Hook: | Pupils go to the carpet, and we talk about what happens in winter (cold, snow, shorter days) Ask if anyone knows what happens to animals during winter. Do they have coats and mittens like us? |
| Body: | Instructions:  The teacher explains that one of the things they do is hibernate. Hibernation is a state of sleep in which body temperature drops and heart rate slows. Some do not go into complete hibernation but slow down their life and sleep much more.  The teacher takes the animals out of an envelope one by one and asks the students to stand up if they think the animal is hibernating or to stay seated if they don't. The teacher sorts the animals according to whether they "hibernate" or "do not hibernate" (Hibernates: bear, bat, frog, chipmunk Does not hibernate: monarch, robin, beaver, rabbit) and asks the students to sit down before each new animal.  Students go to their desks and each receive a coloring sheet.  The teacher displays the poster on the board with the animals that hibernate and those that do not hibernate.  Students color the hibernating animals. |
| Closure: | Students clean their baskets and prepare for the next activity. |

Lesson 2

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| Name &Time (Minutes Allotted): | Help an animal to hibernate (15) |
| Learning Standards: Curricular Competencies | Transfer and apply learning to new situations  Orally share observations and ideas  Respond to teacher instructions, verbally and non-verbally. |
| Learning Standards: Content | Basic needs of plants and animals |
| Instructional Objectives | After the previous lesson on hibernation, students will be able to use the given materials to build an effective winter house for an animal. |
| Assessment: | What: Students need to have a structure that provides some protection.  How: Observation and final work |
| Teaching Strategies: | Students should raise their hands before sharing  Students will not receive any materials until instructions have been given.  The teacher circulates and talks about what the students are making. |
| Materials: | modeling clay  Popsicle sticks  Etc.  Little toy bears |
| Lesson Activities: | |
| Introduction/Hook: | Take out the list of hibernating animals.  Ask students where they think animals can hibernate. |
| Body: | Instructions:  Explain that we are going to create a nice place for Mr. Bear to spend his winter hibernating.  Give each table toothpicks and modeling clay.  The students use toothpicks and modeling clay to make a structure in which the animals can hibernate. |
| Closure: | Do a gallery walk so students can look at each other's creations. |

Lesson 3

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| Name &Time (Minutes Allotted): | Migration - What is it? And who does it? (10) |
| Learning Standards: Curricular Competencies | Demonstrate curiosity and a sense of wonder at the world.  Observing objects and events in familiar contexts  Make connections between personal knowledge and learning.  Respond to verbal and non-verbal instructions from the teacher.  Interact with others while respecting communication strategies  Use unconventional writing and drawing to convey a message. |
| Learning Standards: Content | the basic needs of plants and animals  adaptations of local plants and animals  weather changes  seasonal changes  living things make changes to adapt to daily and seasonal cycles |
| Instructional Objectives | After one lesson, students will be able to identify migrating animals in a list. |
| Assessment: | What: Coloring sheet  How: The teacher walks around and observes who colors the correct animals. |
| Teaching Strategies: | Each student has their own square on the mat which is their personal space, students move and engage in learning by standing and sitting. |
| Materials: | Each student has their own square on the mat which is their personal space, students move and engage in learning by standing and sitting. |
| Lesson Activities: | |
| Introduction/Hook: | Go to the mat.  Remind students that we are learning about what happens to animals in winter. Another thing animals do is migrate.  The teacher explains migration: when it is cold, the animals go to warmer places. They leave so that it is warmer for them and so that they can find food. |
| Body: | Instructions:  The teacher takes the animals one by one out of an envelope and asks the students to stand up if they think the animal is migrating or to stay seated if they think it is not. The teacher classifies the animals into two categories: "migrates" and "does not migrate" (migrates: monarch, robin, elk, whale does not migrate: bear, chipmunk, squirrel, dog) and asks the pupils to sit down before each new animal.  Students go to their desks and are given a coloring sheet.  The teacher displays the cheat sheet on the board with the animals that hibernate and those that do not hibernate.  Students color the migrating animals. |
| Closure: | Students clean their baskets and prepare for the next activity. |

Lesson 4

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| Name &Time (Minutes Allotted): | Migration for Dummies (10-15) |
| Learning Standards: Curricular Competencies | Demonstrate curiosity and a sense of wonder at the world.  Observing objects and events in familiar contexts  Handle materials safely  Orally share observations and ideas  Respond to verbal and non-verbal instructions from the teacher.  Interact with others while respecting communication strategies |
| Learning Standards: Content | adaptations of local plants and animals  communications strategies:   * active listening * take turns in a conversation |
| Instructional Objectives | After experimenting and playing, students will understand why "V" flight is easier for birds than straight line flight |
| Assessment: | What: The teacher will listen to the final conversation and observe/listen to those who made the connection.  How: Observation and conversation. |
| Teaching Strategies: | Ask students to line up to try on the fan, one or two at a time.  Lead the conversation to ensure it stays on topic, while letting the flow of the conversation lead students to new discoveries and wonders. |
| Materials: | Fan  long sheets of paper  Markers or pencils for drawing |
| Lesson Activities: | |
| Introduction/Hook: | Ask the students if they have ever seen birds flying in the sky in a "V" shape and show them a picture. Ask them why they are doing this. |
| Body: | Instructions:  Give students a long sheet of paper and ask them to draw birds on it in a line.  Have students take turns trying to hold the paper straight/flat against the wind.  Then suggest trying to do like the birds, forming a "V".  Everyone folds the paper in half.  Take turns holding the paper against the fan. |
| Closure: | Discuss which was easier, and why. |

Lesson 5

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| Name &Time (Minutes Allotted): | Adaptation: what is it? And who does it? (10) |
| Learning Standards: Curricular Competencies | Demonstrate curiosity and a sense of wonder at the world.  Observing objects and events in familiar contexts  Make connections between personal knowledge and learning.  Respond to verbal and non-verbal instructions from the teacher.  Interact with others while respecting communication strategies  Use unconventional writing and drawing to convey a message. |
| Learning Standards: Content | the basic needs of plants and animals  adaptations of local plants and animals  climate changes  seasonal changes  Living things change to adapt to daily and seasonal cycles. |
| Instructional Objectives | After one lesson, students will be able to identify animals that adapt to winter from a list. |
| Assessment: | What: Coloring sheet  How: The teacher walks around and observes who colors the correct animals. |
| Teaching Strategies: | Each student has their own square on the mat which is their personal space, students move and engage in learning by standing and sitting. |
| Materials: | Cards with animals (rabbit, squirrel, beaver, dog, whale, monarch, moose, bear).  Cards with "fits" and "does not fit".  Coloring sheet with animals on it  Coloring utensils for students |
| Lesson Activities: | |
| Introduction/Hook: | Go to the mat.  Remind students that we are learning about what happens to animals in winter. Another thing animals do is adapt. How do we adapt to winter? |
| Body: | Instructions:  The teacher explains the adaptations: some animals adapt, as we do during the winter.  The teacher takes the animals one by one out of an envelope and asks the pupils to stand up if they think the animal is migrating or to remain seated if they think it is not migrating. The teacher classifies the animals into two categories: "migrates" and "does not migrate" (migrates: rabbit, squirrel, beaver, dog does not migrate: whale, monarch, moose, bear) and asks the pupils to sit down again before each new animal. Explain what each animal does after each one.  Students return to their desks and receive a coloring sheet.  The teacher displays the cheat sheet on the board with the animals that hibernate and those that do not hibernate.  Students color in the matching animals. |
| Closure: | Students clean their baskets and prepare for the next activity. |

Lesson 6

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| Name &Time (Minutes Allotted): | Squirrel Hide and Seek (10+) |
| Learning Standards: Curricular Competencies | Demonstrate curiosity and a sense of wonder at the world.  Orally share observations and ideas  Interact with others while respecting communication strategies |
| Learning Standards: Content | adaptations of local plants and animals  weather changes  seasonal changes  living things make changes to adapt to daily and seasonal cycles |
| Instructional Objectives | After the activity, students will be able to explain what squirrels do to store food during the winter and how this causes trees to grow. |
| Assessment: | What: Conversation with students  How: The teacher will listen to which students have understood the concept of the squirrel's role in the ecosystem. |
| Teaching Strategies: | Have students help each other once they find their nut.  Surprise students after lunch with surprise trees |
| Materials: | Photos (if possible laminated) of acorns.  Tree figurines (medium sized/not miniscule) |
| Lesson Activities: | |
| Introduction/Hook: | The teacher hides pictures of nuts in the classroom during recess. |
| Body: | Instructions:  Ask students who remember what squirrels do to adapt during winter.  When students return from recess, ask them to sit at their desks.  Tell the students that we are going to pretend to be squirrels (have them act out the role of a squirrel) and find the nuts that we have hidden for the winter. Show them what they're looking for and let them search for a nut. Everyone has one. If they found theirs, they can help a friend find one.  Once everyone has a nut, ask them if they think we found all the nuts. Do they think squirrels sometimes forget where they put their nuts? What would happen if that was the case?  During lunch, set up trees around the class.  When the students return, ask them if they noticed anything different. |
| Closure: | Explain to them that this is where the squirrel forgot its nuts and so a tree grew there. |

Lesson 7

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| Name &Time (Minutes Allotted): | Animal Sorting (10) |
| Learning Standards: Curricular Competencies | Demonstrate curiosity and a sense of wonder at the world.  Observing objects and events in familiar contexts  Make connections between personal knowledge and learning.  Respond to verbal and non-verbal instructions from the teacher.  Interact with others while respecting communication strategies  Use unconventional writing and drawing to convey a message. |
| Learning Standards: Content | the basic needs of plants and animals  adaptations of local plants and animals  weather changes  seasonal changes  living things make changes to adapt to daily and seasonal cycles |
| Instructional Objectives | After several lessons on hibernation, migration and adaptation, students will be able to correctly classify animals based on their winter readiness activity by cutting and pasting pictures of animals into a chart. |
| Assessment: | What: Worksheet  How: The students must have stuck all the animals in the right places. |
| Teaching Strategies: | Review past learning together  Let the students direct the knowledge by asking them to give the answers about the location of the animals in the table.  Require hands up |
| Materials: | Coloring pages they worked on  Scissors  Glue  Scientific notebook  Cards from previous lessons  Whiteboard and markers to make a board  Magnets for animal cards  Tables Worksheet |
| Lesson Activities: | |
| Introduction/Hook: | They pull out the coloring pages they've been working on for the last two lessons.  The teacher has the animals and puts them all on the board.  The teacher makes a chart on the board about hibernation, migration and adaptation.  The teacher chooses one animal at a time and the students raise their hands to say where it is on the board. |
| Body: | Instructions:  Explain that we are going to classify animals according to how well they survive the winter.  The students take their baskets of supplies and their science books.  The pupils cut out the animals and glue them into the board in their place. |
| Closure: | Put everything away and prepare for the next activity |

Lesson 8

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| Name &Time (Minutes Allotted): | I am a winter animal (8-10) |
| Learning Standards: Curricular Competencies | Transfer and apply learning to new situations  Develop and demonstrate a variety of fundamental movement skills in a variety of physical activities and environments.  Engage in moderate to vigorous intensity physical activity daily. |
| Learning Standards: Content | proper technique for fundamental movement skills, including non-locomotor, locomotor, and manipulative skills  how to participate in different types of physical activity, including individual and pair activities, rhythmic activities and games. |
| Instructional Objectives | After a few sets of exercises, students will be able to follow the instructions given by doing the correct movement for each direction 3/5 times. |
| Assessment: | What: Observation  How: The teacher watches which students are listening and which students are running around and ignore the teacher. |
| Teaching Strategies: | Have a whistle in case you lose control of the students.  Review the instructions before releasing students into the gymnasium.  Explain the meaning of each command  Practice rounds  There are no losers, everyone keeps playing all the time.  Give students the opportunity to run and let off steam when they first enter the gymnasium. |
| Materials: | Whistle |
| Lesson Activities: | |
| Introduction/Hook: | Give students 2 minutes to run and do whatever they want in the gym |
| Body: | Instructions:  Remind students that we learned about what different animals do in the winter. Explain what the actions of each of these animals are  Monarch - migrate (run to one side of the gym)  Elan - migrate (run to another side of the gym)  Rabbit-hide (hide against a wall, flat on the ground, etc.)  Bear-sleep (mimics sleeping on the ground)  Squirrel-hide your nuts (mime digging and hiding nuts)  The teacher gives an order and the students run around the gymnasium doing the requested actions. |
| Closure: | Call the students back to the center and prepare to leave the gymnasium. |

Resources:

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| Hibernation: bear, bat, frog, chipmunk  Migration: monarch, whale, elk, robin  Adaptation: bunny, squirrel, beaver, dog  <https://www.howweelearn.com/why-do-birds-fly-in-a-v/>  <https://pocketofpreschool.com/hibernation-centers-and-activities/>  <https://www.tejedastots.com/animals-in-winter-hibernation-migration-camouflage-adaptation/>  <https://www.sciencemadesimple.com/animals.html#hibernate>  <https://www.howweelearn.com/why-do-birds-fly-in-a-v/> |

Extensions to Unit:

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| We must continue with the other seasons and do a unit on what the animals do in the fall.  You can link this to a lesson on the months of the Secwepemc and what they traditionally did during each month. |

Reflections and Revisions

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