Outcome(s) of Lesson:

1. 1-11.2. Contrast living and nonliving things

2. 1-11.7. Identify the requirements of plants to maintain life; i.e., air, light, suitable temperature, water, growing medium, space; and recognize that we must provide these for plants in our care.

How will I know the students have achieved the learning outcome?

- Students will be able to demonstrate a role in keeping a plant alive
- Students will identify the needs of a living thing and express the importance of receiving these essential needs
- Student will be able to identify what happens if a living thing does not receive their essential needs

HOOK: (5 min)

- Have students sit on carpet area in classroom
- Read picture book “As Big as the Sky, as Tall as the Trees” by Leah Yardley
- Discuss with class what the book talked about by looking at the pictures – specifically the pages about water

Learning Opportunities:

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| 25min | ✗ Step One: While students are on the floor have them move into sitting in a circle. Conduct an acknowledgement of the territory they are learning on prior to continuing the learning. Explain to students that we do this to respect the history of the land.  
   o Welcome to our class today. I would like to take this opportunity to acknowledge the traditional territories of the people of the Treaty 7 region in Southern Alberta. | • Class discussion  
• Active participation  
• Observation  

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Step Two: When gathered in the circle have students take turns (starting with the person on your left as to go in the direction of the sun) discussing things they saw in the book.

- Explain to students when you start taking turns that you are going in the direction of the sun just as traditional indigenous culture.
- Ask students thought provoking questions – continues with answering in a clockwise direction. Explain to students that they have the right to pass. Ask questions such as: “What so we notice about the pages about water?” “Why is water important?” “What do we and the earth use water for?” “Where in Alberta do you think we can find water?” “What about in Medicine Hat?”

Step Three: Ask students to go back to their desks.

- Using a timer, have students work with their shoulder partner have them discuss 3 things that water is used for. Tell them that they will have 30 seconds for 1 person to go (the timer will go off) and then 30 seconds for the other person to go (the timer will go off). ** Be sure to set timer.
- Have students then conduct a Stand Up, Hand Up, Pair Up (students will walk around the room with their hand in the air, once the teacher yells stop, the students will make eye contact with another student and high five them – the high five now makes them partners). Once with a new partner they will share the 3 ideas they came up with from their last partner. They are given 1 minute to share. One timer goes off they go back to their desks.
- Ask for volunteers to share what they came up with. Write all the ideas on the board.

How do I differentiate the learning opportunity for all learners?

- Provide visual and auditory aid from story book.
- Allow students to process their thoughts by working with a partner.
- Teacher-led discussion and examples.
- Group discussion.
- Right to pass for those that do not feel comfortable sharing in a group setting.
## TRANSITION: *(what will students do when they are finished?, how will we move to the next learning opportunity?)*

- All students will be finished together as this is the group discussion portion of the learning. They will directly move into watching a video about living and non-living things. See the next learning objective.

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### Materials Needed

- Watering can
- 2 plants
- Computer with access to internet to view video
- Tobacco for offering
- Students will need their science workbook or pen and paper

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 Ø Step One: watch video on the comparison of living and non-living things: [https://www.youtube.com/watch?v=BEz7RPvQCAI](https://www.youtube.com/watch?v=BEz7RPvQCAI)
  - We know if something is living if it can: move, grow, needs nutrients, breathe, and reproduce.
  - It is non-living when it can’t do the things that living things do.

 Ø Step Two: Have students with their elbow partner, using only their eyes and not their bodies (remaining seated), find one thing in the classroom that is living and one that is non-living. (Provide 30 seconds for this)
  - Ask volunteers to share what they found. Ask the class for verification from the class – go through the checklist – “Does it move?” “Can it grow?” “Does it need nutrients?” and so on and so forth. This repetition will help students learn strategies to identify living and non-living things

 Ø Step Three: Explain to students that water is one of the main things a living thing needs to live. Just like the book said “water is so important for all of creation as it gives and sustains life for all LIVING things.” (emphasize the living part of this quote)

 Ø Step Four: Explain to students that they will be doing an experiment on figuring out just HOW important water is to a living thing.
  - There will be 2 plants into the classroom.
  - Plant 1 will be the plant that the students will take turns watering every day.
  - Plant 2 will not receive water.
Ask students what they think will happen to Plant 1 and Plant 2. Have students write down their predictions.

What does a plant need to live?

Explain to students that plants need water, air, light, space, and food to live. Show video: https://www.youtube.com/watch?v=dUBIQ1fTRzl

Step Five: Have students come to the carpet and sit in a circle with Plant 2 in the middle. Once students are sitting, explain to them that the plant is going to suffer because it will not be getting water. Because a plant is a living thing it can feel emotions. Ask students what they think the plant will feel when it doesn’t get water. Explain to students that in indigenous tradition in order to take the life of a living thing we must provide an offering and acknowledge the sacrifice the plant is making. This is called a ceremony.

Teacher will place tobacco onto soil of the plant and say “Thank you for sacrificing your life in order for us to gain an understand and grow our learnings.”

Have each student say thank you or something nice about the plant.

Step Six: Have students take turns watering Plant 1 each day. Have them document the changes of Plant 1 and Plant 2. After approximately 5 days there should be a clear distinction between the living and the no longer living plant. Discuss this with the students. “How did water help Plant 1 live?” “What did we learn about the importance of water?”

How do I differentiate the learning opportunity for all learners?

Students viewed physical representation of what they were learning.

Inquiry based learning

Used visual, auditory, and kinesthetic learning opportunities

Teacher-led discussion

Documentation in both written and visual
CLOSURE:

- Students will have a finished product of what water does to a living thing. From this they will draw what they see and discuss in a group setting the importance of water to not only the plant but to themselves and all other living things.

Lesson Plan Analysis: Using your lesson above, describe the following: (This information must be in your learning opportunities)

| Accommodations                              | Students were given the opportunity to work in pairs to share their learning, this allowed for peer-instructed learning  
|                                            | Students used drawings for documentation rather than written form to demonstrate their understandings of living and non-living things |
| Cooperative Learning Strategies used        | Shoulder partner                                                                  
|                                            | Elbow partner                                                                  
|                                            | Stand up, hand up, pair up                                                     |
| Movement Breaks                             | Move from carpet to desks 2 times                                               
|                                            | Move during stand up, hand up, pair up                                          |
| Modes of Learning (Differentiation)         | Naturalistic                                                                  
|                                            | Verbal-Linguistic                                                             
|                                            | Spatial                                                                      
|                                            | Visual                                                                       
|                                            | Auditory                                                                     |
| Higher Order Question(s)                    | Why is water important?                                                        
|                                            | How is water good for us and the earth?                                       |

Reflection and Revisions: