

Bachelor of Education (Elementary) & Bachelor of Education (Secondary) STEM Lesson Plan

Lesson Title:	Problems and Solutions	Lesson#	1	Date:	April 3, 2023
			Career		
Name:	Tianna Frost	Subject:	Education	Grade(s):	4/5

Rationale:

The lesson will begin by defining what is a problem and what is a solution. Students will familiarize themselves with the vocabulary and listen to a story with a problem and solution for examples. Problem solving is not only a valuable lifelong skill for students to have but falls under the BC Curriculum in Career Education.

Core Competencies:

Core Corripeterioles.	_	
Communication	Thinking	Personal & Social
Communicating	Creative thinking	Personal awareness and
 Connecting and engaging with others Students will connect with others through class discussions. 	Evaluating and developing Students will reflect on their ideas in order to decide which	responsibility • Self-advocating Students will learn about selfadvocating in problems in an
Acquiring and presenting information Students will have the opportunity to present to their peers how they would change the solution to the problem.	ones to develop. They will also evaluate multiple solutions. Critical thinking Reflecting and assessing Students will have to reflect and assess whether they think which solutions are best.	appropriate manner during problem solving. • Well-being Strategies for managing problems will be discussed and ways to solve them.

Big Ideas (Understand)

Leadership requires listening to and respecting the ideas of others.

Good learning and work habits contribute to short- and long-term personal and career success.

Learning Standards

(DO) (KNOW)

Learning Standards - Curricular Competencies		Learning Standards - Content		
	 Use <u>innovative</u> thinking when solving problems (career 4-5) 	 Personal development: problem-solving and decision-making strategies (career 4- 5) 		

Instructional Objectives & Assessment

Instructional Objectives (students will be able to)	Assessment		
 SWBAT: create a solution to a problem. SWBAT: identify what problem and solution means. 	 Formative: reading students alternate story endings for different solutions. Formative: during conversation, listening to students answers about what a solution and problem is. 		

Prerequisite Concepts and Skills:

Definition (vague idea) of problems and solutions

Respectful sharing and listening

Past problems and solutions they have experienced

Indigenous Connections/ First Peoples Principles of Learning:

• Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors.

Students learning about emotional regulation through problem solving and will help support their wellbeing inside and outside the classroom.

• Learning involves patience and time.

This principle is one that always applies to all lessons and should be actively acknowledged in the classroom to make connections to it. Giving students time to think and extra time when needed is always an option. Also, it is important for students to know they may not learn everything right away because it takes time and patience.

• Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).

Throughout the lesson students will have opportunities to reflect on past experiences to make connections to the new information. There will also be a heavy focus on relationship building in the classroom.

Universal Design for Learning (UDL)

- 1. MULTIPLE MEANS OF REPRESENTATION I provide for multiple means of representation in this unit in the following ways:
- Visual Aids such as, videos, photos
- Highlighting key vocabulary words and discussing meaning prior
- Brainstorming and giving time to collect thoughts.
- group discussions
- written instructions on the board and verbally stated.
- listening to oral video in addition to spoken word
- 2. MULTIPLE MEANS OF ACTION AND EXPRESSION I provide multiple means of action and expression in this unit in the following ways:
- Movement
- writing
- oral discussions
- checklists and project planning templates for understanding the problem, setting up prioritization, sequences, and schedules of steps
- graphic organizers and templates for data collection and organizing information
- alternative scaffolds
- 3. MULTIPLE MEANS OF ENGAGEMENT I provide multiple means of engagement in this unit in the following ways:
- Multiple sources of consistent, specific and encouraging feedback
- Encourage self-reflection.
- Varied levels of noise, collaboration, and output.

- collective elements and individual aspects including group work and group discussions.
 - Group work might make it easier for students to feel heard and be comfortable sharing.
 - Group discussions can help students make connections and get ideas.
 - writing options during reflections

Differentiated Instruction (DI):

For students who are uncomfortable sharing orally and participating verbally in class discussion it will be stated that everyone must share but it can be done through different outputs such as, writing, drawing, sharing a video and other options can be discussed and considered. Oral sharing will be encouraged but alternative options available for everyone.

For students who get easily distracted or deal with sensory overload I will use a noise meter on the projector to keep noise levels down but also create a quiet corner in the classroom where students can go to work.

For students who struggle with transitions a timer can be used for students to track how much time they have

For students who like kinesthetic learning we will use regular active brain breaks.

For students who like auditory learning class discussion and oral sharing will be used.

For students who like visual learning there will be videos shown in class, instructions written on a whiteboard, artwork and photos in PowerPoints.

Scaffolded worksheets will be made for students who need to utilize them

Materials and Resources

Whiteboard markers Projector Pencil

Worksheet Book/video link

Lesson Activities:

Teacher Activities	Student Activities	Time
Introduction/Hook:		10
Ask students:	Listen and participate in discussion.	minutes
What is a problem?		
What is a solution?		
Ask students to pay attention to the problem solving before watching the read aloud. Listen to Book: "The Little Mouse, The Red Ripe Strawberry, and THE BIG HUNGRY BEAR"	Watch Video	
https://www.youtube.com/watch?v=cELSeYq2aul		
Body:		30
Ask how did the mouse solved the problem?	Share answers.	minutes
Are there other ways he could have solved the		
problem?	Brainstorm different solution	

-dismiss groups to get supplies (crayons) -draw scene where the problem is solved another way (change the ending)	Handout sheets Get supplies Work on handout/drawing	
Closure: -ask students to share (3-5 depending on time)	Share endings	5 minutes
-write ideas on the board	Listen respectfully	

Organizational Strategies:

Schema activation

Physical activity during hook to serve as intro to concept and brain break

Visibly random group selection

work prepared for early finishers

have students help handout worksheet

Instructions written on the board

Proximity use if needed

Giving time for responses (waiting)

Not talking until everyone is quiet

During transitions counting down to show how much time they have

Proactive, Positive Classroom Learning Environment Strategies:

group work

manipulative resources

positive and encouraging tone

praise effort

use job helpers to keep routines (ex. Paper passers)

circulating

Extensions:

Problem solving Skits.

Who are people who can help us problem solve?

Big problems versus little problems

Reactions and controlling emotions.

Consequences of actions

Decision Making: how do we make decisions

Reflections (if necessary, continue on separate sheet):