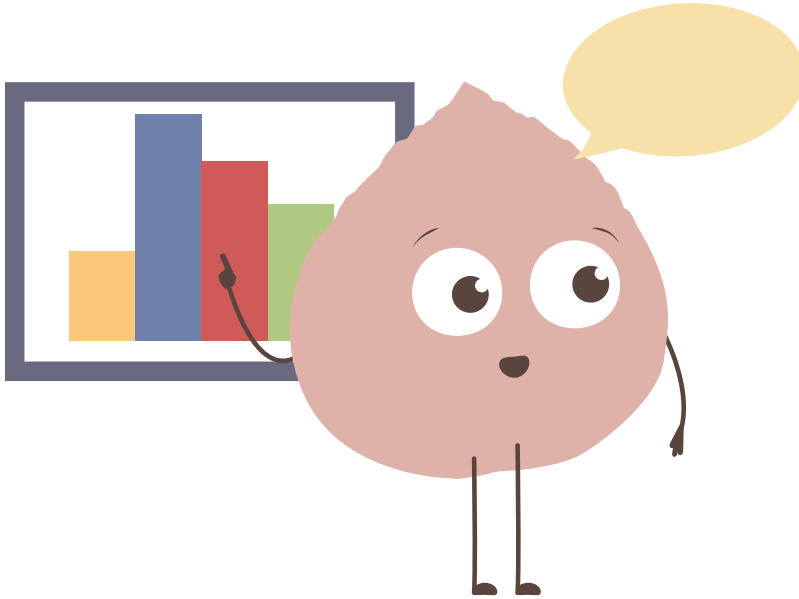


EXPLAIN

K - 3

To describe the how or why of something; give the cause or reason for.



Explaining requires students to use facts and/or details, to clearly communicate more in-depth information about an idea, process, concept, relationship, etc. It is helpful for students to use visuals or manipulatives to demonstrate their understanding. When students *explain* it gives others an insight into their thinking and learning.

The table below shows where **explain** is included as student action within Alberta's K-3 Math curriculum.

Grade Level	Learning Outcomes	Skills & Procedures
Kindergarten		
Grade 1	Students interpret and explain quantity to 100. Students explain time in relation to cycles.	
Grade 2	Students analyze and explain geometric attributes of shape. Students explain and analyze patterns in a variety of contexts.	Compare and order measurements of different lengths measured with the same non-standard units, and explain the choice of unit.
Grade 3	Students interpret and explain representations of data.	Explain the standard algorithms for addition and subtraction of natural numbers. Explain the meaning of the remainder in various situations.

To best support learners, student action verbs should be explicitly taught, modeled and practiced through multiple experiences. The illustrative examples can provide clarification about how student understanding might be developed. It is important to reference the curriculum to view the entire context of the Learning Outcome and related KUSPS.

Illustrative Examples

Learning Outcome 1T.1: Students **explain** time in relation to cycles.

1. Read the story "[We Greet the Four Seasons](#)" by Terri Mack. Students are asked to use examples from the story to **explain** about the four seasons. Story Synopsis: "The Medicine Wheel is a guide to living a healthy life. People use it all around the world. There are four parts to the Medicine Wheel that teaches us many different things. We learn from everything that is around us! We begin our teachings in the direction that the sun rises, to the east. We learn from the gifts that the four seasons provide us with." Students are asked to **explain** about the four seasons using examples from the story.
2. Provide students with a circle template divided into 4 equal parts. Have students use a tree or other items to represent the seasonal cycle in one year (fall, winter, spring, summer). Have students **explain** what they know about time and seasonal observable changes that happen in each season.



Learning Outcome 3ST1.2: Students interpret and **explain** representations of data.

1. Tell students that each of the following statements represents information that can be graphed. Ask students to **explain** why the following types of data can be collected using first-hand data and which information can be collected using second-hand data.
 - Students in the class who have pets.
 - The population of each Canadian province.
 - Students in class who take the bus to school.
 - The win/lose record of the Edmonton Oiler hockey team.
 - Which animal has a higher heart rate- a cow, a pig, a rabbit, a chicken
2. Have students answer the following questions in their math journals. Encourage students to give examples that have not been discussed in class.
 - "What is an example of first-hand data?"
 - "What is an example of second-hand data?"
 - "**Explain** the differences between first- and second-hand data."

To best support learners, student action verbs should be explicitly taught, modeled and practiced through multiple experiences. The illustrative examples can provide clarification about how student understanding might be developed. It is important to reference the curriculum to view the entire context of the Learning Outcome and related KUSPS.

Additional Resources

[Manitoba Education's Grade 5 Mathematics Support Document.](#)

References

Welcome to Learn Alberta. (n.d.). LearnAlberta.

<https://www.learnalberta.ca/Home.aspx?lang=en>

Grade 5 Mathematics Support Documents for Teachers. (n.d.). Manitoba Education.

https://www.edu.gov.mb.ca/k12/cur/math/support_gr5/full_doc.pdf

Mack, T. (2013). *We Greet the Four Seasons*. Strong Nations Publishing Incorporated.