

Bachelor of Education (Elementary) & Bachelor of Education (Secondary) STEM Unit Plan Template

Unit Title: Probability in Kindergarten! Number of Lessons: 8 Time (in weeks): _____
Name: Kyra Doehle Subject(s): Math (integrated ELA, Arts, and Science) Grade(s): Kindergarten

Rationale

I am teaching this unit because probability is an essential early mathematical concept that helps students make sense of the world around them. By engaging in hands-on, and movement-based activities, students will develop foundational probability vocabulary, while building reasoning skills. This unit encourages critical thinking by prompting students to justify their choices and predictions, fostering decision-making skills they will use throughout their lives. Additionally, the integration of Indigenous perspectives on seasonal changes and real-world applications allows students to see how probability is relevant beyond the classroom.

Overview:

Lesson 1: Introduction to Probability Vocabulary

Students learn and practice using the words *always*, *sometimes*, and *never* by sorting familiar events through a movement-based "Three Corners" game.

Lesson 2: Exploring "Possible" and "Impossible"

Students explore *possible* and *impossible* events through a read-aloud of *That's a Possibility!* by Bruce Goldstone, followed by a group sorting activity.

Lesson 3: Reinforcing "Possible" and "Impossible"

Students deepen their understanding by justifying why events are *possible* or *impossible* through a sorting game and a read-aloud of *Chickens Aren't the Only Ones*.

Lesson 4: Introducing "Likely" and "Unlikely"

Students learn how to describe probability using *likely* and *unlikely* and classify events using a movement-based "walking line" activity.

Lesson 5: Exploring "Likely" and "Unlikely" Through Drama and Indigenous Perspectives

Students act out how trees respond to different seasons, exploring probability through movement and Indigenous knowledge.

Lesson 6: Introducing "Certain" and "Impossible"

Students learn to describe events using *certain* and *impossible* through a sorting activity and an interactive "Stand or Sit" game.

Lesson 7: Practicing All Probability Vocabulary

Students review *likely*, *unlikely*, *certain*, and *impossible* through engaging sorting games, movement-based activities, and discussions.

Lesson 8: Creating a Class Probability Book

Each student creates a page describing a probability scenario, contributing to a class book that showcases their learning.

CORE COMPETENCIES

Communication	Thinking	Personal & Social
<ul style="list-style-type: none"> Communicating <i>I communicate purposefully, using forms and strategies I have practiced.</i> Collaborating <i>In familiar situations, I can participate with others.</i> 	<ul style="list-style-type: none"> Critical thinking <i>I can ask questions and consider options. I can use my observations, experience, and imagination to draw conclusions and make judgments.</i> Creative thinking <i>I can get new ideas or build on or combine other people's ideas to create new things within the constraints of a form, a problem, or materials.</i> 	<ul style="list-style-type: none"> Social responsibility <i>I can be aware of others and my surroundings.</i>

BIG IDEAS

(multiple subject areas for integrated unit)

Subject Name: Math K	Subject Name: ELA K
Familiar events can be described as likely or unlikely and compared.	Curiosity and wonder lead us to new discoveries about ourselves and the world around us.

LEARNING STANDARDS

Curricular Competencies	Content
Math: <ul style="list-style-type: none"> Communicate mathematical thinking in many ways Use mathematical vocabulary and language to contribute to mathematical discussions Explain and justify mathematical ideas and decisions Reflect on mathematical thinking Connect mathematical concepts to each other and to other areas and personal interests Incorporate First Peoples' worldviews and perspectives to make connections to mathematical concepts 	Math: <ul style="list-style-type: none"> Likelihood of familiar life events <ul style="list-style-type: none"> Using the language of probability such as unlikely or likely
Science: <ul style="list-style-type: none"> Questioning and predicting Transfer and apply learning to new situations 	Science: <ul style="list-style-type: none"> First Peoples' knowledge of seasonal changes Seasonal changes weather changes
ELA:	ELA:

<ul style="list-style-type: none"> - Exchange ideas and perspectives to build shared understanding - Use language to identify, create, and share ideas, feelings, opinions, and preferences 	<ul style="list-style-type: none"> - Metacognitive strategies - Letter knowledge
Arts: <ul style="list-style-type: none"> - Express feelings, ideas, stories, observations, and experiences through the arts 	Arts: <ul style="list-style-type: none"> - Dramatic forms

Prerequisite Concepts and Skills:

<ul style="list-style-type: none"> - Basic understanding of sorting and classifying - Basic understanding of cause and effect - Basic concept of chance - Basic counting skills and understanding of more and less - Ability to make simple predictions based on prior experience - Ability to categorize and compare objects and events
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Teacher Preparation Required:

Lesson #	Teacher Preparation Required (See Unit Plan Sample)
Lesson 1	<ul style="list-style-type: none"> - Prepare visual aids - Setup whiteboard or chart paper columns with vocab words - Review gestures for vocabulary words - Create a list of examples to use for each vocab word
Lesson 2	<ul style="list-style-type: none"> - Have a copy of "That's A Possibility!" by Bruce Goldstone (or similar book) ready to go - Prepare whiteboard or chart paper for class discussion - Have copies of "Can a _____? Possible/Impossible? worksheets ready - Review gestures for vocab words
Lesson 3	<ul style="list-style-type: none"> - Prepare book: "Chickens Aren't the Only Ones" by Ruth Heller (or a similar book) - Resetup the whiteboard or chart paper from the last lesson - Prepare a new list of events with visuals if possible - Blank paper or copies of simple sentence worksheets
Lesson 4	<ul style="list-style-type: none"> - Create a list of examples for likely/unlikely game (on the cliff off the cliff) - Prepare whiteboard or chart paper for class sorting - Review gestures for vocab words
Lesson 5	<ul style="list-style-type: none"> - Review Indigenous knowledge of seasons that we will use (language?) - Prepare seasonal prompts for drama activity - Gather visuals of trees and seasonal changes to review for the drama activity
Lesson 6	<ul style="list-style-type: none"> - Copies of the "Certain or Impossible" worksheet ready - Create a list of examples for the sit or stand game - Prepare whiteboard or chart paper for class sorting
Lesson 7	<ul style="list-style-type: none"> - Prepare examples of all the vocab words - Prepare pages for each student for the class book (draft first then a good copy?)

Cross-Curricular Connections:

<p>This unit integrates Arts, ELA, and Science to deepen students' understanding of probability. Through storytelling, drama, and real-world observations, students use language to express mathematical thinking and apply probability concepts to nature, seasonal changes, and everyday life.</p>
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Aboriginal Connections/ First Peoples Principles of Learning:

<p>FPPL: Learning involves recognizing the consequences of one's actions.</p> <p>Through engaging activities, students develop an understanding of probability as a way to predict and describe real-world events. By classifying events as likely, unlikely, certain, or impossible, they build</p>

foundational skills in decision-making and critical thinking, which is key to understanding how choices and circumstances shape outcomes. The probability vocabulary encourages students to think about everyday events, such as weather patterns or classroom routines, reinforcing that actions and external factors influence what is possible or likely to happen. By integrating experiential learning, the students get to practice recognizing patterns and develop reasoning skills that will support their ability to anticipate, plan, and make informed choices, which is a concept deeply connected to the FPPL focus on understanding consequences.

Grandfather Teaching: *Wisdom*

Wisdom emphasizes using knowledge, experience, and good judgment to understand the world. Through exploring probability concepts, students develop critical thinking and decision-making skills, recognizing how past experiences and observations help predict future events. The Indigenous knowledge integrated into the unit reflects the wisdom of learning from nature and understanding patterns over time. By engaging in discussions, hands-on activities, and creating a class probability book, students practice applying their knowledge thoughtfully, demonstrating that wisdom is not just about knowing but about using knowledge in meaningful ways.

Universal Design for Learning (UDL)

Multiple Means of Engagement:

- Student Choice & Autonomy: Students contribute their own examples to sorting activities (e.g., Three Corners, tree role-play, and the Class Probability Book).
- Cultural & Real-World Connections: The unit integrates Indigenous knowledge through seasonal probability discussions, making learning meaningful.
- Hands-On & Movement-Based Learning: Activities like acting as trees, playing Four Corners, and sorting scenarios allow students to engage in active learning rather than just listening.

Multiple Means of Representation:

- Visual Supports: Charts, images, books (That's a Possibility!, Chickens Aren't the Only Ones), and classroom posters provide varied ways to understand probability concepts.
- Gestures & Modeling: I introduce probability vocabulary with physical gestures (e.g., thumbs up for "certain," crossed arms for "impossible"), reinforcing understanding for visual and kinesthetic learners.
- Storytelling & Discussion: Read-alouds and group conversations allow auditory learners to engage with the material in a meaningful way.

Multiple Means of Action & Expression:

- Verbal & Physical Expression: Students communicate their understanding through discussion, movement-based activities, and role-play.
- Drawing & Writing Opportunities: The Class Probability Book allows students to express their learning in a creative and individualized way.
- Collaborative & Independent Activities: Students work independently (worksheets, drawings) and collaboratively (sorting games, discussions) to accommodate different learning preferences.

Differentiated Instruction (DI):

Student D:

- Provide noise-cancelling headphones if needed
- Break tasks into smaller steps if needed
- Frequently check in during activities
- Use clear, simple language when instructing the next steps

Student B:

- Use a timer to give a sense of urgency to help stay on task
- Allow to stand while working at tables
- Set short, clear goals for tasks (try and gamify)

Student J:

- Provide choice when possible
- Clear, simple instructions (check back frequently)
- Be sure to take notice when on task and following directions

Overview of Lessons:

Lesson 1

Name & Time (Minutes Allotted):	Introduction to Probability Vocabulary
Learning Standards: Curricular Competencies	Math: <ul style="list-style-type: none">- Use mathematical vocabulary and language to contribute to mathematical discussions Science: <ul style="list-style-type: none">- Questioning and predicting ELA: <ul style="list-style-type: none">- Use language to identify, create, and share ideas, feelings, opinions, and preferences
Learning Standards: Content	Math: <ul style="list-style-type: none">- Likelihood of familiar life events
Instructional Objectives	SWBAT use the words "always," "sometimes," and "never" to describe the likelihood of familiar events in their daily lives.
Assessment:	Observation: <ul style="list-style-type: none">● Watch for student engagement during the discussion and sorting activity.● Note if students can appropriately classify events using "always," "sometimes," and "never." Conversation: <ul style="list-style-type: none">● Ask open-ended questions (e.g., "Can you think of something you always do at school?") and listen for correct usage of vocabulary.● Facilitate group discussions to assess understanding of terms.
Teaching Strategies:	<ul style="list-style-type: none">- Direct Instruction- Collaborative Learning- Repetition
Materials:	<ul style="list-style-type: none">- Chart paper or whiteboard with columns labelled "Always," "Sometimes," "Never"- Markers- Visual aids (e.g., pictures of common school activities or events)
Lesson Activities:	
Introduction/Hook:	Begin with a simple, relatable question: <ul style="list-style-type: none">● "What is something you always do every day at school?" (e.g., "We always wash our hands before lunch.")● "What is something you never do at school?" (e.g., "We never eat lunch outside when it's raining.") Share personal examples or humorous scenarios:

	<ul style="list-style-type: none"> ● "I sometimes wear a jacket to school, but I never wear my swimsuit. What about you?" <p>Introduce the vocabulary words "always," "sometimes," and "never" with quick explanations and gestures:</p> <ul style="list-style-type: none"> ● "Always" (gesture: circle your arms like a ray of sunshine to show a repeated motion). ● "Sometimes" (gesture: wiggle your hand back and forth). ● "Never" (gesture: shake your head and cross your arms).
Body:	<p>Whole Group Activity:</p> <ul style="list-style-type: none"> ● Play 3 corners! <ul style="list-style-type: none"> ○ Add 1–2 teacher-led examples for modelling showing students that they will go to the corner labelled always, sometimes, or never <ul style="list-style-type: none"> ■ Always: "We always line up before going outside." ■ Sometimes: "We sometimes have music class." ■ Never: "We never run in the hallways." ● Ask students to think of their own examples of things they "always," "sometimes," or "never" do at school or home. ● Have students give examples for the class of scenarios and walk to whatever corner they think the answer is <p>Group Discussion:</p> <ul style="list-style-type: none"> ● Highlight interesting or funny examples, and ask the class to confirm if we guessed right.
Closure:	<p>Preview the next lesson:</p> <ul style="list-style-type: none"> ● "Tomorrow, we'll learn two new words: possible and impossible. Can you think about what those might mean?" <p>End with a quick, fun recap:</p> <ul style="list-style-type: none"> ● Play a game where you say a sentence and students respond with "always," "sometimes," or "never" (e.g., "The sun shines every day. Is that always, sometimes, or never true?").

Lesson 2

Name & Time (Minutes Allotted):	Exploring Possible and Impossible
Learning Standards: Curricular Competencies	<p>Math:</p> <ul style="list-style-type: none"> - Connect mathematical concepts to each other and to other areas and personal interests - Communicate mathematical thinking in many ways - Explain and justify mathematical ideas and decisions <p>Science:</p> <ul style="list-style-type: none"> - Questioning and predicting

	<p>ELA:</p> <ul style="list-style-type: none"> - Use language to identify, create, and share ideas, feelings, opinions, and preferences
Learning Standards: Content	<p>Math:</p> <ul style="list-style-type: none"> - Likelihood of familiar life events <p>ELA:</p> <ul style="list-style-type: none"> - Letter knowledge
Instructional Objectives	SWBAT identify and classify events as possible or impossible using examples from their daily lives.
Assessment:	<p>Observation:</p> <ul style="list-style-type: none"> ● Observe student participation during the group discussion and sorting activity. ● Note how well students differentiate between "possible" and "impossible" events. <p>Conversation:</p> <ul style="list-style-type: none"> ● Engage students in a discussion about why certain events are possible or impossible. ● Ask follow-up questions like, "Why do you think that is impossible?" <p>Product:</p> <ul style="list-style-type: none"> ● Students complete a worksheet or activity where they classify events or images as "possible" or "impossible."
Teaching Strategies:	<ul style="list-style-type: none"> - Read-Aloud - Collaborative Learning - Scaffolding
Materials:	<ul style="list-style-type: none"> - Storybook: <i>That's a Possibility!</i> by Bruce Goldstone (or a similar book introducing the concept of possibility) - Chart paper or whiteboard with two columns: "Possible" and "Impossible" - Sticky notes, sentence strips, or pre-prepared image cards - Worksheet: "Can a _____? Possible or Impossible?"
Lesson Activities:	
Introduction/Hook:	<p>Start with a Riddle Game:</p> <ul style="list-style-type: none"> ● "Can a dog fly?" (Pause for reactions.) ● "Can a bird swim?" ● "Can you eat lunch today?" <p>Discuss:</p> <ul style="list-style-type: none"> ● Explain that some things are "possible" (they can happen) and others are "impossible" (they cannot happen). ● Use simple gestures to reinforce the terms: <ul style="list-style-type: none"> ○ Possible: Thumbs up. ○ Impossible: Cross arms in an "X." <p>Read-Aloud:</p>

	<ul style="list-style-type: none"> ● Read <i>That's a Possibility!</i> by Bruce Goldstone or a similar book. ● Pause to ask questions about possible and impossible events mentioned in the story.
Body:	<p>Whole Group Activity:</p> <ul style="list-style-type: none"> ● Draw a T-chart labelled "Possible" and "Impossible" on chart paper or the board. ● Model sorting with a few examples: <ul style="list-style-type: none"> ○ Possible: "It might rain today." ○ Impossible: "Fish can walk on land." <p>Student Participation:</p> <ul style="list-style-type: none"> ● Hand out sticky notes or pre-prepared image cards with scenarios (e.g., "A cat riding a bike," "The sun shining"). ● Ask students to decide if their event is "possible" or "impossible" and place it in the correct column on the chart. <p>Guided Discussion:</p> <ul style="list-style-type: none"> ● Read a few examples from each column and ask: <ul style="list-style-type: none"> ○ "Why is this possible?" ○ "What makes this impossible?" <p>Independent Activity:</p> <ul style="list-style-type: none"> ● Students complete a worksheet: "Can a _____? Possible or Impossible?" ● Examples: "Can a cow jump over the moon?" "Can you eat lunch today?" <ul style="list-style-type: none"> ○ Students can identify the letter P and the letter I on the worksheet to know possible or impossible
Closure:	<p>Quick Review Game:</p> <ul style="list-style-type: none"> ● Say an event and have students respond with "possible" or "impossible" by showing a thumbs up or crossing their arms. Examples: <ul style="list-style-type: none"> ○ "It will snow in summer." ○ "We will eat lunch at school." ○ "A car can swim in the ocean." <p>Preview Next Lesson:</p> <ul style="list-style-type: none"> ● "Next time, we'll learn about words like likely and unlikely. What do you think those words mean?" <p>Celebrate Learning:</p> <ul style="list-style-type: none"> ● Acknowledge great participation and remind students to notice "possible" and "impossible" events in their daily lives.

Lesson 3

Name & Time (Minutes Allotted):	Reinforcing "Possible" and "Impossible"
Learning Standards: Curricular Competencies	<p>Math:</p> <ul style="list-style-type: none"> - Connect mathematical concepts to each other and to other areas and personal interests - Communicate mathematical thinking in many ways - Explain and justify mathematical ideas and decisions <p>Science:</p> <ul style="list-style-type: none"> - Questioning and predicting <p>ELA:</p> <ul style="list-style-type: none"> - Use language to identify, create, and share ideas, feelings, opinions, and preferences
Learning Standards: Content	<p>Math:</p> <ul style="list-style-type: none"> - Likelihood of familiar life events
Instructional Objectives	SWBAT provide examples and justify why specific events are "possible" or "impossible."
Assessment:	<ul style="list-style-type: none"> ● Observation: <ul style="list-style-type: none"> ○ Monitor participation during the group discussion and sorting activity. ○ Observe whether students correctly classify events and can explain their reasoning. ● Conversation: <ul style="list-style-type: none"> ○ Engage students in individual or group discussions to assess their understanding of "possible" and "impossible." ○ Use prompts like: "Why do you think that is possible?" ● Product: <ul style="list-style-type: none"> ○ Assess student-created sentences or drawings classifying events as "possible" or "impossible."
Teaching Strategies:	Collaborative Learning Read-Aloud
Materials:	<ul style="list-style-type: none"> - Book: <i>Chickens Aren't the Only Ones</i> by Ruth Heller (or similar book for discussion) - Chart paper or whiteboard from Lesson 2 (reuse the "Possible/Impossible" T-chart) - New event cards or images for sorting - Blank paper or worksheet for students to draw and label events as "possible" or "impossible"
Lesson Activities:	
Introduction/Hook:	<p>Revisit Vocabulary with a Quick Review Game:</p> <ul style="list-style-type: none"> ● Say an event and have students respond with a thumbs-up for "possible" or crossed arms for "impossible." Examples: <ul style="list-style-type: none"> ○ "A dog barking." ○ "A chair flying." ○ "Eating lunch at school today." <p>Introduce the Story:</p>

	<ul style="list-style-type: none"> • Tell students: “Today, we’ll read a story that helps us think about what animals can and cannot do. Let’s see if you can spot things that are possible or impossible!” <p>Read-Aloud:</p> <ul style="list-style-type: none"> • Read <i>Chickens Aren’t the Only Ones</i>. Pause periodically to ask questions about events in the book (e.g., “Is it possible for a snake to lay eggs?”).
<p>Body:</p>	<p>Group Sorting Activity:</p> <ul style="list-style-type: none"> • Review the T-chart from Lesson 2 (“Possible” and “Impossible”). • Use new event cards or images (e.g., “A fish breathing underwater,” “A car flying in the sky”). • Have students help classify events by placing cards in the correct column. <p>Discussion:</p> <ul style="list-style-type: none"> • For each card, ask students to explain their reasoning: <ul style="list-style-type: none"> ○ “Why is it possible for a fish to breathe underwater?” ○ “Why is it impossible for a car to fly?” <p>Independent Practice:</p> <ul style="list-style-type: none"> • Provide blank paper or a worksheet with sentence starters: <ul style="list-style-type: none"> ○ “It is possible for _____.” ○ “It is impossible for _____.” • Students draw and label two examples—one possible and one impossible.
<p>Closure:</p>	<p>Share and Reflect:</p> <ul style="list-style-type: none"> • Invite a few students to share their drawings or sentences with the class. • Reinforce understanding by asking questions: <ul style="list-style-type: none"> ○ “Why do you think that is possible?” ○ “What makes this impossible?” <p>Preview Next Lesson:</p> <ul style="list-style-type: none"> • “Next time, we’ll learn new words to describe events: likely and unlikely. Can you think about what those words might mean?”

Lesson 4

<p>Name & Time (Minutes Allotted):</p>	<p>Introducing “Likely” and “Unlikely”</p>
<p>Learning Standards: Curricular Competencies</p>	<p>Math:</p> <ul style="list-style-type: none"> - Connect mathematical concepts to each other and to other areas and personal interests - Communicate mathematical thinking in many ways

	<ul style="list-style-type: none"> - Explain and justify mathematical ideas and decisions <p>Science:</p> <ul style="list-style-type: none"> - Questioning and predicting - Transfer and apply learning to new situations <p>ELA:</p> <ul style="list-style-type: none"> - Use language to identify, create, and share ideas, feelings, opinions, and preferences
Learning Standards: Content	<p>Math:</p> <ul style="list-style-type: none"> - Likelihood of familiar life events
Instructional Objectives	SWBAT Use terms "likely" and "unlikely" to describe the probability of familiar events.
Assessment:	<p>Observation:</p> <ul style="list-style-type: none"> ● Monitor student participation in group discussions and sorting activities. ● Look for the correct use of "likely" and "unlikely" during group responses. <p>Conversation:</p> <ul style="list-style-type: none"> ● Ask students to explain why they classify events as "likely" or "unlikely." ● Use prompts like: "What makes you think that is likely to happen?" <p>Product:</p> <ul style="list-style-type: none"> ● Evaluate completed sorting activities or a worksheet where students classify events as "likely" or "unlikely."
Teaching Strategies:	<ul style="list-style-type: none"> - Guided Practice - Modelling
Materials:	<ul style="list-style-type: none"> - Chart paper or whiteboard with columns: "Likely" and "Unlikely" - Sentence strips or image cards with example events (e.g., "It will rain tomorrow," "A dinosaur will visit the school.") - Markers - Worksheet or blank paper for students to draw or label events as "likely" or "unlikely."
Lesson Activities:	
Introduction/Hook:	<p>Quick Review of Prior Vocabulary:</p> <ul style="list-style-type: none"> ● Ask students to recall the meanings of "possible" and "impossible." ● Play a quick game: "Possible or Impossible?" with a few fun examples. <p>Introduce New Vocabulary:</p> <ul style="list-style-type: none"> ● Explain: "Today, we'll learn about two new words—'likely' and 'unlikely.' These words tell us how often something might happen." ● Give examples:

	<ul style="list-style-type: none"> ○ "It's likely to see the sun in summer." (Gesture: Thumbs up with a nod.) ○ "It's unlikely to see snow in summer." (Gesture: Shake head and shrug shoulders.) <p>Engage Students:</p> <ul style="list-style-type: none"> ● Ask: "What do you think is something likely to happen today? What's something unlikely to happen?"
Body:	<p>Group Sorting Activity:</p> <ul style="list-style-type: none"> ● Draw a T-chart with columns "Likely" and "Unlikely." ● Show sentence strips or images one at a time and ask students to help classify them. Examples: <ul style="list-style-type: none"> ○ "We will eat lunch today." (Likely) ○ "A giraffe will walk into our classroom." (Unlikely) <p>Guided Discussion:</p> <ul style="list-style-type: none"> ● For each event, ask: <ul style="list-style-type: none"> ○ "Why do you think this is likely?" ○ "What makes this unlikely?" <p>Interactive Practice:</p> <ul style="list-style-type: none"> ● Create a "walking line" in the classroom: <ul style="list-style-type: none"> ○ One side represents "likely," and the other represents "unlikely." ○ Read scenarios aloud, and students walk to the side they think matches the probability. <p>Independent Activity:</p> <ul style="list-style-type: none"> ● Provide a worksheet or blank paper with prompts: <ul style="list-style-type: none"> ○ "It is likely that _____." ○ "It is unlikely that _____." ● Students draw or write one example for each.
Closure:	<p>Quick Review Game:</p> <ul style="list-style-type: none"> ● Say events aloud and ask students to respond with "likely" or "unlikely" using gestures (thumbs up or shrug). Examples: <ul style="list-style-type: none"> ○ "It will rain today." ○ "A fish will fly." <p>Reflect and Preview:</p> <ul style="list-style-type: none"> ● Ask: "What's one thing you learned about 'likely' and 'unlikely' today?" ● Preview the next lesson: "Tomorrow, we'll learn about 'certain' and 'impossible.' Can you guess what those words mean?"

Lesson 5

Name & Time (Minutes Allotted):	Exploring "Likely" and "Unlikely" Through Drama and Indigenous Perspectives
Learning Standards: Curricular Competencies	<p>Math:</p> <ul style="list-style-type: none"> - Connect mathematical concepts to each other and to other areas and personal interests - Communicate mathematical thinking in many ways - Explain and justify mathematical ideas and decisions <p>Science:</p> <ul style="list-style-type: none"> - Questioning and predicting <p>ELA:</p> <ul style="list-style-type: none"> - Use language to identify, create, and share ideas, feelings, opinions, and preferences <p>Arts:</p> <ul style="list-style-type: none"> - Express feelings, ideas, stories, observations, and experiences through the arts
Learning Standards: Content	<p>Math:</p> <ul style="list-style-type: none"> - Likelihood of familiar life events <p>Science:</p> <ul style="list-style-type: none"> - First Peoples' knowledge of seasonal changes - Seasonal and weather changes <p>Arts:</p> <ul style="list-style-type: none"> - Dramatic forms (specifically role play in this lesson)
Instructional Objectives	SWBAT Identify common events that are "likely" or "unlikely" to happen in different seasons and express their understanding through creative movement and role-play.
Assessment:	<p>Observation:</p> <ul style="list-style-type: none"> ● Monitor participation in acting out scenarios as trees and answering probability questions. ● Observe how well students embody the seasonal characteristics and use vocabulary appropriately. <p>Conversation:</p> <ul style="list-style-type: none"> ● Engage in group discussions to assess comprehension: <ul style="list-style-type: none"> ○ "Why is it likely for trees to lose their leaves in autumn?" ○ "Why is it unlikely to see a tree full of leaves in winter?" <p>Product:</p> <ul style="list-style-type: none"> ● Assess students' creative movement and their ability to represent seasonal tree characteristics through drama.
Teaching Strategies:	Indigenous Knowledge Drama and Role-Play
Materials:	<ul style="list-style-type: none"> - Visual aids - List of seasonal prompts - Open space for students to act out scenarios
Lesson Activities:	
Introduction/Hook:	Begin with a Discussion:

	<ul style="list-style-type: none"> ● Ask: "What are the four seasons? What do you see or feel during each one?" ● Introduce the idea that some things are "likely" or "unlikely" to happen in different seasons. <p>Introduce Indigenous Knowledge:</p> <ul style="list-style-type: none"> ● Explain how Indigenous peoples (e.g., the Ktunaxa) observe the natural world to determine what events are likely or unlikely in each season. ● Share examples using Ktunaxa month names, such as: <ul style="list-style-type: none"> ○ March: #ikuq (melting snow) – "In spring, is it likely or unlikely to see melting snow?" ○ February: Nupqu natanik (bear month) – "In winter, is it likely or unlikely to see bears outside?" <p>Set the Stage:</p> <ul style="list-style-type: none"> ● Tell students they'll act as trees experiencing seasonal changes and will decide if these changes are "likely" or "unlikely."
Body:	<p>Role-Play Setup:</p> <ul style="list-style-type: none"> ● Have students stand in a circle or spaced out as "trees." ● Explain the rules: Trees must stay in their spot (roots planted) and act out the scenarios given. <p>Seasonal Scenarios:</p> <ul style="list-style-type: none"> ● Call out prompts for each season, and have students act as trees while answering "likely" or "unlikely" questions. Examples: <ul style="list-style-type: none"> ○ Autumn: <ul style="list-style-type: none"> ■ "Shake your branches as leaves start to fall. Is this likely or unlikely in autumn?" ■ "Pretend to sway in the wind with some leaves left on your branches." ○ Winter: <ul style="list-style-type: none"> ■ "Stand still under a blanket of snow. Is this likely or unlikely in winter?" ■ "Pretend to be a tree with bare branches." ○ Spring: <ul style="list-style-type: none"> ■ "Stretch your branches as new leaves grow. Is this likely or unlikely in spring?" ■ "Sway gently in the rain, welcoming new life." ○ Summer: <ul style="list-style-type: none"> ■ "Provide shade for animals under your branches. Is this likely in summer?" ■ "Show how you might sway with a strong summer breeze." <p>Group Discussion:</p>

	<ul style="list-style-type: none"> After each season, pause and discuss the likelihood of the events students acted out.
Closure:	<p>Reflect on the Lesson:</p> <ul style="list-style-type: none"> Ask students: <ul style="list-style-type: none"> "What did we learn about trees in each season?" "How does observing nature help us understand what is likely or unlikely to happen?" <p>Connect to Indigenous Knowledge:</p> <ul style="list-style-type: none"> Reinforce how the Ktunaxa people use observations of the natural world to predict seasonal changes. <p>Preview Next Lesson:</p> <ul style="list-style-type: none"> "Next time, we'll practice using all the words we've learned: likely, unlikely, certain, and impossible!"

Lesson 6

Name & Time (Minutes Allotted):	Introducing "Certain" and "Impossible"
Learning Standards: Curricular Competencies	<p>Math:</p> <ul style="list-style-type: none"> Connect mathematical concepts to each other and to other areas and personal interests Communicate mathematical thinking in many ways Explain and justify mathematical ideas and decisions <p>Science:</p> <ul style="list-style-type: none"> Questioning and predicting Transfer and apply learning to new situations <p>ELA:</p> <ul style="list-style-type: none"> Use language to identify, create, and share ideas, feelings, opinions, and preferences
Learning Standards: Content	<p>Math:</p> <ul style="list-style-type: none"> Likelihood of familiar life events
Instructional Objectives	SWBAT use the terms "certain" and "impossible" to describe events with absolute probabilities.
Assessment:	<p>Observation:</p> <ul style="list-style-type: none"> Monitor student participation during discussions and sorting activities. Watch for correct usage of "certain" and "impossible" when responding to prompts. <p>Conversation:</p> <ul style="list-style-type: none"> Engage students in discussions to explain their reasoning: <ul style="list-style-type: none"> "Why is this event certain?" "What makes this event impossible?" <p>Product:</p>

	<ul style="list-style-type: none"> ● Assess students' drawings or written responses describing one "certain" and one "impossible" event.
Teaching Strategies:	Modelling Active Engagement
Materials:	<ul style="list-style-type: none"> - Chart paper or whiteboard with two columns: "Certain" and "Impossible" - Event cards or images (e.g., "The sun will rise tomorrow," "A dog will drive a car.") - Markers - Worksheet: "Certain or Impossible?" with space to draw or write events
Lesson Activities:	
Introduction/Hook:	<p>Quick Review of Prior Vocabulary:</p> <ul style="list-style-type: none"> ● Ask students to recall the meanings of "likely" and "unlikely." ● Play a quick sorting game with these terms to reinforce understanding. <p>Introduce New Vocabulary:</p> <ul style="list-style-type: none"> ● Explain: "Today, we'll learn two new words—'certain' and 'impossible.' These words help us describe things that either will always happen or can never happen." ● Use examples: <ul style="list-style-type: none"> ○ "It is certain the sun will rise tomorrow." (Gesture: Open arms wide to emphasize surety.) ○ "It is impossible for a fish to drive a car." (Gesture: Shake head and cross arms.) <p>Engage Students:</p> <ul style="list-style-type: none"> ● Ask: "What is something that is certain to happen today? What is something impossible to happen?"
Body:	<p>Group Sorting Activity:</p> <ul style="list-style-type: none"> ● Create a T-chart labeled "Certain" and "Impossible." ● Show event cards or images and ask students to help classify them. Examples: <ul style="list-style-type: none"> ○ "The sun will rise tomorrow." (Certain) ○ "A chicken will read a book." (Impossible) <p>Guided Discussion:</p> <ul style="list-style-type: none"> ● For each event, ask: <ul style="list-style-type: none"> ○ "Why do you think this is certain?" ○ "Why do you think this is impossible?" <p>Interactive Practice:</p> <ul style="list-style-type: none"> ● Play "Stand or Sit":

	<ul style="list-style-type: none"> ○ Say a scenario and ask students to stand if it's "certain" and sit if it's "impossible." Examples: <ul style="list-style-type: none"> ■ "We will eat lunch at school today." ■ "A dinosaur will walk into the classroom." <p>Independent Activity:</p> <ul style="list-style-type: none"> ● Provide a worksheet or blank paper with prompts: <ul style="list-style-type: none"> ○ "It is certain that _____." ○ "It is impossible for _____." ● Students draw or write one example for each.
Closure:	<p>Review with a Fun Game:</p> <ul style="list-style-type: none"> ● Say events aloud and have students respond with "certain" or "impossible." Examples: <ul style="list-style-type: none"> ○ "It will get dark tonight." ○ "A cat will fly an airplane." <p>Reflect and Preview:</p> <ul style="list-style-type: none"> ● Ask: "What's one certain thing you can think of? What's one impossible thing?" ● Preview the next lesson: "Next time, we'll practice all the words we've learned: likely, unlikely, certain, and impossible!"

Lesson 7

Name & Time (Minutes Allotted):	Practicing "Likely," "Unlikely," "Certain," and "Impossible"
Learning Standards: Curricular Competencies	<p>Math:</p> <ul style="list-style-type: none"> - Connect mathematical concepts to each other and to other areas and personal interests - Communicate mathematical thinking in many ways - Explain and justify mathematical ideas and decisions <p>Science:</p> <ul style="list-style-type: none"> - Questioning and predicting - Transfer and apply learning to new situations <p>ELA:</p> <ul style="list-style-type: none"> - Use language to identify, create, and share ideas, feelings, opinions, and preferences
Learning Standards: Content	<p>Math:</p> <ul style="list-style-type: none"> - Likelihood of familiar life events
Instructional Objectives	SWBAT accurately use the terms likely, unlikely, certain, and impossible to describe and classify events from their daily lives.
Assessment:	<p>Observation:</p> <ul style="list-style-type: none"> ● Observe participation during sorting games and group activities. ● Note how well students apply vocabulary to classify events. <p>Conversation:</p> <ul style="list-style-type: none"> ● Engage students with questions like: <ul style="list-style-type: none"> ○ "Why do you think this is certain?"

	<ul style="list-style-type: none"> ○ "What makes this event unlikely?" <p>Product:</p> <ul style="list-style-type: none"> ● Assess students' completed sorting tasks or a simple visual representation showing one example for each vocabulary term.
Teaching Strategies:	Review and Scaffolding Group and Individual Work
Materials:	<ul style="list-style-type: none"> - Chart paper or whiteboard with four columns: "Likely," "Unlikely," "Certain," and "Impossible" - Event cards or images (e.g., "It will snow in summer," "We will eat lunch today.") - Markers or sticky notes - Worksheet or blank paper with space for students to illustrate examples of "likely," "unlikely," "certain," and "impossible"
Lesson Activities:	
Introduction/Hook:	<p>Recap Vocabulary:</p> <ul style="list-style-type: none"> ● Write the four terms ("likely," "unlikely," "certain," "impossible") on the board. ● Quickly review their meanings using gestures: <ul style="list-style-type: none"> ○ Likely: Thumbs up with a nod. ○ Unlikely: Shrug with a tilted head. ○ Certain: Arms wide open to emphasize surety. ○ Impossible: Shake head and cross arms. <p>Engage Students with Examples:</p> <ul style="list-style-type: none"> ● Ask: "Can you think of an example for each word?" (e.g., "What is something certain to happen today?")
Body:	<p>Sorting Activity:</p> <ul style="list-style-type: none"> ● Create a chart with four columns: "Likely," "Unlikely," "Certain," and "Impossible." ● Use event cards or images one at a time. Examples: <ul style="list-style-type: none"> ○ "It will rain tomorrow." (Likely) ○ "A dinosaur will visit our class." (Impossible) ○ "The sun will rise tomorrow." (Certain) ○ "It will snow today." (Unlikely, depending on weather.) ● Invite students to classify each event by placing it in the correct column. <p>Movement-Based Practice:</p> <ul style="list-style-type: none"> ● Play a "Four Corners" game: <ul style="list-style-type: none"> ○ Label each corner of the classroom with one term. ○ Read a scenario aloud, and students move to the corner that matches the probability of the event. <p>Independent Activity:</p>

	<ul style="list-style-type: none"> ● Provide a worksheet or blank paper divided into four sections labeled "Likely," "Unlikely," "Certain," and "Impossible." ● Students draw or write one example for each term.
Closure:	<p>Reflect on Learning:</p> <ul style="list-style-type: none"> ● Ask: "What's one thing you learned about these words today?" ● Discuss how understanding probability helps us think about events in the world. <p>Preview Next Lesson:</p> <ul style="list-style-type: none"> ● "In our next lesson, we'll put all our knowledge together and create our own probability scenarios!"

Lesson 8

Name & Time (Minutes Allotted):	Creating a Class Probability Book (could span over multiple days if extra time is needed)
Learning Standards: Curricular Competencies	<p>Math:</p> <ul style="list-style-type: none"> - Connect mathematical concepts to each other and to other areas and personal interests - Communicate mathematical thinking in many ways - Explain and justify mathematical ideas and decisions <p>Science:</p> <ul style="list-style-type: none"> - Questioning and predicting - Transfer and apply learning to new situations <p>ELA:</p> <ul style="list-style-type: none"> - Use language to identify, create, and share ideas, feelings, opinions, and preferences - Metacognitive strategies <p>Arts:</p> <ul style="list-style-type: none"> - Express feelings, ideas, stories, observations, and experiences through the arts
Learning Standards: Content	<p>Math:</p> <ul style="list-style-type: none"> - Likelihood of familiar life events
Instructional Objectives	SWBAT create their own probability scenario, classify it using the correct vocabulary, and illustrate their ideas for a collaborative class book.
Assessment:	<p>Observation:</p> <ul style="list-style-type: none"> ● Monitor student engagement as they brainstorm, write, and illustrate their pages. ● Look for correct vocabulary usage and logical probability reasoning. <p>Conversation:</p> <ul style="list-style-type: none"> ● Ask students to explain their scenarios and probability choices during the sharing process.

	<p>Example prompts:</p> <ul style="list-style-type: none"> • "Why is this event certain?" • "What makes this impossible?" <p>Product:</p> <ul style="list-style-type: none"> • Assess each student's book page for correct vocabulary application and logical probability classification.
<p>Teaching Strategies:</p>	<p>Scaffolding Collaboration Creative Writing/Art</p>
<p>Materials:</p>	<ul style="list-style-type: none"> - Blank templates for book pages (space for a sentence and an illustration) - Markers, crayons, pencils - A cover page for the class probability book - Binding materials (stapler, hole punch with rings, or a binder)
<p>Lesson Activities:</p>	
<p>Introduction/Hook:</p>	<p>Review Probability Vocabulary:</p> <ul style="list-style-type: none"> • Write all the terms on the board: always, sometimes, never, possible, impossible, likely, unlikely, certain. • Ask students to give one example for each term. <p>Introduce the Book Project:</p> <ul style="list-style-type: none"> • Explain: "Today, we're making our very own class probability book! Each of you will create a page with an event and classify it using one of our probability words." • Show a sample page: <ul style="list-style-type: none"> ○ "It is certain that the sun will rise tomorrow." ○ "It is impossible for a dog to drive a car."
<p>Body:</p>	<p>Independent Work:</p> <ul style="list-style-type: none"> • Give each student a book page template. • Have them complete their page by: <ul style="list-style-type: none"> ○ Writing a sentence using a probability term. <ul style="list-style-type: none"> ■ This could also be "circle the probability term" ○ Drawing an illustration to match their sentence. <p>Peer Sharing (Optional):</p> <ul style="list-style-type: none"> • Pair students to share their pages before submitting. • Encourage them to explain their choices using the probability vocabulary. <p>Assembling the Book:</p> <ul style="list-style-type: none"> • Collect all the pages. • Assemble into a book using staples, rings, or a binder.

Closure:	<p>Read the Class Book Together:</p> <ul style="list-style-type: none">● Sit in a circle and read through the finished book, celebrating each student's contribution. <p>Reflect on Learning:</p> <ul style="list-style-type: none">● Ask:<ul style="list-style-type: none">○ "What did you learn about probability?"○ "How can we use probability in real life?" <p>Celebrate Success:</p> <ul style="list-style-type: none">● Display the book in the classroom or make a copy to send home.
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Resources:

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Extensions to Unit:

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| <ul style="list-style-type: none">- Use dice and spinner games to explore random events and probability- Track and classify daily weather patterns to discuss likely vs. unlikely- Incorporate predictions into morning routine (ex. it is likely we will have recess outside) and then check on predications later- Guess the object game- hide an object in a bag and give probability-based clues (ex. it is impossible that it's a giraffe, but it is likely something we use in class) |
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Reflections and Revisions

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