THE ADVENTURES WITH FRISBEE ROB

The Long Way Down

Adventure 001: Isaac Newton

COMPLETE TEACHER GUIDE SET

GRADE 3

ELAL	Math	Science	Social Studies	PE & Wellness

Wonder in Motion

Alberta K–6 Curriculum · Adventure 001

THE ADVENTURES WITH FRISBEE ROB

The Long Way Down

Adventure 001: Isaac Newton

GRADE 3

ENGLISH LANGUAGE ARTS and LITERATURE

Teacher Guide

Clue + Connection = Inference

GRADE	SUBJECT	TIME
Grade 3	ELAL	2 × 30 minutes

CENTRAL QUESTION

How can we combine story clues with background knowledge to infer what Rob or Newton is thinking, feeling, or trying to understand?

Wonder in Motion

Lesson at a Glance

Teachers with a continuous 60-minute block may teach both sessions together.

Story connection	The narrator does not explain every thought Rob and Newton have. Their words, actions, pauses, questions, and changing attention provide clues readers can combine with what they know.
ELAL focus	Making relevant connections, identifying explicit clues, inferring character feelings or motives, supporting inferences with evidence, and monitoring whether an inference still fits.
Learning intention	We are learning to combine what a text tells us with what we already know to infer an idea the author does not state directly.
Core experience	Across two sessions, students build Character Inference Triangles, then rehearse, test, refine, and share evidence-supported inferences.
Flexible use	Session 1 is a complete core lesson and can be used independently. Session 2 continues the same Wonder Lab through rehearsal, testing, refinement, sharing, and deeper questioning.
Use after reading	Read Adventure 001: The Long Way Down before beginning. Keep the story available for evidence checks.
Story context	Isaac Newton was a real historical person. Rob's visit, their conversation, and the events they experience together are imaginative parts of the story.

Optional Teacher-Spoken Success Indicators

I can identify a clue in a character's words or actions.
I can connect the clue with relevant background knowledge.
I can state an inference and explain why it fits.
I can revise an inference when another clue does not fit.

How to Use This Guide

THE GUIDE IS A TOOL, NOT A SCRIPT

This guide is designed to support responsive teaching rather than prescribe every word or action.

Session 1 is a complete 30-minute Grade 3 Comprehension lesson and can be taught independently.

Session 2 continues the same inferential thinking through rehearsal, refinement, sharing, and questioning. It does not introduce additional curriculum.

Follow productive student thinking and conversation while protecting the central question, selected Comprehension KUSP, relevant connections, explicit clues, inferencing, evidence use, and revision, meaningful participation, and approximate lesson timing.

Adjust the amount of text, grouping, response mode, language support, and pacing to meet the needs of the learners in front of you while preserving the comprehension goal.

Different students may reach different reasonable inferences. The important question is whether the clue, background connection, and inference fit one another and remain consistent with the text.

The goal of the second session is not to do more. It is to give students enough time to think, try, improve, and communicate what they understand.

Curriculum Alignment

Session 1 provides sufficient opportunities for evidence. Session 2 gives students additional opportunities to refine and communicate their understanding.

Organizing Idea	Comprehension: Text comprehension is supported by applying varied strategies and processes and by considering both particular contexts and universal themes.
Guiding Question	How can the development of skills and strategies support comprehension of text?
Learning Outcome	Students analyze text and make connections to personal experiences to support meaning.
Assessment Focus	Gather formative evidence of selected Grade 3 Comprehension KUSP through relevant connections, inferencing, evidence use, and concise explanations.

Selected KUSP for These Lessons

KUSP element	Selected curriculum learning	What it looks or sounds like
Knowledge	Connections can be made prior to, during, or after reading and between texts and ideas related to past, present, or future world events. Predictions combine text information with background knowledge, personal experience, and anticipation of logical outcomes. Inferencing involves drawing conclusions based on known facts or evidence and can involve connections, questioning, predicting, and visualizing.	Students distinguish the story clue from the background knowledge they add and use both to infer a character's thinking, feeling, or motive.
Understanding	Comprehension involves connecting relevant background knowledge and experiences with new information in	Students explain why an inference is reasonable, recognize that readers may form different inferences, and

KUSP element	Selected curriculum learning	What it looks or sounds like
	text. Comprehension involves predicting outcomes that reflect clues from texts. Comprehension can be enhanced by inferring meanings that are not stated explicitly.	test each idea against the text.
Skills & Procedures	Make connections between a text and personal feelings, experiences, or background knowledge; within or between texts; and with world events. Make and modify predictions using text information. Make inferences by combining background knowledge with information not explicitly stated. Identify connections between a character's actions, feelings, or motives and evidence in text. Determine and logically share important information using own words.	Students build an Inference Triangle, cite a specific clue, name the relevant connection, rehearse reasoning, and revise when new evidence weakens the inference.

Curriculum source: Government of Alberta, English Language Arts and Literature (K–6) Curriculum, Comprehension, pp. 37–38. *View the Alberta program of study*

Teacher Preparation

STANDARD PATHWAY

Use these two 30-minute sessions after students have heard Adventure 001: The Long Way Down.

Session 1: Build the Inference is the core lesson. Students learn the Text Clue → What I Know → Inference process and apply it to selected character moments.

Session 2: Test the Inference continues the same Wonder Lab. Students rehearse an inference, check its evidence, consider alternatives, revise when needed, and communicate their reasoning.

If only one 30-minute period is available, teach Session 1.

If a continuous 60-minute block is available, teach both sessions with a brief transition or movement break.

Flexible Use of the Guide

Core Pathway | 30 minutes

Teach Session 1: Build the Inference.

Students experience:

Get Curious → Model → Build → Think It Through

This is a complete Grade 3 Comprehension lesson and provides opportunities to gather formative evidence of the selected KUSP through relevant connections, inferencing, evidence use, and explanation.

Full Wonder Lab | 2 × 30 minutes

Teach both sessions.

Students experience the complete Wonder Lab cycle:

Model → Build → Rehearse → Share

Session 2 deepens the same learning rather than adding additional curriculum. Students test, revise, and communicate the same inferential process with additional story moments.

It also gives students time to deepen story-based questions through:

Puddle → Pond → Lake → Ocean

Continuous Block | ~60 minutes

If scheduling allows, Sessions 1 and 2 may be taught consecutively.

Take a brief transition after the first Think It Through. Reconnect may be shortened because the Inference Triangle remains visible; protect Rehearse and Share.

Materials

A copy of Adventure 001: The Long Way Down
Whiteboard or chart paper
A large triangle labelled Text Clue, What I Know, Inference
Optional evidence cards
Optional character cards for Rob and Newton

Before Students Begin

Prepare one Inference Triangle for modelling and space for additional class triangles.

Mark the “poor hat,” “I never stopped,” changing-attention, and final Moon-question passages.

Prepare one unsupported inference so students can test what happens when evidence does not fit.

Keep the completed triangles available for Session 2.

Use professional judgment to choose the Session 2 grouping—partners, groups of three, or whole group—that best supports productive reasoning and participation.

Substitutions

Use teacher-read excerpts, picture cues, highlighted clues, thought-bubble cards, or acted character moments when independent rereading is a barrier. Reduce the number of clues while preserving the Text Clue → What I Know → Inference relationship.

Useful Vocabulary

Pre-teach essential vocabulary through an explicit vocabulary routine, providing students with opportunities to build meaning, interact with the words, and use them in context before and throughout the lesson.

Comprehension words
explicit • clue • background knowledge • connection • inference • evidence • motive • revise • support

Character and story words
curious • unfamiliar • playful • thoughtful • observe • hesitate • wonder • perspective

An explicit idea is stated directly.

An inference is an idea reached by combining clues with relevant background knowledge.

A motive is a reason a character may think or act in a certain way.

Supporting Our Diverse Learners

Use these supports proactively while preparing and teaching the two sessions.

Make it accessible	Use short excerpts, character pictures, and a visual or icon for each side of the Inference Triangle. Work with one character moment at a time.
Support language	Model The text shows..., I know..., I infer..., and This clue supports my inference because.... Allow students to rehearse an idea in a home language before sharing in English when appropriate.
Offer response choices	Accept speaking, pointing, sorting evidence, drawing thought bubbles, acting, dictation, communication devices, or assistive technology.
Support participation	Offer roles such as clue finder, connection maker, inference reporter, evidence checker, or reviser. Students may contribute one side of the triangle rather than the complete explanation.
Reduce memory load	Keep the triangle and selected passage visible. Limit the number of clues presented at one time and allow students to point to evidence instead of recalling it from memory.
Support rehearsal	Allow students to revise the same inference after checking another clue rather than continually creating new ones. Practise the clue-connection sentence before asking for a complete explanation.
Preserve the learning	Change the amount of text, number of choices, language support, grouping, or response mode—not the inferential thinking. Students still connect evidence with relevant background knowledge to reach or revise a reasonable inference.

KUSP Assessment: Evidence to Notice

FORMATIVE ASSESSMENT

Gather evidence through observations and conversations across both sessions.

Session 1 provides sufficient opportunities to gather evidence of the selected KUSP.

Session 2 gives students additional opportunities to demonstrate, refine, and communicate their understanding.

These lessons do not assess the complete learning outcome.

Evidence source	Listen or look for	Possible teacher note
Observation	Listen or look for: Student locates a relevant word, action, pause, question, or visual clue and uses it purposefully in an Inference Triangle.	"Selects Newton's smile and careful handling as evidence rather than as the inference itself."
Conversation	Listen or look for: Student distinguishes text information from background knowledge and explains how the connection supports an inference or why another clue causes revision.	"Says a person may test an unfamiliar object and links that knowledge to Newton's actions before inferring curiosity and playfulness."
Class product	Listen or look for: Student contributions to Inference Triangles show a traceable path from clue to relevant background connection to reasonable inference.	"Connects Newton's silence with earlier evidence about continued questioning and labels the conclusion as an inference rather than a stated fact."

The Two-Session Flow

Session 1 — Build the Inference | 30 minutes

Time	Section	Student experience
~5 min	**Get Curious**	Student experience Notice gaps the author leaves for readers to interpret in a selected character moment. Teacher move Distinguish what the Adventure states directly from what a reader may infer.
~5 min	**Wonder Lab: Model**	Student experience Observe one complete Inference Triangle built from a clue,

Time	Section	Student experience
		relevant background knowledge, and a reasonable inference. Teacher move Make the three-part reasoning visible and model cautious language such as may, might, and suggests.
~15 min	**Wonder Lab: Build**	Student experience Create class Inference Triangles for two important character moments. Teacher move Prompt students to identify the specific clue, name the connection they are adding, and test whether the inference explains the evidence.
~5 min	**Think It Through**	Student experience Reflect on what makes an inference reasonable and when it should be revised. Teacher move Reinforce that different inferences can be defensible when each is supported by relevant evidence.

Session 2 — Test the Inference | 30 minutes

Time	Section	Student experience
~5 min	**Reconnect**	Student experience Revisit a completed triangle and reconstruct one missing part. Teacher move Show that clue, background knowledge, and inference work together.
~8 min	**Wonder Lab: Rehearse**	Student experience Create and test an inference with another student or in a teacher-supported group. Teacher move Use flexible grouping and ask students to check whether the clue, connection, and inference genuinely fit.
~9 min	**Wonder Lab: Share**	Student experience Compare evidence-supported inferences and identify where revision may be needed. Teacher move Let evidence—not popularity—determine whether an inference is well supported.
~3 min	**Think It Through**	Student experience Explain why readers may reach different reasonable

Time	Section	Student experience
		conclusions. Teacher move Return to the central question and connect differences in interpretation with the evidence used.
~5 min	**Keep Wondering**	Student experience Generate and deepen interpretive questions about the Adventure. Teacher move Keep deeper questions grounded in character clues and meaning within the story.

Session 1 — Build the Inference

Get Curious | ~5 minutes

Revisit the moment when Newton places the frisbee on his head.

Create two spaces:

The text says...
I infer...

Record:

Newton turns the frisbee over.
He looks through the middle.
He balances it on one finger.
He puts it on his head.
He smiles.

Ask:

- Does the narrator directly say why Newton puts it on his head?
- What might he be thinking or trying to do?
- Which action gives us that idea?
- What background knowledge are we using?
- What inference would not fit these clues?

Teacher move
Use might, probably, and the evidence suggests.

Model | ~5 minutes

Complete the triangle.

Text clue
Newton carefully studies the frisbee, tries several ways of handling it, places it on his head, and smiles.

What I know
People encountering an unfamiliar object may test possibilities. Smiling and making an absurd suggestion can signal playfulness.

Inference
Newton is curious and playful. He is experimenting with what the strange object might be rather than seriously believing it is a hat.

Think aloud:

> *"My background knowledge has to connect to this clue. If I said Newton is angry, I would need evidence of anger."*

FACILITATION PROMPTS

- Which information came directly from the story?
- What did I add?
- Does the inference explain the actions?
- What other inference could fit?
- What clue might make me revise?

Teacher move
The model should show that background knowledge must be relevant to the exact clue. Avoid rewarding imaginative ideas that the Adventure does not support.

Build | ~15 minutes

Build two class Inference Triangles.

Triangle A: Rob begins paying attention

Possible clues

Rob notices the breeze, birds, leaves, and frisbee.
The narrator says he is no longer simply watching; he is paying attention.
He sees familiar things as though for the first time.

Possible connections

Careful observation can reveal details people previously overlooked.
A surprising event can change what someone notices.

Possible inferences

Rob's way of seeing the ordinary world is changing.
Rob is becoming more deliberate and curious.
The three journeys teach Rob to notice patterns and differences.

Triangle B: Newton says, "I never stopped."

Possible clues

Newton watches another leaf before answering.
He smiles.
He says he never stopped asking questions.
He later does not answer Rob's Moon question.

Possible connections

Thoughtful pauses can show reflection.
Curious people may value a strong question even when an answer is not immediate.

Possible inferences

Newton sees questioning as an ongoing way of learning.
Newton respects Rob's curiosity.
Newton may want the question to remain open.

FACILITATION PROMPTS

- Which clue is most specific?
- What does the narrator state explicitly?
- What connection are we adding?
- Is the connection relevant?
- Does the inference explain more than one clue?
- What evidence could support another inference?

Teacher move
During Build, ask students to trace every inference back through the triangle. If a clue does not support the idea, revise the inference or choose more appropriate evidence.

Think It Through | ~5 minutes

Ask:

- What is the difference between an explicit fact and an inference?
- Why do we need background knowledge?
- What makes a connection relevant?
- Can two readers form different reasonable inferences?
- What should a reader do when a later clue does not fit?

Sample Response Guidance

Possible response
"The text says Newton turns the frisbee over, balances it, tries it as a hat, and smiles. I know people sometimes test unfamiliar objects in different ways. I infer that Newton is curious and playful."
"Rob starts noticing the breeze, birds, leaves, and frisbee more carefully. I know people can notice new details when something surprises them. I infer that Rob's way of looking at ordinary things is changing."
"Newton says he never stopped asking questions. That supports the inference that he values curiosity as something ongoing."

Look for a specific story clue, a relevant connection, and a reasonable inference. Students may word the inference differently or reach different conclusions when each remains defensible.

Session 1 Closing

Tell students:
"Today we built inferences by combining story clues with what we know. We also checked whether our ideas actually fit the evidence."

> *"Next time, we'll test our own inferences and see whether another clue makes them stronger or causes us to revise."*

If Session 1 is the only lesson being taught, finish by asking:
"What is one inference you can make about Rob or Newton, and which story clue supports it?"

Session 2 — Test the Inference

Reconnect | ~5 minutes

Revisit one completed triangle.

Cover the inference.

Ask students to use the clue and background knowledge to reconstruct a reasonable inference.

Then cover the background knowledge and repeat.

Teacher move
Reinforce that all three parts work together.

Rehearse | ~8 minutes

Partners choose one moment:

Rob says, "But that's not why I asked."
Newton whispers, "Curious..." after the frisbee returns.
Neither character speaks for a long while under the tree.
Newton does not answer the final Moon question.

Partners rehearse:

I infer that ___ may be thinking / feeling / trying to ___ because the text shows ___. I connect that clue with what I know about ___.

Partner B checks:

- Is the clue actually in the story?
- Is the background connection relevant?
- Does the inference fit both?
- Is there a clue that weakens it?

Students revise before switching.

FACILITATION PROMPTS

- Which clue are you using?
- What background knowledge are you adding?
- Does the inference fit both?
- Could another inference also fit?

- Is there a clue that weakens your idea?
- What could you revise before sharing?

Teacher move
Use partners, groups of three, or whole-group rehearsal based on readiness. A strong rehearsal makes the reasoning clearer; it does not require adding more clues.

Share | ~9 minutes

Invite pairs to share one completed triangle.

After each share, ask the audience to identify:

the clue
the connection
the inference

Use a simple strength check:

Fits clearly
Possible but needs another clue
Needs revision

Ask:

- What makes the inference plausible?
- Does another story moment strengthen it?
- Could another inference also fit?
- What wording shows that we are inferring rather than stating fact?

Teacher move
The evidence determines the judgment, not popularity.

Think It Through | ~3 minutes

Ask:

- How can two readers reach different reasonable inferences?
- What makes one inference stronger than another?
- How did checking the text improve our thinking?

Teacher move
Return to the central question. Emphasize that readers can disagree responsibly when they can trace their interpretations back to evidence.

Keep Wondering | ~5 minutes

Questions can focus on one detail, connect several details, or invite deeper thinking across the Adventure.

PUDDLE

A question that can usually be explored by returning to one clear story detail.

- What does Newton do when he first sees the frisbee?
- What words show that Rob is paying closer attention?
- What does Newton say when Rob asks if he ever stopped asking questions?

POND

A question that connects a few story details.

- What clues suggest that Newton is playful as well as curious?
- What details show that Rob's attention is changing?
- What clues surround Newton's final silence?

LAKE

A question that requires thinking across several parts of the Adventure.

- How does Rob's way of thinking change from the beginning to the end?
- How do Newton's actions and words help Rob keep questioning?
- Why does the Adventure include several moments where characters pause and observe?

OCEAN

A deeper story-based question that may support more than one thoughtful, defensible answer.

- What do Rob's and Newton's actions suggest about what curiosity looks like?
- Why might Newton choose not to answer Rob's final question?
- What does the Adventure leave readers to infer rather than state directly, and why might that matter?

Invite Student Questions

Ask:
"What are you still wondering about this Adventure?"

Invite students to generate story-based questions. Choose several and ask:
"Does this feel like a Puddle, Pond, Lake, or Ocean question?"
There does not need to be one perfect classification.

FACILITATION PROMPTS

- Which story clue would you examine first?
- Does the question require one detail or several moments?
- Could another reader answer differently?
- What inference might the question invite?
- How could we deepen the question by connecting two character moments?
- What evidence would we need before treating an inference as strong?

Teacher move
A deeper question does not need to move into another subject or introduce information students have not encountered. Depth comes from noticing, connecting, interpreting, and wondering more deeply about the story itself.

Close with one student-generated question that the class would like to keep wondering about.

> *"Every adventure begins with a question. Keep wondering."*

Likely Misconceptions and Helpful Responses

If students...	Try this teacher response
If students present an explicit event as an inference:	"That is what the story says. What might it help us understand that is not stated directly?"
If students make an inference without evidence:	"Which word, action, pause, question, or image led you there?"
If students use an unrelated personal connection:	"Which part of your experience helps explain this exact clue?"
If students state an inference as certain fact:	"Could another explanation fit? Try may, might, or suggests."
If students assume different inferences cannot both be reasonable:	"Let's compare the evidence supporting each."
If students choose background knowledge that contradicts the story:	"Does what you know help explain this clue, or does the text give us stronger information?"
If students believe more clues always make an inference stronger:	"Are the clues relevant to the exact inference, or are we simply collecting details?"
If students move beyond the Adventure during Keep Wondering:	"What story clue or character moment could anchor that question?"

Use the Evidence Next

If a student repeats explicit facts:
Ask what those facts might mean about the character.

If a student offers an imaginative but unsupported idea:
Provide two clues and ask which inference fits both.

If a student makes a relevant connection but cannot form the inference:
Use the triangle one side at a time.

If a student supports an inference with one clue:
Invite a second clue only when it adds meaningful support or helps test the inference.

If a student forms a strong inference:
Ask what later clue might confirm, complicate, or weaken it.

If a student independently distinguishes stated information from inference:
Invite comparison of two reasonable interpretations.

If a student generates mostly Puddle questions:
Ask them to connect two character moments or ask why a character may think, feel, or act as they do.

If a student communicates the inference nonverbally:
Treat accurate clue selection, thought-bubble drawing, or evidence sorting as assessment evidence and invite explanation through an accessible mode.

Optional ELAL Extensions

Use these only when they naturally support classroom learning. They are not required parts of the two-session experience.

Inference Continuum

Provide several inferences already generated by the class. Place them along a continuum from strongly supported to weakly supported. Students justify placement with specific clues and identify what evidence could strengthen a weaker inference.

Character Thought Bubbles

Return to selected story moments and add an inferred thought bubble for Rob or Newton. Beside each thought, record the word, action, pause, or question that makes the inference plausible. Discuss why the bubble is an interpretation rather than explicit text.

Prediction and Inference

Use one story moment to compare predicting what a character may do next with inferring why the character is acting that way. Students identify which clues support each type of thinking and explain the difference.

Concise Character Summary

Summarize what the Adventure reveals about Rob or Newton using evidence from the beginning, middle, and ending. Students distinguish what the story states directly from what they responsibly infer.

Every adventure begins with a question.
Keep wondering.

THE ADVENTURES WITH FRISBEE ROB

The Long Way Down

Adventure 001: Isaac Newton

GRADE 3

MATHEMATICS

Teacher Guide

The Right Unit for the Journey

GRADE	SUBJECT	TIME
Grade 3	Mathematics	2 × 30 minutes

CENTRAL QUESTION

How can choosing an appropriate standard unit help us communicate different lengths accurately?

Wonder in Motion

Lesson at a Glance

Story connection	The Long Way Down draws attention to lengths at noticeably different scales: the apple moves through a short vertical path, the frisbee crosses part of the orchard, and Rob eventually turns his attention toward the distant Moon. Mathematics gives us standard units for communicating lengths according to context and desired precision.
Math focus	Metric units of length, relationships among millimetres, centimetres, and metres, selecting an appropriate unit, measuring straight and curved lengths, estimating with benchmarks, using a measuring tool from its origin, and considering precision.
Learning intention	We are learning to choose an appropriate metric unit, estimate a length, measure accurately, and justify why the unit fits the context.
Core experience	Across two 30-minute sessions, students investigate several story-inspired lengths at different scales. They estimate using familiar benchmarks, choose millimetres, centimetres, or metres, measure straight and curved models, rehearse explanations of their unit choices, and share evidence about context and precision.
Flexible use	Session 1 is a complete core lesson and can be used independently. Session 2 continues the same Wonder Lab by giving students additional time to rehearse, refine, share, and deepen their mathematical thinking. Teachers with a continuous 60-minute block may teach both sessions together.
Use after reading	Read Adventure 001: The Long Way Down before beginning. The story reading is separate from the Mathematics sessions.
Story context	Isaac Newton was a real historical person. Rob's visit, their conversation, and the events they experience together are imaginative parts of the story.
Important mathematical distinction	The classroom measurements in these lessons are inspired by objects and movement from the Adventure. They do not represent actual distances travelled within the story.

Optional Teacher-Spoken Success Indicators

- I can estimate a length using a familiar benchmark.
- I can choose millimetres, centimetres, or metres for a measurement.
- I can measure straight and curved lengths using an appropriate method.
- I can justify why my chosen unit is useful for the context.

How to Use This Guide

THE GUIDE IS A TOOL, NOT A SCRIPT

This guide is designed to support responsive teaching rather than prescribe every word or action.

Session 1 is a complete 30-minute Grade 3 Measurement lesson and can be taught independently.

Session 2 continues the same learning through rehearsal, refinement, sharing, and questioning. It does not introduce additional curriculum.

Follow productive student thinking and conversation while protecting the central question, selected Measurement KUSP, meaningful participation, and approximate lesson timing.

Adjust measurement contexts, tools, grouping, response modes, and pacing to meet the needs of the learners in front of you.

Different unit choices may be mathematically defensible. The goal is not to create a rigid rule that one object has one "correct" unit. Students should consider context, efficiency, and desired precision.

The goal of the second session is not to do more.

It is to give students enough time to estimate, choose, measure, evaluate, improve, and communicate what they understand.

Curriculum Alignment

Organizing Idea	Measurement: Attributes such as length, area, volume, and angle are quantified by measurement.
Guiding Question	In what ways can length be communicated?
Learning Outcome	Students determine length, using standard units.
Assessment Focus	Gather formative evidence of selected Grade 3 Measurement KUSP through students' relationships among metric units, justification of unit choice, measurement of straight and curved lengths, use of measuring tools, estimation with benchmarks, and communication of results. Session 1 provides sufficient opportunities to gather evidence of the selected KUSP. Session 2 offers additional opportunities for students to demonstrate and communicate their understanding. These lessons do not assess the complete learning outcome.

Selected KUSP for These Lessons

KUSP element	Selected curriculum learning	What it looks or sounds like
Knowledge	The basic unit of length in the metric	Students recognize common metric

KUSP element	Selected curriculum learning	What it looks or sounds like
	system is the metre. Metric units are named by using prefixes that indicate the relationship to the basic unit, including milli, centi, and deci. Metric units are abbreviated for convenience, including m, dm, cm, and mm. Standard measuring tools show iterations of a standard unit from an origin. A benchmark is a known length to which another length can be compared. Length can be estimated by using a personal or familiar referent.	units, identify the starting origin of a tool, and select a benchmark or unit appropriate to the scale of a measurement.
Understanding	Length is measured in standard units according to the metric system and the imperial system. Length can be expressed in various units according to context and desired precision. Length can be estimated when less accuracy is required.	Students recognize that several units can describe the same length but that some choices communicate a particular situation more efficiently or precisely.
Skills & Procedures	Relate millimetres, centimetres, and metres. Justify the choice of millimetres, centimetres, or metres to measure various lengths. Measure lengths of straight lines and curves, with millimetres, centimetres, or metres. Identify referents for a centimetre and a metre. Estimate length by comparing to a benchmark. Estimate length by visualizing the iteration of a referent for a centimetre or metre.	Students estimate a length, select a metric unit, use a suitable measuring tool from its origin, measure a straight or curved model, record the result with a unit, and justify their choice.

Curriculum source: Government of Alberta, Mathematics (K–6) Curriculum, Measurement. *View the Alberta program of study*

Teacher Preparation

STANDARD PATHWAY

Use these two 30-minute sessions after students have heard Adventure 001: The Long Way Down.

Session 1: Choose and Measure is the core lesson. Students reconnect with the Adventure, compare measurement contexts of different scales, see unit selection and curved-length measurement modelled, and rotate through story-inspired measurement stations.

Session 2: Defend the Unit continues the same Wonder Lab. Students revisit unit choice, rehearse a measurement explanation, respond to a partner challenge, share and evaluate different choices, and explore questions of different depths about measurement communication.

If only one 30-minute period is available, teach Session 1.

If a continuous 60-minute block is available, teach both sessions with a brief transition or movement break.

Flexible Use of the Guide

Core Pathway | 30 minutes

Teach Session 1: Choose and Measure.

Students experience:

Get Curious → Model → Build → Think It Through

This is a complete Grade 3 Measurement lesson and provides opportunities to gather formative evidence of the selected KUSP.

Full Wonder Lab | 2 × 30 minutes

Teach both sessions.

Students experience:

Model → Build → Rehearse → Share

Session 2 deepens the same learning rather than adding curriculum.

It also provides time to explore:

Puddle → Pond → Lake → Ocean

Continuous Block | ~60 minutes

If scheduling allows, Sessions 1 and 2 may be taught consecutively with a short transition break.

Materials

- A copy of Adventure 001
- Rulers marked in millimetres and centimetres
- Metre sticks or measuring tapes
- Flexible string or cord for transferring curved lengths

- Three or four story-inspired measurement stations
- Recording chart with:
  - What are we measuring?
  - Estimate
  - Chosen unit
  - Measurement
  - Why this unit?
- Optional centimetre benchmark objects
- Optional metre benchmark objects
- Optional quick sketches of the story objects or paths

Before Students Begin

Prepare several contexts at noticeably different scales.

Possible examples:

- a tiny detail on an apple or illustration appropriate for millimetres
- the diameter of a frisbee or model appropriate for centimetres
- a curved story-path model appropriate for centimetres
- Use professional judgment to choose the Session 2 grouping—partners, groups of three, or whole group—that best supports student participation. Early in the year, whole-group practice may help students establish the routine, build confidence, and understand what successful participation looks and sounds like.
- a classroom or hallway distance appropriate for metres

Mark the origin on selected measuring tools if useful.

Prepare or identify a familiar centimetre benchmark.

Prepare or identify a familiar metre benchmark.

Test the curved-path measurement procedure in advance.

Keep station materials and student recording charts available for Session 2.

Substitutions

Use desk lengths, book dimensions, paper strips, classroom routes, or projected drawings where story-object materials are unavailable.

Useful Vocabulary

Pre-teach essential vocabulary through an explicit vocabulary routine, providing students with opportunities to build meaning, interact with the words, and use them in context before and throughout the lesson.

Mathematics words:

metric • millimetre • centimetre • metre • length • curve • precision • benchmark • estimate • standard unit • origin • measure

Story words:

apple • frisbee • leaf • orchard • path • glide • fall • drift • Moon

The origin is the point where measurement begins on a standard measuring tool.

A benchmark is a known length used to help estimate another length.

Precision describes how finely a measurement communicates length.

An estimate is a reasonable approximation rather than an exact measurement.

Supporting Our Diverse Learners

Use these supports proactively while preparing and teaching the two sessions.

Make it accessible	Use large, clearly labelled tools and concrete benchmarks. Allow students to physically compare a benchmark before estimating.
Support language	Model:
I chose centimetres because...	A metre would be less useful because... My estimate was...
My measurement was...	This unit gives useful precision because...
Offer response choices	Accept measuring, pointing, selecting unit cards, recording on a chart, drawing, oral explanation, dictation, communication devices, or assistive technology.
Support participation	Offer roles such as estimator, unit chooser, tool handler, origin checker, recorder, curve measurer, or reporter.
Reduce memory load	Keep unit names, abbreviations, benchmark referents, and the measurement sequence visible throughout the lesson.
Support rehearsal	Allow students to defend a unit choice, receive one challenge question, and improve the explanation before sharing.
Preserve the learning	Change the complexity of the measurement, number of stations, language scaffold, or response mode—not the expectation to estimate, choose, measure, and justify.

KUSP Assessment: Evidence to Notice

FORMATIVE ASSESSMENT

Gather evidence through observations and conversations across both sessions.

Session 1 provides sufficient opportunities to gather evidence of the selected KUSP.

Session 2 gives students additional opportunities to demonstrate and communicate their understanding.

Evidence source	Listen or look for	Possible teacher note
Observation	Student begins at the origin, uses an appropriate measuring tool, and applies a workable method to straight or curved lengths.	“Uses string to capture the curved path and transfers it to a ruler.”
Conversation	Student justifies unit choice in relation to scale, efficiency, or desired precision.	“Explains that millimetres are useful for the small detail but metres are more practical for the classroom distance.”
Product	Student records an estimate, selected unit, measured length, and rationale.	“Chooses metres for the long route and explains why centimetres would create an unnecessarily large number.”

The Two-Session Flow

Session 1 — Choose and Measure | 30 minutes

Time	Section	Student experience	Teacher move
~5 min	**Get Curious**	Compare possible units for lengths at different scales.	Invite debate about what makes a unit useful rather than simply possible.
~5 min	**Wonder Lab: Model**	Observe estimating, unit selection, tool use, and measurement of a curved path.	Make benchmark use, origin, and measurement technique visible.
~15 min	**Wonder Lab: Build**	Rotate through measurement contexts to estimate, choose, measure, and justify.	Press for unit reasoning and accurate tool use.
~5 min	**Think It Through**	Explain how context and desired precision influence unit choice.	Connect student decisions to mathematical communication.

Session 2 — Defend the Unit | 30 minutes

Time	Section	Student experience	Teacher move
~5 min	**Reconnect**	Infer sensible units from unlabeled measurements and contexts.	Reactivate reasoning rather than memorized matching.
~8 min	**Wonder Lab:**	Prepare and revise a	Use partner challenge questions

Time	Section	Student experience	Teacher move
	Rehearse	measurement justification.	to improve reasoning.
~9 min	**Wonder Lab: Share**	Present and evaluate different unit choices.	Acknowledge multiple defensible choices while requiring justification.
~3 min	**Think It Through**	Reflect on what makes a measurement useful and communicable.	Return to the central question.
~5 min	**Keep Wondering**	Generate and deepen questions about scale, unit choice, and precision.	Use Puddle–Pond–Lake–Ocean.

Session 1 — Choose and Measure

Get Curious | ~5 minutes

Display or describe three measurement situations:

- a tiny feature on an apple or illustration
- the diameter of a frisbee
- a classroom-length journey

Ask:

- Could we measure all three in millimetres?
- Could we measure all three in metres?
- Would those choices be useful?
- Why might centimetres be convenient for one but not another?
- What makes a unit a good choice?
- When might we want more precision?
- When might less precision be enough?

Record mm, cm, and m.

Invite students to make initial recommendations.

TEACHER MOVE

Allow students to distinguish "possible" from "useful."

The goal is not rigid matching of objects to units.

2. Wonder Lab

Model | ~5 minutes

Show a curved Frisbee Path model.

Estimate first.

Think aloud:

> *"I know about how long 10 centimetres looks."*
>
> *"I can imagine that benchmark repeated along this curve."*

Make a reasonable estimate.

Choose centimetres.

Use flexible string to trace or capture the curve if necessary.

Transfer the string to a ruler or measuring tape.

Begin at the origin.

Measure and record the result.

Then ask:

> *"Could this also be expressed in millimetres?"*
>
> *"Yes."*
>
> *"Would that amount of precision help us more in this situation?"*

Discuss.

FACILITATION PROMPTS

- Which benchmark helped with the estimate?
- Why might centimetres fit this context?
- Where is the origin?
- How can we measure a curve?
- Could millimetres describe the same length?
- Which measurement would be more precise?
- Does more precision always make a measurement more useful?
- Could metres work?
- What would be awkward about that representation?

TEACHER MOVE

Keep the focus on choosing and communicating length.

Do not turn the activity into an extended conversion lesson.

Build | ~15 minutes

Students rotate through three or four stations.

At each station they:

1. Identify the length being measured.
2. Make a benchmark-based estimate.
3. Choose mm, cm, or m.
4. Explain the unit choice.
5. Measure.

6. Record the result.
7. Compare estimate and measurement.

Possible stations:

Apple Detail

Measure a small feature using millimetres or centimetres.

Frisbee Width

Measure the diameter of a classroom frisbee.

Curved Journey

Use flexible string and a ruler or tape.

Long Journey

Measure a classroom or hallway distance in metres.

FACILITATION PROMPTS

- What is the scale of this length?
- Which benchmark could help?
- Which unit would communicate efficiently?
- How much precision is useful?
- Which tool matches your unit?
- Where is the origin?
- How will you measure the curve?
- How close was your estimate?
- Could another unit also be reasonable?
- Which unit would you defend?
- Why?

TEACHER MOVE

Do not reward unit choice separately from reasoning.

A student who selects a less conventional but defensible unit and explains it well may demonstrate strong understanding.

Think It Through | ~5 minutes

Ask:

- What makes one unit more useful than another?
- Can the same length be expressed in several metric units?
- Does changing the unit change the actual length?
- Why can millimetres provide greater precision?
- When would that precision matter?
- Why are metres useful for longer distances?
- How did benchmarks help us estimate?
- How can we measure a curved length?
- What should we do if our measurement is very different from our estimate?

Sample Response Guidance

Possible response
"I chose metres for the classroom because centimetres would give a very large number."
"I chose millimetres for a small detail because I wanted finer precision."
"I copied the curve with string and then measured the string."
"Two units can both be correct, but one may fit the context better." Look for reasoning about scale and precision rather than memorized unit-object pairings.

Session 1 Closing

Tell students:

> *"Rob's Adventure begins because he notices something carefully. Mathematicians also need to notice carefully before measuring—especially when deciding which unit will communicate a length well."*
>
> *"Next time, you will defend your measurement choices to another mathematician."*

If Session 1 is taught alone, finish with:

> *"What is one reason a mathematician might choose centimetres instead of metres?"*

Session 2 — Defend the Unit

Reconnect | ~5 minutes

Display several measurements with the units missing.

For example:

28 ___

900 ___

2 ___

Pair them with contexts such as:

a frisbee width

a tiny feature

a classroom route

Ask:

- Which unit could make sense?
- Could another unit also work?
- What information would help us decide?
- Which unit would communicate most naturally?

- Which might give unnecessary precision?

TEACHER MOVE

Use ambiguity intentionally.

The aim is to reactivate judgment, not create a matching quiz.

2. Wonder Lab

Rehearse | ~8 minutes

Students work in partners.

Each student chooses or receives one measurement context.

They prepare:

> *"Our estimate was..."*
>
> *"We chose..."*
>
> *"We measured..."*
>
> *"This unit was useful because..."*

Partner B asks one challenge question:

- Why not use millimetres?
- Why not use centimetres?
- Why not use metres?
- How much precision did you need?
- What benchmark supported your estimate?
- How did you measure the curve?
- How do you know you began at the origin?

Partner A revises the explanation.

Switch roles.

FACILITATION PROMPTS

- Is your unit appropriate for the scale?
- What would happen to the number with a smaller unit?
- Would the extra precision help?
- What benchmark did you use?
- Can you explain why your tool matched the unit?
- What changed after your partner's question?
- Could your justification become more precise?

TEACHER MOVE

Rehearsal should improve the same mathematical explanation.

Do not replace it with a second unrelated measurement task.

Share | ~9 minutes

Invite groups representing different scales to share.

After each share, ask the audience:

- Was the estimate reasonable?
- Was the unit appropriate?
- Was the measuring tool used correctly?
- Was the amount of precision useful?
- Could another unit also work?
- Which choice communicates most efficiently?
- What evidence supports that judgment?

Include at least one context in which two unit choices are both defensible.

FACILITATION PROMPTS

- What part of their explanation was strongest?
- How did context influence the unit?
- What would change if they used a smaller unit?
- What would stay the same?
- Does greater precision automatically mean better communication?
- How did estimating support the final measurement?

> **TEACHER MOVE**
> Share is an opportunity to evaluate measurement choices, not to crown one universal "correct" unit.

Think It Through | ~3 minutes

Ask:

- What is the difference between a possible unit and a useful unit?
- When is more precision valuable?
- How can benchmarks make measurement more reliable?
- Why are standard units powerful for communication?

Return briefly to the central question:

How can choosing an appropriate standard unit help us communicate different lengths accurately?

Keep Wondering | ~5 minutes

PUDDLE

A small question about one measurement detail.

Examples:

- Which unit did we use for the Frisbee Path?
- Where is the origin on this ruler?
- Which benchmark is close to one metre?

POND

A question connecting several measurement ideas.

Examples:

- Why might centimetres work better than metres for a frisbee?
- How can we measure a curved path?
- How can an estimate help us notice a measurement error?

LAKE

A question that requires thinking across units or contexts.

Examples:

- How would the numerical measurement change if the same length were expressed in a different metric unit?
- Why can two correct measurements of the same length look very different?
- How does desired precision influence unit choice?

OCEAN

A deep mathematical question about measurement communication.

Examples:

- What makes a measurement useful rather than merely technically correct?
- How should a mathematician choose among millimetres, centimetres, and metres when several could work?
- How do standard units allow people who were not present to understand the same measured length?

The purpose is not for Grade 3 students to mechanically classify every question.

The water language gives students a way to recognize increasing depth of mathematical reasoning.

Invite Student Questions

Ask:

- “What are you still wondering about measuring objects and journeys from this Adventure?”
- Accept questions about units, scale, precision, benchmarks, curves, or measurement tools.

Choose several and discuss:

> *“Does this feel like a Puddle, Pond, Lake, or Ocean question?”*

FACILITATION PROMPTS

- Is your question about one measurement or a relationship among measurements?
- Would greater precision matter?
- Could two unit choices both be reasonable?
- What would we need to measure or compare?
- Can we make this Puddle deeper?
- What could turn this Pond into a Lake?
- What larger idea about communication could make this an Ocean?

TEACHER MOVE

Keep the questions mathematical and anchored to story-inspired contexts.

Do not move into astronomical measurement of the Moon unless that content is deliberately taught elsewhere.

Close with one student-generated mathematical question.

"Every adventure begins with a question. Keep wondering."

Likely Misconceptions and Helpful Responses

If students...	Try this teacher response
If students automatically choose the smallest unit:	"Would the extra precision help answer our question?"
If students always choose centimetres because they are most familiar:	"What scale are we measuring?"
If students begin at the edge of a ruler rather than the origin:	"Where does measurement begin on this tool?"
If students think curved lengths cannot be measured:	"What flexible material could help us transfer the curve?"
If students assume a larger numerical measurement always means a longer object:	"Are the measurements using the same unit?"
If students treat an estimate as a random guess:	"What benchmark could support your estimate?"
If students think there is always one acceptable unit:	"Could another unit describe the same length accurately? Which would communicate better?"
If students move away from the Adventure when questioning:	"What object or journey from the Adventure could bring the question back to our measurement investigation?"

Use the Evidence Next

- If a student chooses units randomly, compare two possible unit choices explicitly.
- If a student struggles to estimate, strengthen centimetre and metre benchmarks.
- If a student chooses appropriately but uses the tool incorrectly, separate unit reasoning from measuring technique.
- If a student measures curves inaccurately, model string transfer or flexible tape.
- If a student measures fluently, ask them to defend a second possible unit and compare usefulness.

- If a student demonstrates strong precision reasoning, ask when additional precision would be unnecessary.
- If a student generates mainly Puddle questions, invite them to connect scale with unit choice or precision.
- If a student demonstrates understanding through tool selection and physical measurement, record those actions as mathematical evidence.

Optional Mathematics Extensions

Unit Debate

Give students one measurement context and two plausible units.

Students defend which unit communicates the situation more effectively.

Curved Path Challenge

Provide an irregular curved path.

Students design, compare, and evaluate ways to measure it accurately.

Estimate Before You Touch

Students must make a benchmark-based estimate before receiving a measuring tool.

Measurement Communication

One group sends another group only a number and unit.

The receiving group discusses what that information communicates and what it still does not reveal about the object or path.

Every adventure begins with a question.
Keep wondering.

THE ADVENTURES WITH FRISBEE ROB

The Long Way Down

Adventure 001: Isaac Newton

GRADE 3

PHYSICAL EDUCATION & WELLNESS

Teacher Guide

Physical Education & Wellness

GRADE	SUBJECT	TIME
Grade 3	Physical Education & Wellness	2 × 30 minutes

CENTRAL QUESTION

How can changing elements of movement change the way we move with a frisbee?

Wonder in Motion

Teacher Guide

Space, Direction, Effort: Change the Movement

Lesson at a Glance

Story Connection	Rob's frisbee movement in *The Long Way Down* does not happen in an empty space. Rob occupies space. Other people and objects are around him. His body faces and moves in particular directions. His movement follows pathways. He uses effort. Grade 3 gives students language and physical experiences for noticing these **elements of movement** and then changing them deliberately. The Adventure provides a familiar movement context. Physical Education & Wellness shifts the question toward the mover: ● **Where is my body?** ● **What space am I using?** ● **Which direction am I moving?** ● **What pathway is my body following?** ● **How can I change the movement?** Students begin to discover that the basic physical task can remain recognizable even when the way the body moves changes.
Physical Education & Wellness Focus	Investigating **space, direction, and effort as elements of movement** and applying those elements during frisbee activities. Students pay particular attention to: ● personal space ● general space ● movement in relation to people and objects ● direction ● level ● body pathway The FlightPlan gives students opportunities to repeat a familiar frisbee-related task while deliberately changing one movement element. The lesson does not need to introduce every possible direction, level, or pathway at once. A manageable number of purposeful choices provides stronger curriculum evidence than random movement variety.
Learning Intention	**We are learning to notice and change elements of movement during frisbee play.**
Core Experience	Across two 30-minute sessions, students complete the companion **Grade 3**

	Adventures FlightPlan in Frisbee Playbook.

Session 1 — Change the Element

Get Curious → Wonder Lab: Model → Wonder Lab: Build → Think It Through

Students identify selected movement elements and experiment with changing them while keeping the basic physical task recognizable.

Session 2 — Design the Movement

Reconnect → Wonder Lab: Rehearse → Wonder Lab: Share → Think It Through → Keep Wondering

Students deliberately choose one movement element to modify, repeat the movement, compare versions, and communicate what changed.

- facilitation prompts
- misconceptions
- next instructional steps
- reflection
- Adventure-based inquiry

Flexible Use

Session 1 is a complete Grade 3 Movement Skill Development lesson and can be taught independently.

Session 2 deepens the same selected KUSP by giving students more time to:

- choose movement elements deliberately
- repeat a familiar physical task
- compare movement versions
- observe classmates
- explain what changed

Teachers with a continuous 60-minute block may teach both sessions together.

Use After Reading

Read Adventure 001 before beginning.

The story reading is separate from the two Physical Education & Wellness sessions.

Story Context

Isaac Newton was a real historical person.

Rob's visit, their interaction, and the events of the Adventure are imaginative.

Important Physical Education & Wellness Distinction

Students are **not** being asked to explain why the frisbee itself follows a particular flight path.

That would move the lesson toward Science.

Grade 3 PE&W asks students to investigate **their own movement**.

The pathway emphasized in this guide is primarily the **body's pathway**, not the flight path of the frisbee.

When students use a curved, linear, or zigzag pathway, ask:

> ***"What route did your body follow?"***

rather than:

> ***"Why did the frisbee curve?"***

The lesson is also not a contest to see who can use the greatest number of movement variations.

Intentional movement matters more than random variety.

A student who says:

> ***"I moved diagonally because the open space was over there."***

may demonstrate stronger Grade 3 understanding than a student who performs several impressive movements but cannot identify what changed or why.

The curricular focus is:

notice the element → change the element deliberately → observe what changes

Optional Teacher-Spoken Success Indicators

I can identify elements of movement.

I can notice personal and general space.

I can move in different directions.

I can use different levels or body pathways.

I can change a movement element deliberately.

I can explain what changed in my movement.

Frisbee Playbook FlightPlan

The FlightPlan Is the Physical Lesson

This Teacher Guide is designed to be used with the companion **Grade 3 Adventures FlightPlan in Frisbee Playbook**.

Open the FlightPlan before teaching these PE sessions.

A FlightPlan is a ready-to-use PE lesson sequence showing what students physically do, in what order, and for how long.

For this Adventure, the Grade 3 FlightPlan contains both 30-minute sessions.

The FlightPlan provides the practical information needed to run the physical lesson, including:

- activity sequence
- phase and activity timing
- educator notes
- Drill instructions

- coaching cues
- frisbee and equipment information
- grouping and activity-specific setup
- modifications where applicable

When a Drill appears in the FlightPlan, select **Details** when you need its complete instructions, coaching cues, equipment information, or additional resources.

Grade 3 FlightPlan

Direct access

https://frisbeeplaybook.com/flightplan/newton/grade-3

Or navigate:
Frisbee Playbook → Build → Adventures with Frisbee Rob → The Long Way Down → Grade 3

Keep the FlightPlan open on a phone, tablet, or computer during class, or select **Print** before teaching.

Standard and Quick Launch

Use **Standard** to view the complete two-session experience.

When only one short block is available, select **Quick Launch**.

For the Newton Adventures FlightPlans, Quick Launch contains the four activities from Session 1:

Get Curious → Model → Build → Think It Through

Quick Launch displays the activities intentionally selected as the essential short-block pathway.

It does not automatically shorten every activity.

How the Two Resources Work Together

FlightPlan = what students physically do.

Teacher Guide = what the teacher is looking for and why it matters.

The FlightPlan is required to deliver the physical portion of these lessons.

This Teacher Guide is designed to be used alongside the FlightPlan, not instead of it.

The public Adventures FlightPlan focuses primarily on lesson delivery.

Curriculum interpretation, assessment evidence, learner supports, misconceptions, reflection, and deeper questioning remain in this Teacher Guide.

How to Use This Guide

THE GUIDE IS A TOOL, NOT A SCRIPT

Before teaching, open the Grade 3 Adventures FlightPlan and review both physical sessions.

During class:

use Frisbee Playbook to run the activities
and

use this Teacher Guide to understand which movement elements students are demonstrating and how to interpret their choices

The FlightPlan should create opportunities for students to change:

- space
- direction
- pathway
- level
- another selected movement element where appropriate

This Guide intentionally does not duplicate the operational mechanics.

Session 1 provides enough opportunity for selected KUSP evidence.

Session 2 gives students time to make their movement changes more deliberately and explain them.

Do not make the lesson a vocabulary quiz.

A student who deliberately changes to a diagonal direction or curved body pathway and can explain the choice may demonstrate stronger understanding than a student who can define the word **direction** but cannot apply it.

Change one primary variable at a time when introducing the concept.

Later, students can notice how movement elements interact.

Avoid making the activity increasingly complicated simply because Grade 3 students can handle more challenge.

Complexity should serve the curriculum.

The goal of the second session is not to do more. It is to give students enough time to think, try, improve, and communicate what they understand.

Curriculum Alignment

Organizing Idea	**Movement Skill Development:** Developing physical literacy through movement and active living supports well-being across a lifespan.
Guiding Question	**How can elements of movement support movement competence?**
Learning Outcome	**Students investigate and demonstrate how elements of movement support physical activity.**
Assessment Focus	Gather formative evidence through students': ● physical movement ● purposeful movement choices ● deliberate modifications ● observations ● comparisons

	• explanations Look for students who: • identify movement elements • adjust movement in response to space • demonstrate directional movement • use more than one direction, level, or pathway • deliberately modify an element • explain what changed • connect a movement element with successful participation Session 1 provides sufficient opportunities for evidence. Session 2 adds deliberate manipulation and communication. These lessons do not assess the complete Learning Outcome.

Selected KUSP for These Lessons

KUSP element	Selected curriculum learning	What it looks or sounds like
Knowledge	**Selected Curriculum Learning** Elements of movement include space, direction, and effort. Space includes the area around or taken up by the body. Space can be: • general • personal • in relation to people • in relation to objects • in relation to the surrounding environment Directional movement is body movement in various: • directions • levels • pathways Directions include: • forward and backward • up and down • left and right • lateral and diagonal Levels include elevations that are: • low • medium • high	Students identify and physically demonstrate movement choices involving space and direction. They may: • move diagonally • use a curved body pathway • change level • move into available general space • adjust because another person affects the available space • change direction because an object or boundary affects the route Students do not need to demonstrate every possible direction, level, and pathway. Effort remains one of the curriculum's identified elements, but this core FlightPlan does not need to overextend into additional definitions or subcategories that are not necessary for the selected learning.

KUSP element	Selected curriculum learning	What it looks or sounds like
	Pathways include: ● zigzag ● over ● under ● curved ● linear ● wavy	
Understanding	**Selected Curriculum Learning** Elements of movement can be modified to make creative movements. The element of space can be explored through body movement. The element of directional movement can be manipulated by the body.	Students understand that a physical task can remain recognizable even while the way the body performs it changes. For example: ● the destination may remain the same while the body pathway changes ● the basic frisbee task may remain the same while the mover changes direction ● the movement purpose may remain the same while the body changes level Students begin recognizing the difference between changing a movement deliberately and moving randomly. They may explain: ● "I used a curved pathway." ● "I moved diagonally." ● "I changed direction because there was less space." ● "I moved lower." ● "The task stayed the same, but my movement changed."
Skills & Procedures	**Selected Curriculum Learning** Apply movement elements when engaging in physical activity. Adjust movement in response to the element of space. Demonstrate directional movement in physical activity.	Students respond to the FlightPlan environment by deliberately altering: ● body position ● pathway ● direction ● level ● or another relevant movement element They can identify or demonstrate the

KUSP element	Selected curriculum learning	What it looks or sounds like
		element they changed. Students begin making decisions such as: ● "There was someone there, so I changed direction." ● "I wanted another pathway, so I moved in a curve." ● "I used the open space on the side."

Curriculum source: Government of Alberta, Physical Education and Wellness (K–6) Curriculum, Movement Skill Development, p. 22. *View the Alberta program of study*

Teacher Preparation

STANDARD PATHWAY

Use these sessions after students have heard Adventure 001.

Before teaching, open the Grade 3 Adventures FlightPlan:
https://frisbeeplaybook.com/flightplan/newton/grade-3

Review both sessions and the relevant Drill details.

Session 1 — Change the Element

Students identify and experiment with selected movement elements.

The instructional focus is:

same basic task + one changed movement element

Session 2 — Design the Movement

Students deliberately select a movement element and compare movement versions.

The instructional focus is:

choose the element → change it deliberately → notice the effect → explain the change

If only one 30-minute period is available, teach Session 1 or use Quick Launch.

If a continuous 60-minute block is available, teach both sessions with a brief transition.

Flexible Use of the Guide

Core Pathway | 30 minutes

Open the Grade 3 Adventures FlightPlan and teach Session 1:

Get Curious → Model → Build → Think It Through

The FlightPlan provides the physical experience.

This Teacher Guide provides the curriculum, movement-element, questioning, and assessment lens.

Session 1 independently provides sufficient opportunities to gather evidence of the selected KUSP.

Full Wonder Lab | 2 × 30 minutes

Teach both sessions through the companion FlightPlan:

Model → Build → Rehearse → Share

Session 2 deepens the same movement learning through **deliberate element choice**, not through adding unrelated physical skills.

Students also deepen Adventure-based inquiry through:

Puddle → Pond → Lake → Ocean

Continuous Block | ~60 minutes

Teach both sessions consecutively with a brief transition.

Reconnect may be shortened when Session 1 remains fresh.

Maintain the progression:

notice the element → experiment → choose deliberately → compare → explain

Do not increase physical complexity simply because more time is available.

Protect the curriculum focus.

Materials

Required

Companion Grade 3 Adventures FlightPlan in Frisbee Playbook

Adventure 001

The FlightPlan identifies the frisbees, markers, setup, equipment, grouping, pathways, and physical-delivery requirements for the activities.

Optional Teacher Guide Supports

Movement-element cards:

- SPACE
- DIRECTION
- EFFORT
- PERSONAL SPACE
- GENERAL SPACE
- LOW
- MEDIUM
- HIGH

- CURVED
- LINEAR
- ZIGZAG
- These are instructional supports.

They are not additional FlightPlan activities.

Before Students Begin

Open the Grade 3 FlightPlan.

Review:

- Session 1 and Session 2
- Standard and Quick Launch
- **Change the Element** Drill details
- **Movement Detective** Drill details
- activity timing
- equipment
- pathways and physical setup
- educator notes
- coaching cues
- Use professional judgment to choose the Session 2 grouping—partners, groups of three, or whole group—that best supports student participation. Early in the year, whole-group practice may help students establish the routine, build confidence, and understand what successful participation looks and sounds like.
- activity-specific modifications

Identify which movement elements will be most visible during the physical experience.

Do not expect students to manipulate every movement element during one lesson.

Choose a manageable subset.

For example:

- personal and general space
- forward, lateral, or diagonal direction
- low, medium, or high level
- linear, curved, or zigzag body pathway

Prepare the recurring question:

What element did you change?

When discussing pathways, clarify:

> ***"We are watching the pathway of the body."***

This helps prevent the PE&W lesson from drifting toward analysis of frisbee flight.

Useful Vocabulary

Pre-teach essential vocabulary through an explicit vocabulary routine, providing students with opportunities to build meaning, interact with the words, and use them in context before and throughout the lesson.

Physical Education & Wellness Words

element • space • personal space • general space • direction • level • pathway • effort • lateral • diagonal • curved • linear • zigzag

Story Words

Rob • Newton • frisbee • Adventure • movement • question

An **element of movement** is a feature that can shape how movement is performed.

Space includes the area around or occupied by the body.

Personal space is the area immediately around a person.

General space is the larger area shared for movement.

Direction tells where body movement is going.

A **level** describes the elevation of body movement.

A **pathway** is the route the body follows through space.

Lateral describes movement toward the side.

Diagonal describes movement along a slanted direction rather than directly forward, backward, or sideways.

Supporting Our Diverse Learners

Make It Accessible	Use the FlightPlan's physical modifications as the primary source for adapting the live activity. Use clearly marked boundaries and visible movement spaces. Introduce one movement element before combining several. Use floor lines, markers, cones, or arrows when making direction or pathways visible helps students. Reduce physical intensity when needed without removing the movement-element learning. A student may demonstrate body pathways or direction without releasing a frisbee if object manipulation prevents access to the curricular focus.
Support Language	Use frames such as: • "I changed _____." • "My direction was _____." • "My pathway was _____." • "I moved at a _____ level."

	• "I adjusted because _____." • "The task stayed the same, but _____ changed." Pair terminology with physical demonstration. A student may show a curved pathway before independently using the word **curved**.
Offer Response Choices	Accept: physical demonstration, movement cards, pathway diagrams, arrows, speech, gesture, AAC, pointing, and partner-supported explanation. Students may demonstrate the element before naming it.
Support Participation	Meaningful roles may include mover, observer, pathway designer, element detective, space checker, demonstrator, and reporter. Use Frisbee Playbook as the primary source for activity grouping and physical organization.
Reduce Memory Load	Keep: • SPACE • DIRECTION • EFFORT • visible when useful. Limit the number of pathway or direction choices introduced simultaneously. Use the same recurring question: **What element did you change?** rather than layering many instructional questions at once.
Support Rehearsal	Practise one element change at a time. Allow students to repeat the same basic physical task using: • one different pathway • one different direction • one different level • or one different use of space Provide a baseline version when students need something concrete to compare against.
Preserve the Learning	Adjust: speed, distance, locomotor mode, equipment, movement intensity, and available physical space. Do not remove the requirement to apply or change a movement element deliberately. **Change the access pathway—not the learning goal.**

KUSP Assessment: Evidence to Notice

FORMATIVE ASSESSMENT

Gather evidence naturally while students complete the Grade 3 FlightPlan.

Avoid creating a separate movement-element test.

Session 1 provides sufficient selected KUSP evidence opportunities.

Session 2 adds purposeful manipulation, comparison, observation, and explanation.

Evidence source	Listen or look for	Possible teacher note
Observation	Student adjusts movement in response to available space. Student demonstrates different directions. Student uses different body pathways. Student changes level deliberately. Student maintains participation while changing an element. Student predicts or selects an element before moving.	"Changes from a linear to a curved body pathway while continuing the frisbee activity." Or: "Moves diagonally into available space rather than continuing directly toward another person." Or: ● "Changes direction after noticing the original space is occupied."
Conversation	Student names or shows the element they changed. Student explains why they adjusted. Student distinguishes body pathway from frisbee flight. Student describes what remained the same.	"Says, 'I moved diagonally because the open space was over there.'" Or: ● "Explains, 'The task stayed the same, but I changed my pathway.'"
Product / Class Product	● An optional **Movement Elements Board** can provide supporting evidence. ● Possible headings: SPACE, DIRECTION, and EFFORT. ● Students may contribute: a movement word, an arrow, a pathway drawing, a level, a movement example, and a teacher-recorded observation. ● Physical performance remains the primary evidence.	

The Two-Session Flow

Session 1 — Change the Element | 30 minutes

Time	Section	Student experience	Teacher move
~5 min	**Get Curious**	Complete **Get Curious** in the	Introduce the idea that changing

Time	Section	Student experience	Teacher move
		Grade 3 Adventures FlightPlan. Students reconnect with Rob's movement and notice that his body uses space and direction.	a movement element can change how a movement looks while the overall movement purpose remains recognizable. Use the FlightPlan for physical directions. Use this Guide to establish the movement-element lens.
~5 min	**Wonder Lab: Model**	**FlightPlan activity: Change the Element** Observe two versions of the same basic FlightPlan movement with one visible element changed.	Make the one-variable comparison visible: **same task + changed element** Help students identify what remained the same and what changed.
~15 min	**Wonder Lab: Build**	**FlightPlan activity: Change the Element** Complete the Build experience and experiment with selected space and directional changes.	Ask students to identify what they are changing and why. Keep the movement purposeful. Do not reward random movement variety simply because it looks creative.
~5 min	**Think It Through**	Reflect on how changing movement elements affected the physical experience.	Connect students' movement choices with the central question and the idea of movement competence.

Session 2 — Design the Movement | 30 minutes

Time	Section	Student experience	Teacher move
~5 min	**Reconnect**	Complete **Reconnect** in the Grade 3 FlightPlan. Students physically recall selected movement elements.	Reactivate movement concepts through movement, not definitions alone.
~8 min	**Wonder Lab: Rehearse**	**FlightPlan activity: Change the Element** Repeat the familiar physical task and deliberately choose one movement element to change.	Ask students to preserve the basic task while changing one feature intentionally. Require the change to be purposeful and explainable.
~9 min	**Wonder Lab: Share**	**FlightPlan activity: Movement Detective**	Ask Movement Detectives to identify:

Time	Section	Student experience	Teacher move
		Students demonstrate two versions of a movement while classmates observe.	• what changed • what stayed the same • which movement element was manipulated • what evidence helped them decide Share makes movement thinking visible.
~3 min	**Think It Through**	Explain how a movement element affected participation.	Return to the central question. Connect movement awareness with the ability to participate effectively in physical activity.
~5 min	**Keep Wondering**	Complete the FlightPlan Keep Wondering transition, then use the Puddle–Pond–Lake–Ocean prompts in this Teacher Guide.	Keep the inquiry focused on Rob's body movement, space, direction, pathway, and movement choices. Do not shift the inquiry into explaining frisbee aerodynamics.

Session 1 — Change the Element

Get Curious | ~5 minutes

Open the Grade 3 Adventures FlightPlan and run Get Curious.

Use the FlightPlan for the physical directions.

Return to an Adventure image or moment involving Rob and the frisbee.

Ask:

- "Does Rob take up space?"
- "Is there space around him?"
- "Does his body face a direction?"
- "Could he move another way?"

Use the physical comparison in the FlightPlan to help students notice that one destination or physical purpose can sometimes be reached using different body movements.

Introduce:

SPACE — DIRECTION — EFFORT

Say:

> ***"These are elements of movement."***

Introduce the central challenge:

How can changing elements of movement change the way we move with a frisbee?

FACILITATION PROMPTS

- Where is your body?
- What space is around you?
- Which direction are you facing?
- Which direction are you moving?
- What pathway could your body use?
- Could the movement happen at another level?
- What could change while the task stays the same?

TEACHER MOVE

Connect the story to **body movement choices**.

Do not analyse the physical flight path of the frisbee.

2. Wonder Lab

Model | ~5 minutes

Open the FlightPlan and run Change the Element — Model.

The FlightPlan contains the physical activity directions.

Demonstrate or draw attention to two versions of the same basic movement.

Change one selected element.

Examples may include:

- linear body pathway → curved body pathway
- forward movement → diagonal movement
- medium level → lower level

Ask:

- “What stayed the same?”
- “What changed?”
- “Which movement element changed?”

FACILITATION PROMPTS

- Was the available space the same?
- Which direction changed?
- What body pathway did you observe?
- Was the body higher or lower?
- How did changing the element affect the movement?
- Could another version also work?
- Was the movement change deliberate?

TEACHER MOVE

Make the comparison explicit:

same task + changed element

Students should be able to see that a movement can change without becoming an entirely different activity.

Build | ~15 minutes

Open the FlightPlan and run Change the Element — Build.

Use Frisbee Playbook for activity instructions, partner organization, equipment, markers, pathways, repetitions, timing, and coaching cues.

Use this Guide as the curriculum and observation lens.

Prompt students periodically:

- "What element are you changing?"
- "Where is the open space?"
- "What direction are you choosing?"
- "What pathway is your body following?"
- "What happens if you use another direction?"
- "If someone moves into your space, what can you adjust?"

Encourage students to try several **purposeful movement solutions** rather than move randomly.

FACILITATION PROMPTS

- Can you use a different body pathway?
- Can you change level?
- Where is your personal space?
- Where is the general space?
- What direction gives you room?
- Can you move diagonally?
- Could a curved pathway work?
- What did the element change make easier or harder?
- Did the movement purpose stay the same?

TEACHER MOVE

The curricular focus is **intentional application**.

Random movement variety is less useful than a student being able to say or demonstrate:

"I changed my direction because the space changed."

Watch for the relationship between what students notice in the environment and the movement decision they make.

Think It Through | ~5 minutes

Run Think It Through from the FlightPlan, then deepen the reflection using the prompts below as appropriate.

Ask:

- “What movement elements did we use?”
- “How did available space affect movement?”
- “What directions did you try?”
- “What body pathways did you use?”
- “What levels did you notice?”
- “How could two students complete the same task using different movement elements?”
- “What stayed the same even when the movement changed?”

Return to:

How can changing elements of movement change the way we move with a frisbee?

Sample Response Guidance

Possible response:
“I moved diagonally instead of forward.”
“I used a curved pathway.”
“I changed direction because someone was in the space.”
“I moved at a lower level.”
“The task stayed the same, but my movement changed.”
• “I used the open space on the other side.” • Look for relationships between **element and movement**, not vocabulary recall alone.

Session 1 Closing

Tell students:

- “Movement is not only about which skill we use.”
- “We can also change where, which way, and how we move.”
- “Movement elements give us choices.”
- “Today we experimented with those choices.”
- “Next time, we’ll choose an element deliberately and see what happens.”

If Session 1 is taught alone, ask:

> ***“Show me one movement element you changed and tell me what changed.”***

Session 2 — Design the Movement

Reconnect | ~5 minutes

Open the Grade 3 FlightPlan and run Reconnect.

Display or say: SPACE, DIRECTION, and EFFORT.

Use the physical demonstrations in the FlightPlan to reactivate ideas such as linear, curved, diagonal, low, and high.

Ask:

- **"Can you change one element while keeping the same movement task?"**

TEACHER MOVE

Reconnect terminology with visible physical movement immediately.

Do not begin Session 2 with a vocabulary quiz.

Students should experience the concepts through movement.

2. Wonder Lab

Rehearse | ~8 minutes

Open the FlightPlan and run Change the Element — Rehearse.

Students repeat the familiar physical task.

Before an attempt, ask:

> ***"What are you changing?"***

Afterward, ask:

- **"What happened?"**
- **"Did the task stay recognizable?"**
- **"Would you keep the change?"**

FACILITATION PROMPTS

- What element are you changing?
- What are you keeping the same?
- How did your body pathway change?
- How did available space affect the movement?
- Could another element create another version?
- What will you try again?
- Why did you choose that movement element?

TEACHER MOVE

Require the change to be **purposeful and explainable**.

Do not require one particular movement solution.

Two students may make different movement choices and both demonstrate strong curriculum understanding.

Share | ~9 minutes

Open the FlightPlan and run Movement Detective — Share.

Pairs or students demonstrate two versions of a movement.

Movement Detectives identify the changed element.

Ask:

- “What changed?”
- “What stayed the same?”
- “What evidence helped you decide?”
- “How did the element affect the movement?”

FACILITATION PROMPTS

- Was the change about space?
- Direction?
- Level?
- Pathway?
- What did the body do differently?
- Could another student make a different choice?
- Which version fit the available space better?
- How could you tell the change was deliberate?

TEACHER MOVE

Share is about making **movement thinking visible**.

Observers are not ranking the most athletic performance.

They are identifying and interpreting movement choices.

Think It Through | ~3 minutes

Run Think It Through from the FlightPlan.

Ask:

- “How can movement elements support movement competence?”
- “Which movement element was easiest to change?”
- “Which one required the most awareness?”
- “Why does noticing space matter during frisbee play?”
- “How did deliberately choosing an element feel different from simply moving randomly?”

Return to the central question.

Keep Wondering | ~5 minutes

The FlightPlan transitions students into Keep Wondering.

Use the questions below to deepen the inquiry.

PUDDLE

- Which direction is Rob facing?
- What space is around Rob?
- What body pathway can you notice?
- Is Rob moving at a low, medium, or high level in this moment?

POND

- How might Rob move differently if someone were closer to him?
- How could Rob use another body pathway before throwing?
- How might direction and available space work together?
- How could changing level change the way Rob moves?

LAKE

- How could Rob change two movement elements while completing the same frisbee task?
- Why might the best body pathway change as people move around him?
- How can noticing space make Rob's movement more effective?
- How could Rob keep the same movement purpose while changing the way his body travels?

OCEAN

- How can the same movement skill look very different when movement elements change?
- Why does movement competence require awareness of the environment as well as the body?
- How might Rob decide which movement element to change first when the space around him changes?
- Why might two people make different movement choices in the same space and both be successful?

Invite Student Questions

Ask:

> ***"What are you still wondering about space, direction, effort, or the way Rob moves in the Adventure?"***

FACILITATION PROMPTS

- Which movement element is your question about?
- Can you connect more than one element?
- What part of the Adventure made you wonder?
- What would have to change in Rob's movement?
- Could Rob solve the movement problem another way?
- Can we deepen the question by asking how the surroundings affect his movement choice?
- Could the task stay the same while the movement changes?

TEACHER MOVE

A deeper question does not need to move into another subject or introduce information students have not encountered.

Depth comes from:

noticing

connecting

interpreting

comparing

wondering more deeply about the story itself

Keep the pathway focus on **Rob's body movement**, not on explaining the aerodynamics of the frisbee.

If a student asks why the frisbee follows a curved path, acknowledge the question and redirect:

"That is a question about the frisbee. What are you wondering about the pathway Rob's body follows?"

Close with one student-generated question worth preserving.

Likely Misconceptions and Helpful Responses

- **If students think personal and general space are the same**

Try:

- **"What space is immediately around your body? What larger space are we sharing?"**
- **If students change several elements at once**

Try:

- **"Which one element will you make easiest to notice?"**
- **If students think creative movement means random movement**

Try:

- **"What did you choose to change, and why?"**
- **If students assume one pathway is always best**

Try:

- **"Would the same pathway work if the available space changed?"**
- **If students focus only on throwing technique**

Try:

- **"What movement element are we investigating?"**
- **If Keep Wondering shifts into frisbee physics**

Try:

- **"What are you wondering about Rob's body movement?"**
- **If students believe there must be one correct movement solution**

Try:

> ***"Could another movement element also help someone complete the same task?"***

If students...	Try this teacher response
If students think direction means only forward or backward	Try: ● **"What other directions can your body move?"** ● Invite a physical demonstration.
If students confuse the body pathway with frisbee flight	Try: ● **"Which route did your body follow?"**

Use the Evidence Next

If a student can name an element but not apply it

Ask them to demonstrate two movement versions.

If a student applies direction confidently

Introduce a pathway or level comparison.

If a student adjusts movement in response to space

Ask:

- **"What information in the surroundings caused you to make that decision?"**
- **If a student changes movement randomly**

Ask them to predict the change before moving:

- **"What are you going to change?"**
- **If a student can compare two versions**

Ask:

- **"Which version fit the situation better, and why?"**
- **If the spatial demand overwhelms the student**

Simplify the environment while keeping the movement-element focus.

If a student demonstrates several changes simultaneously

Return to one primary variable so the student can interpret what happened.

If a student identifies how two elements interact

Ask:

- **"How did changing one affect the other?"**
- **If a student generates mainly Puddle questions**

Ask them to connect two movement elements.

If a student generates a strong movement-design question

Preserve it for another FlightPlan challenge or future physical activity.

Optional Physical Education & Wellness Extensions

These extensions are optional.

They do not replace the core Grade 3 Adventures FlightPlan.

Pathway Creator

Students design a simple body pathway using markers.

Possible choices: linear, curved, and zigzag.

Students travel through the pathway as part of a familiar frisbee-related physical task.

Ask:

- “What pathway did your body use?”
- “What stayed the same?”
- “What changed?”
- “Why did you choose that pathway?”

Keep the focus on the **body pathway**, not frisbee flight.

Change the Level

Repeat one familiar movement at:

- low
- medium
- high
- levels where developmentally appropriate.

Ask:

- “What changed?”
- “What stayed the same?”
- “How did changing level affect the way your body moved?”

The purpose is not to establish one preferred level.

Students are investigating how the movement changes.

Find the Space

Alter the location of markers, available movement areas, or other environmental features in a familiar activity.

Students adjust their movement based on available general space.

Ask:

- “What changed around you?”
- “What did you change in response?”
- “What movement element did you use?”
- **Rob’s Movement Map**

Return to a moment from the Adventure.

Draw or physically recreate a possible **body pathway** for Rob.

Identify:

- direction
- space
- pathway
- level where visible or reasonably inferable

Ask:

- “What movement element can we notice?”
- “What could Rob change?”
- “How could his surroundings affect the movement?”

Keep the inquiry on Rob’s movement rather than explaining the flight of the frisbee.

Every adventure begins with a question.
Keep wondering.

THE ADVENTURES WITH FRISBEE ROB

The Long Way Down

Adventure 001: Isaac Newton

GRADE 3

SCIENCE

Teacher Guide

Push, Pull, Change the Motion

GRADE	SUBJECT	TIME
Grade 3	Science	2 × 30 minutes

CENTRAL QUESTION

How can changing the strength or direction of a force affect the movement of an object?

Wonder in Motion

Lesson at a Glance

Story connection	Rob's frisbee does not begin its journey by itself. Rob interacts with it and sends it into motion. In Newton's orchard, movement and questions about movement are at the centre of the Adventure. Grade 3 students now have curriculum language for investigating one part of that story scientifically: forces can affect movement.
Science focus	Force as a push or pull, contact forces, applied force, strength and direction of force, prediction, investigation, movement change, and Newton's First Law as stated in the Alberta curriculum.
Learning intention	We are learning to investigate how changing the strength or direction of an applied force can affect an object's movement.
Core experience	Across two 30-minute sessions, students investigate a sliding disc or other classroom object using pushes of different strengths and directions. They collaboratively build a Force-and-Motion Evidence Board, rehearse how to connect force conditions with observed movement, and share evidence-supported explanations.
Flexible use	Session 1 is a complete core lesson and can be used independently. Session 2 continues the same Wonder Lab by giving students additional time to investigate, rehearse, explain, share, and deepen their scientific thinking. Teachers with a continuous 60-minute block may teach both sessions together.
Use after reading	Read Adventure 001: The Long Way Down before beginning. The story reading is separate from the two Science sessions.
Story context	Isaac Newton was a real historical person. Rob's visit, their conversation, and the events they experience together are imaginative parts of the story. Newton's First Law is explicitly included in the Alberta Grade 3 Science curriculum.
Important scientific distinction	The classroom investigation uses controlled **contact forces** that students can directly apply and observe. It does not reproduce the complete forces involved in actual frisbee flight. Students should make claims from the classroom trials rather than assume that every stronger push will produce an identical numerical result.

Optional Teacher-Spoken Success Indicators

I can identify a push or pull as a force.

I can describe the strength and direction of an applied force.

I can make a prediction before a trial.

I can use evidence to explain how changing a force affected movement.

How to Use This Guide

THE GUIDE IS A TOOL, NOT A SCRIPT

This guide is designed to support responsive teaching rather than prescribe every word or action.

Session 1 is a complete 30-minute Grade 3 Energy lesson and can be taught independently.

Session 2 continues the same learning through rehearsal, refinement, sharing, and questioning. It does not introduce additional curriculum.

Follow productive student thinking and conversation while protecting the central question, selected Energy KUSP, meaningful participation, and approximate lesson timing.

Adjust the investigation object, surface, grouping, response modes, and number of trials to meet the needs of the learners in front of you.

The investigation is qualitative. Students do not need numerical force measurements.

Keep the object, surface, and starting position as consistent as reasonably possible when the goal is to compare force strength or direction.

The goal of the second session is not to do more.

It is to give students enough time to predict, test, compare, revise, and communicate their scientific understanding.

Curriculum Alignment

Organizing Idea	Energy: Understandings of the physical world are deepened by investigating matter and energy.
Guiding Question	How can forces relate to changes in movement?
Learning Outcome	Students investigate and explain how forces affect the movement of objects.
Assessment Focus	Gather formative evidence of selected Grade 3 Energy KUSP through students' descriptions of force strength and direction, predictions about movement, participation in controlled investigations, and evidence-based explanations. Session 1 provides sufficient opportunities to gather evidence of the selected KUSP. Session 2 offers additional opportunities for students to demonstrate and communicate their understanding. These lessons do not assess the complete learning outcome.

Selected KUSP for These Lessons

KUSP element	Selected curriculum learning	What it looks or sounds like
Knowledge	A force is a push or pull on an object resulting from an interaction with another object. An object that is not moving will stay still until a force makes it move, and an object that is moving will keep moving until a force stops it. (Newton's First Law) Contact forces occur between objects that touch each other. Contact forces include forces that are applied by a person or an object on another object (applied). Ways to apply a contact force to an object include stretching pulling squeezing pushing The strength of forces applied to objects can be described as strong weak large small The direction of forces applied to objects can be described as upward downward from the left from the right from both sides	Students identify the interaction producing the contact force, describe the applied force as stronger or weaker and identify its direction, and distinguish the force from the resulting movement.
Understanding	Forces can affect properties and movement of objects in different ways.	Students recognize that changing a force condition may change the movement of an object and use trial evidence to support that relationship.
Skills & Procedures	Describe where forces may exist in everyday situations. Describe the strength and direction of forces applied to objects.	Students make predictions, conduct comparable trials, record force conditions and movement observations, and explain how the evidence supports or changes their

KUSP element	Selected curriculum learning	What it looks or sounds like
	Compare the strength of forces applied to objects. Predict how an object will be affected by different strengths and directions of force. Conduct investigations to demonstrate the effects of forces on the movement of objects.	thinking.

Curriculum source: Government of Alberta, Science (K–6) Curriculum, Energy, p. 22. *View the Alberta program of study*

Teacher Preparation

STANDARD PATHWAY

Use these two 30-minute sessions after students have heard Adventure 001: The Long Way Down.

Session 1: Test the Force is the core lesson. Students reconnect with Rob's interaction with the frisbee, see a force-and-motion comparison modelled, and collaboratively investigate how changing the strength or direction of a push affects movement.

Session 2: Explain the Change continues the same Wonder Lab. Students return to the Force-and-Motion Evidence Board, rehearse explanations with a partner, refine cause-and-effect language, share claims and evidence, and explore questions of different depths about forces in the Adventure.

If only one 30-minute period is available, teach Session 1.

If a continuous 60-minute block is available, the two sessions can be taught together with a brief transition or movement break between them.

Flexible Use of the Guide

Core Pathway | 30 minutes

Teach Session 1: Test the Force.

Students experience:

Get Curious → Model → Build → Think It Through

This is a complete Grade 3 Energy lesson and provides opportunities to gather formative evidence of the selected KUSP.

Full Wonder Lab | 2 × 30 minutes

Teach both sessions.

Students experience the complete Wonder Lab cycle:

Model → Build → Rehearse → Share

Session 2 deepens the same learning rather than adding additional curriculum.

It also provides time for students to reflect on and question the Science of the Adventure through:

Puddle → Pond → Lake → Ocean

Continuous Block | ~60 minutes

If scheduling allows, Sessions 1 and 2 may be taught consecutively.

Take a brief movement or transition break after the first Think It Through before beginning Reconnect.

Materials

A copy of Adventure 001: The Long Way Down

A small flat disc, foam disc, puck, toy car, block, or another object that moves predictably

A consistent flat surface

Masking tape for a starting line

Optional direction arrows

Optional informal distance markers

Whiteboard, chalkboard, or chart paper and marker

Force-and-Motion Evidence Board with:

- WHAT DID WE CHANGE?
- WHAT DID WE PREDICT?
- WHAT DID WE OBSERVE?
- WHAT DOES THE EVIDENCE SUGGEST?

Before Students Begin

Choose one investigation object and surface that allow movement to be observed consistently.

Mark a clear starting position.

Prepare two main comparisons.

Comparison 1:

weaker push

stronger push

Keep direction, object, surface, and starting position as consistent as reasonably possible.

Comparison 2:

push from one direction

push from a different direction

Keep the object and starting position consistent.

Decide how students will describe movement. Exact distance measurement is not required, but informal markers may help students compare what they observe.

Prepare the Force-and-Motion Evidence Board.

- Use professional judgment to choose the Session 2 grouping—partners, groups of three, or whole group—that best supports student participation. Early in the year, whole-group practice may help students establish the routine, build confidence, and understand what successful participation looks and sounds like.

Keep the board and investigation materials available for Session 2.

Substitutions

Use a toy car, foam block, rolling ball in a defined lane, digital simulation already available to the teacher, or a teacher-controlled demonstration.

Students who do not manipulate the object can serve as observers, prediction recorders, direction checkers, evidence recorders, or reporters.

Useful Vocabulary

Pre-teach essential vocabulary through an explicit vocabulary routine, providing students with opportunities to build meaning, interact with the words, and use them in context before and throughout the lesson.

Science words:

force • push • pull • contact • applied force • strength • direction • movement • predict • trial • evidence • interaction

Story words:

frisbee • apple • throw • release • Newton • move • question • observe

A force is a push or pull on an object resulting from an interaction with another object.

A contact force occurs between objects that touch.

An applied force is a force applied by a person or another object.

Strength describes how strong or weak a force is.

Direction describes where a force is applied from or toward.

A prediction describes what we think may happen before a trial.

Evidence is information collected through an investigation.

Supporting Our Diverse Learners

Use these supports proactively while preparing and teaching the two sessions.

Make it accessible	Use a clearly marked starting position and large visible direction arrows.

	Keep movement distances manageable and make the comparison visually obvious where possible.
Support language	Model sentence frames such as: We applied a _____ force. The force came from _____. We predicted _____. We observed _____. Our evidence suggests _____.
Offer response choices	Accept applying a force, pointing to direction arrows, moving force cards, recording observations, drawing, explaining orally, communication devices, or assistive technology.
Support participation	Offer roles such as force applier, object resetter, starting-position checker, direction recorder, movement observer, evidence recorder, or science reporter.
Reduce memory load	Keep the investigation sequence visible: Predict → Apply Force → Observe → Record → Compare Keep the two trials being compared side by side.
Support rehearsal	Allow students to revisit the same pair of trials before explaining them. Let students rehearse the relationship between what changed and what was observed with a partner.
Preserve the learning	Change the object, physical role, number of trials, recording demand, or response mode—not the scientific goal. Students still investigate how changing force strength or direction can affect movement.

KUSP Assessment: Evidence to Notice

FORMATIVE ASSESSMENT

Gather evidence through observations and conversations across both sessions.

Session 1 provides sufficient opportunities to gather evidence of the selected KUSP.

Session 2 gives students additional opportunities to demonstrate and communicate their understanding.

Evidence source	Listen or look for	Possible teacher note
Observation	Student participates in comparable trials and deliberately changes the selected force condition while attending to movement.	“Resets the object at the same starting line before comparing a weaker and stronger push.”

Evidence source	Listen or look for	Possible teacher note
Conversation	Student identifies the applied force, describes its strength or direction, and connects it with an observed movement difference.	"Explains that the second push was stronger and the object moved farther in that trial."
Product	Contribution to the Force-and-Motion Evidence Board distinguishes prediction from observation and identifies what changed between trials.	"Records stronger push under 'What We Changed' and greater movement under 'What We Observed.'"

The Two-Session Flow

Session 1 — Test the Force | 30 minutes

Time	Section	Student experience	Teacher move
~5 min	**Get Curious**	Reconnect with Rob sending the frisbee into motion and identify a push or pull as a force.	Create a reason to investigate what happens when force strength or direction changes.
~5 min	**Wonder Lab: Model**	Observe two comparable trials using a weaker and stronger push.	Model prediction, consistent setup, and evidence collection.
~15 min	**Wonder Lab: Build**	Collaboratively investigate changes in force strength and direction.	Keep students focused on what changed, what stayed consistent, and what was observed.
~5 min	**Think It Through**	Explain patterns connecting force conditions with movement.	Connect investigation evidence to the understanding that forces can affect movement.

Session 2 — Explain the Change | 30 minutes

Time	Section	Student experience	Teacher move
~5 min	**Reconnect**	Return to the evidence board and reconstruct the design and results of selected trials.	Ask students to separate the force condition from the observed movement.
~8 min	**Wonder Lab: Rehearse**	Work with a partner to build and revise one evidence-based explanation.	Prompt students to make the cause, observation, and evidence explicit.

Time	Section	Student experience	Teacher move
~9 min	**Wonder Lab: Share**	Present claims about force strength or direction and compare evidence.	Focus audience attention on whether the claim matches the trial evidence.
~3 min	**Think It Through**	Reflect on why a fair comparison strengthens a scientific explanation.	Return to the central question.
~5 min	**Keep Wondering**	Generate and explore questions of different depths about forces and movement in the Adventure.	Use Puddle–Pond–Lake–Ocean language to deepen story-based scientific wondering.

Session 1 — Test the Force

Get Curious | ~5 minutes

Reconnect students to Rob's frisbee.

Ask:

> *"What happens before the frisbee begins its journey?"*

Students may say:

Rob throws it.

Rob pushes it.

His hand moves it.

Introduce or revisit:

> *"A force is a push or pull on an object resulting from an interaction with another object."*

Place the investigation object at the starting line.

Do not touch it.

Ask:

- "What happens if we leave it like this?"
- Connect to the curriculum statement of Newton's First Law.

Then ask:

- "What do you predict might happen if we push this object gently?"
- "What if we apply a stronger push?"
- "What if we push it from another direction?"

Introduce the challenge:

> *"Today we are going to change a force and look carefully at what happens to movement."*

TEACHER MOVE

Use the Adventure to establish the question rather than to supply the answer.

Keep the investigation focused on contact forces students can directly observe.

2. Wonder Lab

Model | ~5 minutes

Place the object at the marked starting line.

Apply a relatively weak push in a clear direction.

Observe.

Record the result.

Reset the object.

Ask:

> *"What should stay the same if I want to compare the strength of the next push?"*

Invite responses:

same object

same surface

same starting place

approximately same direction

Ask students to predict what may happen with a stronger push.

Apply the stronger push.

Observe.

Think aloud:

> *"I changed the strength of the applied force."*
>
> *"I tried to keep the other parts of our comparison the same."*
>
> *"Now I can compare the movement."*

FACILITATION PROMPTS

- What force did I apply?
- Which two objects interacted?
- Was the first push stronger or weaker?
- What changed in the second trial?
- What did we try to keep the same?
- What did you predict?
- What did we actually observe?
- Does our evidence match the prediction?

TEACHER MOVE

Avoid treating one pair of trials as proof of an exact universal numerical relationship.

The goal is to investigate observable effects and build evidence-based reasoning.

Build | ~15 minutes

Create or return to the Force-and-Motion Evidence Board.

Conduct Comparison 1: Force Strength.

Trial A:

weaker push

Trial B:

stronger push

Record:

- What changed?
- What stayed the same?
- What was predicted?
- What was observed?

If appropriate, repeat the comparison to see whether a similar pattern appears.

Next conduct Comparison 2: Force Direction.

Reset the object.

Apply a push from one direction.

Observe and record.

Reset.

Apply a push from a different direction.

Observe and record.

Ask students to compare movement direction and pathway.

If the results are inconsistent, ask students what may have contributed.

FACILITATION PROMPTS

- Which variable are we changing?
- Which parts should stay the same?
- Was the applied force stronger or weaker?
- From which direction was the force applied?
- How did the object move?
- What changed between trials?
- What stayed the same?
- Would repeating the trial help us?
- What evidence belongs on our board?

- If two trials differ unexpectedly, what should scientists do?

TEACHER MOVE

If evidence is unclear, resist correcting it into the expected answer.

Model an authentic scientific response:

"Our evidence is not clear yet. What could we repeat or control more carefully?"

Think It Through | ~5 minutes

Step back from the Force-and-Motion Evidence Board.

Ask:

- What is a force?
- What contact force did we investigate?
- What happened when we changed the strength of the push?
- What happened when we changed the direction?
- Why did we reset the object at the same starting position?
- Why did we try to keep the same surface?
- Why might repeating a trial be useful?
- How does this investigation help us think scientifically about the beginning of Rob's frisbee movement?

Return to the central question:

How can changing the strength or direction of a force affect the movement of an object?

Sample Response Guidance

Possible response:
"A force is a push or pull."
"Our stronger push made the object move farther in our trials."
"Changing where the push came from changed the direction the object moved."
• "We kept other things the same so we could compare the force." • Look for evidence-based cause-and-effect reasoning rather than one memorized rule.

Session 1 Closing

Tell students:

> *"Newton became famous for thinking deeply about motion and forces. Today we investigated one part of that science ourselves."*
>
> *"We changed an applied force and observed what happened to movement."*
>
> *"Next time, you will use the evidence from our trials to build a scientific explanation."*

If Session 1 is the only lesson being taught, finish by asking:

> *"What is one thing our evidence suggests about forces and movement?"*

Session 2 — Explain the Change

Reconnect | ~5 minutes

Return to the Force-and-Motion Evidence Board.

Choose two trials.

Ask:

- What did we deliberately change?
- What did we try to keep the same?
- What did we predict?
- What did we observe?
- What evidence would someone need if they had not been here?

Then deliberately mix one prediction with an observation.

Ask students to correct the board.

TEACHER MOVE
Reconnection should rebuild the logic of the investigation, not simply recall the final conclusion.

2. Wonder Lab

Rehearse | ~8 minutes

Students work with partners.

Each pair chooses either the strength comparison or direction comparison.

Partner A prepares:

> *"When we changed _____..."*
>
> *"We predicted _____..."*
>
> *"We observed _____..."*
>
> *"Our evidence suggests _____..."*

Partner B checks:

- Did you identify the force condition?
- Did you identify what was observed?
- Did you use evidence rather than simply saying what you expected?
- Did anything else change that should be mentioned?
- Could your conclusion be more precise?

Partner A revises.

Switch roles.

FACILITATION PROMPTS

- What was the force?
- Was the statement describing force strength, force direction, or movement?
- What exactly changed between the trials?
- What evidence supports your explanation?
- Can you point to the evidence board?
- Does your claim say more than the evidence shows?
- How could you make it clearer?

TEACHER MOVE

Encourage language such as “our evidence suggests” when the investigation is qualitative.

Strong scientific communication does not require students to pretend that a limited classroom trial establishes an absolute rule.

Share | ~9 minutes

Invite several pairs to share.

Include:

one force-strength comparison

one force-direction comparison

After each share, ask:

- What did they change?
- What did they observe?
- What evidence supported their claim?
- Did their explanation distinguish force from movement?
- Could another group have slightly different evidence?
- What might explain that?

Compare the two kinds of investigations.

Ask:

- “How are strength and direction different features of force?”
- “How can both affect movement?”

FACILITATION PROMPTS

- What is the strongest evidence in their explanation?
- Was the claim supported?
- What variable changed?
- What stayed consistent?
- Would another trial strengthen the claim?
- How is the direction investigation different from the strength investigation?

TEACHER MOVE
Share is about connecting evidence with a defensible explanation, not voting on whose object travelled farthest.

Think It Through | ~3 minutes

Ask:

- Why does controlling parts of an investigation matter?
- Why can repeated trials strengthen an explanation?
- How did our evidence deepen the idea that forces affect movement?

Return to the central question.

Keep Wondering | ~5 minutes

PUDDLE

A small question about one detail.

Examples:

- What is a force?
- Which trial used the stronger push?
- From which direction was the force applied?

POND

A question connecting a few investigation ideas.

Examples:

- How did changing force strength affect movement in our trials?
- How did changing force direction affect movement?
- Why did we reset the object before each comparison?

LAKE

A question requiring reasoning across several trials.

Examples:

- How could we design an even better investigation to compare two force strengths?
- Why might repeated trials sometimes produce slightly different results?
- How can the same object move differently when the applied force changes?

OCEAN

A deep scientific question about evidence, force, and movement.

Examples:

- What evidence would we need before making a strong claim about force and movement?
- Why is changing only one part of an investigation useful when studying cause and effect?
- How does Newton's First Law connect an object at rest with the need for a force-producing interaction?

The purpose is not for students to classify every question mechanically.

The framework helps them notice that Science questions can deepen from identifying a fact to designing investigations and evaluating evidence.

Invite Student Questions

Ask:

- "What are you still wondering about forces in Rob and Newton's Adventure?"
- Accept questions connected to pushes, pulls, movement, Rob's throw, the apple, or Newton's questions.

FACILITATION PROMPTS

- Can our current investigation answer the question?
- Would we need another trial?
- What could we change?
- What would we keep the same?
- What evidence would we collect?
- Can we make this Puddle deeper?
- What could turn this Pond into a Lake?

TEACHER MOVE

Keep the assessed learning anchored to Grade 3 contact forces and movement.

Students may naturally wonder about gravity. Preserve the question rather than turning this lesson into the Grade 4 non-contact-force outcome.

Close with one student-generated question worth preserving.

"Every adventure begins with a question. Keep wondering."

Likely Misconceptions and Helpful Responses

If students...	Try this teacher response
If students say force and movement are the same thing:	Try: "The force is the push or pull. What movement happened after the force was applied?"
If students think a force exists only when an object visibly moves:	Try: "Can a push or pull still be applied even if the movement is difficult to see?"
If students assume the strongest force always means the fastest movement:	Try: "What did our investigation actually measure or observe?"
If students change several conditions at once:	Try: "If we change the object and the push, which change

If students...	Try this teacher response
	caused the result?"
If students confuse force direction with movement pathway:	Try: "Where did the push come from? What path did the object follow afterward?"
If students treat their prediction as evidence:	Try: "What did you think would happen, and what did you actually observe?"
If students believe one trial proves the relationship:	Try: "What could repeating the test help us understand?"
If students say "Newton said so" as the evidence:	Try: "Newton's ideas are important. What evidence did our own investigation collect?"
If students move immediately to gravity:	Try: "That is an important force question. Which contact force are we investigating today?"

Use the Evidence Next

If a student describes movement but cannot identify the force:

Ask which two objects interacted before the movement changed.

If a student identifies the applied force but cannot describe strength:

Provide stronger/weaker choices and compare two trials.

If a student confuses prediction and observation:

Colour-code or separate the two columns and repeat one trial.

If a student recognizes a force-strength pattern:

Invite them to investigate force direction.

If a student recognizes a direction pattern:

Ask what must remain consistent for the comparison to be useful.

If a student encounters inconsistent evidence:

Invite a repeated trial and a discussion of what could be controlled more carefully.

If a student builds a strong evidence-based explanation:

Ask what additional evidence would strengthen the claim further.

If a student generates primarily Puddle questions:

Model how one detail can become an investigation question.

If a student demonstrates understanding through arrows or diagrams:

Record the diagram as substantive evidence of scientific reasoning.

Optional Science Extensions

Use these only when they naturally support classroom learning. They are not required parts of the two-session experience.

REPEAT THE TRIAL

Choose one force-strength comparison.

Conduct several trials using the same setup.

Ask:

- Did we observe the same general pattern every time?
- What changed slightly?
- Why can repeated trials strengthen evidence?

FORCE DIRECTION MAP

Use arrows to represent pushes from different directions.

Students predict the resulting movement before testing and then revise the diagram from evidence.

PREDICTION FIRST

Present a new force condition.

Students must make and record a prediction before the trial.

After testing, compare prediction with evidence.

EVERYDAY FORCE DETECTIVE

Return to everyday interactions connected to the Adventure or classroom.

Students identify:

- What objects interact?
- Where is the push or pull?
- What movement could the force affect?

Every adventure begins with a question.
Keep wondering.

THE ADVENTURES WITH FRISBEE ROB

The Long Way Down

Adventure 001: Isaac Newton

GRADE 3

SOCIAL STUDIES

Teacher Guide

Many Stories, One Alberta

GRADE	SUBJECT	TIME
Grade 3	Social Studies	2 × 30 minutes

CENTRAL QUESTION

How do diverse communities, languages, cultures, histories, and experiences contribute to Alberta's identity?

Wonder in Motion

Lesson at a Glance

Story connection	*The Long Way Down* centres on one memorable person from the past. The Adventure connection here is intentionally light: one person can open a door to curiosity, but one story cannot explain an entire place. Grade 3 Social Studies then widens the lens to Alberta, where the curriculum provides the content students investigate. Students explore how diverse communities contribute to Alberta's identity.
Social Studies focus	Alberta as made up of diverse, pluralistic communities; distinct First Nations communities; Métis history and culture; Francophone communities; settlers; immigration; languages and symbols; and the idea that Alberta identity is shaped by many contributions.
Learning intention	We are learning to explain how diverse communities contribute to Alberta's western identity.
Core experience	Across two 30-minute sessions, students collaboratively build an Alberta Identity Mosaic from curriculum-supported examples. They identify distinct community contributions, connect selected languages, symbols, histories, and migration experiences with the appropriate communities, rehearse explanations, and share how Alberta's identity can be collective without requiring everyone to be the same.
Flexible use	Session 1 is a complete core lesson and can be used independently. Session 2 continues the same Wonder Lab by giving students additional time to connect, rehearse, explain, share, and deepen their Social Studies thinking. Teachers with a continuous 60-minute block may teach both sessions together.
Use after reading	Read Adventure 001: *The Long Way Down* before beginning. The story reading is separate from the two Social Studies sessions.
Story context	Isaac Newton was a real historical person. Rob's visit and the events of the Adventure are imaginative.
Important Social Studies distinction	A famous person can help make history memorable, but no single person or community can represent the complete identity of a place. The Alberta curriculum describes Alberta as made up of **diverse, pluralistic communities**. The Alberta Identity Mosaic is a model for thinking about contributions. It should not imply that every community can be reduced to one symbol, language, or historical event.

Optional Teacher-Spoken Success Indicators

I can identify communities that contribute to Alberta's identity.

I can connect a language, symbol, culture, history, or migration example with the correct community.

I can explain why Alberta's identity includes many different contributions.

I can explain why one story or community cannot represent all Albertans.

How to Use This Guide

THE GUIDE IS A TOOL, NOT A SCRIPT

This guide is designed to support responsive teaching rather than prescribe every word or action.

Session 1 is a complete 30-minute Grade 3 Time and Place lesson and can be taught independently.

Session 2 continues the same learning through rehearsal, refinement, sharing, and questioning. It does not introduce additional curriculum.

Follow productive student thinking while protecting the central question, selected Time and Place KUSP, meaningful participation, and approximate lesson timing.

The core pathway already provides the curriculum-supported examples needed for the lesson.

Additional local examples are optional and should be added only when accurate, appropriate classroom resources are already available.

Do not ask one student to represent an entire First Nation, Métis community, Francophone community, religious community, immigrant community, or cultural group.

Personal connections may be shared voluntarily, but teacher-provided curriculum evidence must remain sufficient for all students to participate.

The goal of the second session is not to do more.

It is to give students enough time to connect evidence, compare contributions, improve their explanations, and communicate a more complete understanding of Alberta identity.

Curriculum Alignment

Organizing Idea	Time and Place: Exploring the dynamic relationships between people, place, and time supports understanding of perspectives and events to make meaning of the world.
Guiding Question	Who are Albertans?
Learning Outcome	Students relate diversity to Alberta's western identity.
Assessment Focus	Gather formative evidence of selected Grade 3 Time and Place KUSP through

	students' accurate connections among diverse communities, languages, symbols, cultures, histories, settlement, immigration, and Alberta identity. Session 1 provides sufficient opportunities to gather evidence of the selected KUSP. Session 2 offers additional opportunities for students to demonstrate and communicate their understanding. These lessons do not assess the complete learning outcome.

Selected KUSP for These Lessons

KUSP element	Selected curriculum learning	What it looks or sounds like
Knowledge	Alberta is made up of diverse, pluralistic communities. Forty-eight distinct First Nations communities are represented in Alberta. Distinct First Nations communities have distinct languages, cultures, and histories. First Nations languages spoken in Alberta include Cree (Nehiyaw), Blackfoot (Niitsitapi), and Dené. Métis people in the Prairies, including Alberta, speak diverse languages, including Michif. Métis symbols, such as the Métis sash and the Red River cart, represent distinct culture that blends First Nations and European traditions. The Francophone population in Alberta originated from the immigration of Francophone Roman Catholic missionaries to the land now known as Alberta. French was the first European language spoken in Alberta.	Students accurately connect selected language, history, culture, or symbol examples with the communities named in the curriculum. Students use words such as **distinct** and **diverse** rather than treating communities as internally identical.
Understanding	First Nations are diverse and contribute to the identity of Alberta. Métis have a distinct culture and history that contributes to the diversity and identity of Alberta. Francophones are diverse and contribute to the identity of Alberta. Settlers contribute to the diversity and identity of Alberta.	Students explain that Alberta identity is shaped by many communities and histories. They recognize that belonging to the same province does not require people to have identical languages, cultures, or experiences.

KUSP element	Selected curriculum learning	What it looks or sounds like
	Immigrants from all over the world contribute to the diversity and identity of Alberta.	
Skills & Procedures	Explore stories about symbols of diverse communities in Alberta. Explore the history of distinct Métis culture. Explain the evolution of Francophone communities in Alberta. Explore stories about early settlers in the land now known as Alberta. Reflect on personal connections to language and culture in relation to Alberta's western identity. Describe the role of immigration in Alberta.	Students use curriculum-supported information to add an accurate piece to the Alberta Identity Mosaic and explain how that contribution connects with the province's diversity and identity.

Curriculum source: Government of Alberta, Social Studies (K–6) Curriculum, Time and Place. *View the Alberta program of study*

Teacher Preparation

STANDARD PATHWAY

Use these two 30-minute sessions after students have heard Adventure 001: *The Long Way Down*.

Session 1: **Build the Alberta Mosaic** is the core lesson. Students consider the limits of explaining a place through one famous person, see one identity contribution modelled, and collaboratively build an Alberta Identity Mosaic using selected curriculum information.

Session 2: **Explain the Identity** continues the same Wonder Lab. Students return to the mosaic, reconstruct selected contributions, rehearse explanations with partners, refine broad statements, share several pieces of evidence, and explore questions of different depths about identity and diversity.

If only one 30-minute period is available, teach Session 1.

If a continuous 60-minute block is available, the two sessions can be taught together with a brief transition or movement break between them.

Flexible Use of the Guide

Core Pathway | 30 minutes

Teach Session 1: **Build the Alberta Mosaic**.

Students experience:

Get Curious → Model → Build → Think It Through

This is a complete Grade 3 Time and Place lesson and provides opportunities to gather formative evidence of the selected KUSP.

Full Wonder Lab | 2 × 30 minutes

Teach both sessions.

Students experience:

Model → Build → Rehearse → Share

Session 2 deepens the same learning rather than adding additional curriculum.

It also provides time for:

Puddle → Pond → Lake → Ocean

Continuous Block | ~60 minutes

Teach both sessions consecutively with a brief transition after the first Think It Through.

Materials

A copy of Adventure 001: *The Long Way Down*

An outline or silhouette of Alberta

Whiteboard, chalkboard, or chart paper and marker

An Alberta Identity Mosaic Board with:

COMMUNITY

LANGUAGE / CULTURE / HISTORY / SYMBOL / EXPERIENCE

HOW DOES THIS CONTRIBUTE TO ALBERTA'S IDENTITY?

Selected curriculum cards, such as:

First Nations

Métis

Francophones

settlers

immigrants

Cree / Nehiyaw

Blackfoot / Niitsitapi

Dené

Michif

Métis sash

Red River cart

French language

Optional local-community information already available to the teacher

Blank mosaic pieces or cards

Before Students Begin

The core lesson is fully supported by the curriculum examples in this guide. No additional research is required before teaching.

First Nations: Forty-eight distinct First Nations communities are represented in Alberta; curriculum-named languages include Cree (Nehiyaw), Blackfoot (Niitsitapi), and Dené.

Métis: Michif is spoken by Métis people in the Prairies, including Alberta; curriculum-named symbols include the Métis sash and Red River cart, alongside distinct Métis culture and history.

Francophones, settlers, and immigrants: French was the first European language spoken in Alberta; Francophone communities, settlers, and immigrants from around the world contribute to Alberta's diversity and identity. Use several examples and avoid treating any one symbol or fact as a complete description of a community.

Prepare the incomplete statement:

ALBERTA'S IDENTITY COMES FROM _____.

Students will revisit and revise it after building the mosaic.

- Use professional judgment to choose the Session 2 grouping—partners, groups of three, or whole group—that best supports student participation. Early in the year, whole-group practice may help students establish the routine, build confidence, and understand what successful participation looks and sounds like.

Keep the Alberta Identity Mosaic available for Session 2.

Substitutions

Use digital cards, projected curriculum statements, a concept map, approved photographs, or student-created text pieces.

Students may make personal language or cultural connections when comfortable, but personal disclosure is not required.

Useful Vocabulary

Pre-teach essential vocabulary through an explicit vocabulary routine, providing students with opportunities to build meaning, interact with the words, and use them in context before and throughout the lesson.

Social Studies words:

identity • diverse • pluralistic • community • culture • history • language • symbol • First Nations • Métis • Francophone • settler • immigrant • contribute

Story words:

Isaac Newton • Rob • Adventure • person • story • history • place

Identity describes characteristics and connections that help answer who people or communities are.

Diverse means including a variety of people, experiences, cultures, languages, or perspectives.

Pluralistic describes a society in which diverse groups coexist.

To **contribute** is to add something to a larger whole.

A **symbol** can represent culture, history, ideas, or identity.

An **immigrant** is a person who moves from one country to another to live.

Supporting Our Diverse Learners

Make it accessible	Use one large class mosaic with moveable cards before asking students to create independent representations. Keep community headings and selected evidence visible.
Support language	Model sentence frames such as: _____ contributes to Alberta's identity through _____. One example connected with _____ is _____. This does not mean every _____ is the same because _____. Alberta is diverse because _____. This piece belongs in the mosaic because _____.
Offer response choices	Accept speaking, card placement, mapping, drawing, matching, writing, diagramming, communication devices, or assistive technology. Students may use curriculum examples rather than personal cultural information.
Support participation	Offer roles such as community-card reader, evidence matcher, mosaic placer, language checker, identity connector, recorder, questioner, or Social Studies reporter.
Reduce memory load	Keep categories and community names visible. Introduce several pieces at a time rather than displaying every possible detail simultaneously.
Support rehearsal	Allow students to explain one contribution before asking them to compare several communities. Provide the same "contributes to Alberta's identity through…" frame repeatedly.
Preserve the learning	Change the amount of information, vocabulary load, number of examples, or response mode—not the diversity-and-identity relationship.

	Students still use accurate evidence to explain a contribution to Alberta identity.

KUSP Assessment: Evidence to Notice

FORMATIVE ASSESSMENT

Gather evidence through observations and conversations across both sessions.

Session 1 provides sufficient opportunities to gather evidence of the selected KUSP.

Session 2 gives students additional opportunities to demonstrate and communicate their understanding.

Evidence source	Listen or look for	Possible teacher note
Observation	Student accurately associates selected curriculum information with an appropriate community.	"Connects Michif with Métis people in the Prairies, including Alberta."
Conversation	Student explains a contribution rather than simply naming a community.	"Explains that distinct First Nations languages, cultures, and histories contribute to Alberta's identity."
Product	Student mosaic contribution accurately connects a community and one curriculum-supported contribution with Alberta identity.	"Adds French language and Francophone history to the mosaic and explains that Francophones contribute to Alberta's diversity."

The Two-Session Flow

Session 1 — Build the Alberta Mosaic | 30 minutes

Time	Section	Student experience	Teacher move
~5 min	**Get Curious**	Reconnect with Newton as one person from history and consider whether one person can explain an entire place.	Use the Adventure to establish the need to widen the historical lens.
~5 min	**Wonder Lab: Model**	See one community contribution represented as one piece of a larger identity mosaic.	Model an accurate contribution without treating the example as a complete description of the community.
~15 min	**Wonder Lab: Build**	Collaboratively add multiple curriculum-supported pieces to the Alberta Identity Mosaic.	Protect distinctions while connecting every piece with the larger idea of Alberta identity.

Time	Section	Student experience	Teacher move
~5 min	**Think It Through**	Explain why Alberta identity requires many stories and contributions.	Connect the mosaic to diverse, pluralistic communities.

Session 2 — Explain the Identity | 30 minutes

Time	Section	Student experience	Teacher move
~5 min	**Reconnect**	Return to the mosaic and reconstruct selected missing labels or connections.	Ask students to explain why a piece belongs rather than relying on memorized placement.
~8 min	**Wonder Lab: Rehearse**	Choose one mosaic contribution and practise explaining its relationship to Alberta identity.	Prompt students to use specific evidence and avoid overgeneralization.
~9 min	**Wonder Lab: Share**	Share several different contributions and compare how each adds to Alberta's identity.	Focus audience attention on distinct contributions and the larger pluralistic whole.
~3 min	**Think It Through**	Reflect on how diversity contributes to Alberta identity.	Return to the central question.
~5 min	**Keep Wondering**	Generate and deepen questions about who gets included in the stories people tell about Alberta.	Use Puddle–Pond–Lake–Ocean language to deepen story-anchored Social Studies wondering.

Session 1 — Build the Alberta Mosaic

Get Curious | ~5 minutes

Show an image of Newton from the Adventure.

Ask:

- "Isaac Newton is one famous person from history."
- "If we knew everything about Newton, would we know everything about every person who lived in England?"
- "No."
- "If I told you one famous person from Alberta, would that one person tell us who all Albertans are?"
- Invite responses.

Display:

WHO ARE ALBERTANS?

Then introduce the curriculum idea:

> *"Alberta is made up of diverse, pluralistic communities."*

Show the blank Alberta mosaic.

Ask:

- "If Alberta's identity were a mosaic made from many pieces, what kinds of pieces might we need?"
- Accept early ideas.

TEACHER MOVE

Use Newton only to demonstrate the limits of the "one famous person equals a whole place" approach.

Move quickly into Alberta evidence.

2. Wonder Lab

Model | ~5 minutes

Choose one curriculum-supported contribution.

For example:

MÉTIS

Add:

Michif

Métis sash

Red River cart

Explain that the curriculum identifies Métis people as having a distinct culture and history that contributes to Alberta's diversity and identity.

Place the piece in the mosaic.

Ask:

- "Does this one piece explain all Métis history and culture?"
- "No."
- "Does it contribute useful information?"
- "Yes."
- "Does Métis culture alone describe all of Alberta?"
- "No."

Think aloud:

> *"This is one meaningful piece of a much larger mosaic."*

FACILITATION PROMPTS

- Which community does this information describe?
- Is the example a language, symbol, history, or culture connection?

- What does it contribute?
- Does one example describe every member of a community?
- Does one community describe all Albertans?
- Why is a mosaic useful for thinking about identity?

TEACHER MOVE
The model should communicate both **contribution** and **incompleteness**.

Build | ~15 minutes

Add selected First Nations pieces.

Display:

Forty-eight distinct First Nations communities are represented in Alberta.

Add examples of languages named in the curriculum:

Cree (Nehiyaw)

Blackfoot (Niitsitapi)

Dené

Ask:

> *"What does the word distinct tell us?"*

Add the understanding:

First Nations are diverse and contribute to Alberta's identity.

Next add Métis pieces.

Possible curriculum-supported pieces:

Michif

Métis sash

Red River cart

distinct history and culture

Next add Francophone pieces.

French language

historical Francophone communities

the curriculum statement that French was the first European language spoken in Alberta

Then add broader pieces:

settlers

immigrants from all over the world

Explain that the curriculum identifies both as contributors to Alberta's diversity and identity.

Return to the incomplete statement:

ALBERTA'S IDENTITY COMES FROM _____.

Invite students to revise.

Possible revision:

> *"Alberta's identity comes from many diverse communities, histories, languages, and cultures."*

FACILITATION PROMPTS

- Which community does this piece connect with?
- What evidence supports that placement?
- Is it language, culture, history, symbol, migration, or another contribution?
- How are these communities distinct?
- What do they share as contributors to Alberta?
- Could one symbol explain a whole culture?
- Could one community explain the province?
- What does the word pluralistic add to our thinking?
- What would happen to our mosaic if we told only one story?

TEACHER MOVE

Avoid making the mosaic a "one icon per culture" activity.

Students should repeatedly hear that the selected pieces are examples within broader, diverse communities.

Think It Through | ~5 minutes

Step back from the completed mosaic.

Ask:

- What does diverse mean?
- What does pluralistic mean?
- Why is a mosaic a useful way to think about Alberta identity?
- How can language contribute to identity?
- How can history or symbols contribute?
- What does immigration contribute to Alberta?
- Why should we not use one person or one community to explain all Albertans?
- How does our Social Studies learning widen the lens beyond the way one Adventure focuses on Newton?

Return to the central question:

How do diverse communities, languages, cultures, histories, and experiences contribute to Alberta's identity?

Sample Response Guidance

Possible response:
“Alberta has many different communities.”
“First Nations communities have distinct languages and histories.”
“Métis culture and history contribute to Alberta.”
“Francophones, settlers, and immigrants also contribute.”
• “One group is not the whole Alberta identity.” • Look for the relationship between diversity and identity, not simply the number of examples remembered.

Session 1 Closing

Tell students:

> *“Newton is one person in one Adventure.”*
>
> *“Alberta is much bigger than any one story.”*
>
> *“Today we built an identity mosaic from many pieces.”*
>
> *“Each piece matters, but none of the pieces tells the whole story by itself.”*
>
> *“Next time, you will choose one piece and explain how it contributes to the larger identity.”*

Session 2 — Explain the Identity

Reconnect | ~5 minutes

Remove several labels from the mosaic.

For example:

Michif

French language

First Nations

immigrants

Ask students to reconstruct the placements.

After each placement, ask:

> *“Why does this belong here?”*

Then ask:

> *“What makes our board an **identity mosaic** instead of a collection of random facts?”*

Invite responses about contribution, Alberta, diversity, and communities.

TEACHER MOVE
Require a relationship, not only a correct card location.

2. Wonder Lab

Rehearse | ~8 minutes

Students work with partners.

Each pair selects one mosaic piece.

Partner A explains:

> *"_____ contributes to Alberta's identity."*
> *"One example is _____."*
> *"This tells us _____."*
> *"This example does not mean _____."*

Partner B checks:

- Is the community correct?
- Is the evidence supported by the curriculum?
- Did the explanation make the connection with Alberta identity?
- Did the speaker avoid suggesting that one example describes everyone?

Partner A revises.

Switch roles.

FACILITATION PROMPTS

- Which community are you discussing?
- What is your specific evidence?
- How does it contribute to Alberta?
- What would be too broad?
- Could another example from the same community be different?
- What could you improve before sharing?

TEACHER MOVE
An accurate explanation of one contribution is better evidence than a long list of community names.

Share | ~9 minutes

Invite several pairs representing different pieces of the mosaic.

After each share, ask:

- What did this contribution add?
- How is it distinct?
- How does it fit within the larger Alberta identity?

- What did the speaker avoid assuming?

After several examples, ask:

> *"What would be missing if Alberta were described through only one of these stories?"*
>
> *"How does recognizing diversity change our answer to 'Who are Albertans?'"*

FACILITATION PROMPTS

- What was the evidence?
- How did the speaker connect it with identity?
- How is this contribution similar to another?
- How is it distinct?
- Can shared provincial identity exist alongside distinct cultures and histories?
- What other information would make our mosaic more complete?

TEACHER MOVE

Do not imply that the class can finish the complete story of Alberta in one board.

A useful mosaic should make students aware that there is always more to learn.

Think It Through | ~3 minutes

Ask:

- How does diversity shape Alberta's identity?
- Why do languages, stories, histories, and symbols matter?
- Why is it useful to recognize diversity within communities as well as between communities?

Return to the central question.

Keep Wondering | ~5 minutes

PUDDLE

Examples:

- What is one First Nations language named in our curriculum?
- What language is named in our Métis example?
- What is one Métis symbol?
- What does pluralistic mean?

POND

Examples:

- How can language contribute to identity?
- How can a symbol carry history?
- Why can one person not represent an entire place?
- How can immigration change Alberta's diversity?

LAKE

Examples:

- How can Alberta have one provincial identity while containing many distinct communities?

- Why is it important to recognize diversity within communities, not only between them?
- How do stories about the past influence the way Albertans understand the province today?
- What might our mosaic be missing?

OCEAN

Examples:

- Who gets included when people tell the story of a place?
- How might Alberta's identity continue to change as communities change?
- What can happen when one story is treated as though it represents everyone?
- How can people build a shared identity while preserving distinct languages, cultures, and histories?

The deeper questions remain grounded in the Adventure's basic lesson: one person can open a door, but understanding a place requires more than one story.

Invite Student Questions

Ask:

- "What are you still wondering about the people and stories that contribute to Alberta?"
- Choose several questions.

Ask:

> *"Does this feel like a Puddle, Pond, Lake, or Ocean question?"*

FACILITATION PROMPTS

- Can one fact answer the question?
- Would we need information from more than one community?
- Whose story or perspective would help us?
- Is your question about one piece or the whole mosaic?
- What part of Newton's Adventure made you think about the limits of one story?
- Can we deepen the question by asking "how" or "whose"?

TEACHER MOVE

Keep questions anchored to identity, diversity, Alberta, and the idea of widening beyond one story.

Close with one student-generated question worth preserving.

"Every adventure begins with a question. Keep wondering."

Likely Misconceptions and Helpful Responses

- **If students treat all First Nations as one culture**

Try:

- "What word does our curriculum use before First Nations communities? **Distinct.**"
- **If students treat Métis identity as simply First Nations plus European**

Try:

- "What does the curriculum say about distinct Métis culture and history?"

- **If students treat a symbol as a complete description of culture**

Try:

- "What does this symbol help us learn, and what else would we need to know?"
- **If students assume French language is a recent part of Alberta**

Try:

- "What historical information does our Grade 3 curriculum provide?"
- **If students think immigration happened only in the distant past**

Try:

- "Does immigration contribute to Alberta only once, or can it continue?"
- **If students use one classmate as proof about a whole community**

Try:

- "Can one person represent everyone? What curriculum information can we use instead?"
- **If students think all diverse groups must be completely different**

Try:

- "Can communities have differences and shared experiences at the same time?"
- **If students think Ocean means the largest community**

Try:

> *"Ocean means deeper reasoning, not larger population."*

If students...	Try this teacher response
If students say one group represents the "real Albertans"	Try: ● "What does the curriculum say about Alberta being made up of diverse, pluralistic communities?"

Use the Evidence Next

If a student can name communities but not contributions

Ask:

- "What does this community contribute to the mosaic?"
- **If a student accurately matches a language and community**

Ask:

- "How can language contribute to identity?"
- **If a student overgeneralizes**

Return to words such as:

distinct

diverse

some

this example

If a student explains one contribution accurately

Invite comparison with another community.

If a student understands the mosaic idea

Ask:

- "What might be lost if one type of story were removed?"
- **If a student makes a voluntary personal connection**
- Connect the experience to the broader curriculum without treating it as representative of everyone.
- **If a student asks for local First Nations or Métis details not in the selected material**
- Preserve the question and use appropriate local sources in future inquiry.
- **If a student generates mostly Puddle questions**
- Invite them to ask whose story, how identity is shaped, or what may be missing.
- **If a student demonstrates understanding through a visual contribution**
- Treat accurate placement and explanation as assessment evidence.

Optional Social Studies Extensions

SYMBOL STORY

Choose one approved symbol connected with a community in Alberta.

Use an appropriate source to investigate what the symbol represents.

Students add the new information to the mosaic without claiming the symbol explains the entire community.

LANGUAGE CONNECTIONS

Use teacher-provided information to explore languages named in the curriculum.

Students discuss how language can connect identity, history, and community.

IDENTITY MOSAIC REVISION

Return to the class mosaic.

Ask:

- "What is missing?"
- Students identify areas where more evidence or perspectives would make the representation more complete.
- **ONE PERSON, BIGGER PLACE**
- Return to Newton.

Ask:

- "What can biographies teach us?"
- "What can they not teach us by themselves?"

Students compare the usefulness of studying one person with studying diverse communities when trying to understand a place.

Every adventure begins with a question.
Keep wondering.