



Mystery Science Alignment with British Columbia's Science Curriculum

Mystery Science - British Columbia's Science Curriculum

Mystery Science aligns to British Columbia's Science Curriculum. Each lesson (exploration & activity) is designed to take one hour per week. Mini-lessons are 5-minute videos that answer K-5 student questions and can be used as a jumping off point to engage learners for a full lesson planned by the teacher.

Lesson Extensions. Extensions are available for each lesson and offer an opportunity for students to continue their science content learning. They include assessments and a curated collection of additional activity suggestions, online resources, project ideas, and readings to help extend the learning.

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Kindergarten

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Big Idea	BC Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit	Mystery Science Grade	Mystery Science Lessons
Plants and animals have observable features.	basic needs of plants and animals	Plant & Animal Secrets Mini-lessons	Grade K	Lesson 1: Why do woodpeckers peck wood? Lesson 2, Read-Along: Where do animals live? Lesson 3: How can you find animals in the woods? Lesson 4, Read-Along: How do animals make their homes in the forest? Lesson 5: How do plants and trees grow? Lesson 6, Read-Along: Why would you want an old log in your backyard? Mini-lesson: Which animal has the biggest heart?** Mini-lesson: How do bees make honey? Mini-lesson: Do fish sleep?
	adaptations of local plants and animals	Mini-lessons		Mini-lesson: Why are butterflies so colorful?** Mini-lesson: Why do snakes shed their skin? Mini-lesson: Why do penguins have wings if they can't fly? Mini-lesson: Could a turtle live outside its shell?
	local First Peoples uses of plants and animals			BC specific standard
Humans interact with matter every day through familiar materials.	properties of familiar materials			Mini-lesson: How do they turn wood into paper?

** Indicates a mini-lesson with an included hands-on STEAM activity from Mystery Science.

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Kindergarten, continued

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Big Idea	BC Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit	Mystery Science Grade	Mystery Science Lessons
The motion of objects depend on their properties.	effects of pushes/pulls on movement	Force Olympics Mini-lessons	Grade K	Lesson 1: What's the biggest excavator? Lesson 2, Read-Along: Why do builders need so many big machines? Mini-lesson: Why can't airplanes fly to space?
	effects of size, shape, and materials on movement	Force Olympics	Grade K	Lesson 3: How can you knock down a wall made of concrete? Lesson 4, Read-Along: How can you knock down the most bowling pins? Lesson 5: How can we protect a mountain town from falling rocks? Lesson 6, Read-Along: How could you invent a trap?
Daily and seasonal changes affect all living things.	weather changes	Wild Weather Mini-lessons	Grade K	Lesson 1, Read-Along: How can you get ready for a big storm? Lesson 2: Have you ever watched a storm? Lesson 3: How many different kinds of weather are there? Mini-lesson: How do polar animals survive the cold?
	seasonal changes	Circle of Seasons Mini-lessons	Grade K	Lesson 1, Read-Along: How do you know what to wear for the weather? Lesson 2: What would the weather be like on your birthday? Mini-lesson: Why do animals come back after going to warm places in winter?
	living things make changes to accommodate daily and seasonal changes	Circle of Seasons Mini-lessons	Grade K	Lesson 3: Why do birds lay eggs in the spring? Mini-lesson: Can animals get a sunburn?
	First People's knowledge of seasonal changes			<i>BC specific standard</i>

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Grade 1

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Big Idea	BC Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit	Mystery Science Grade	Mystery Science Lessons
Living things have features and behaviours that help them survive in their environment.	classification of living and non-living things	Mini-lessons		Mini-lesson: What's the biggest tree in the world? Mini-lesson: Why are pumpkins so popular every fall? Mini-lesson: Can a shark and a dolphin have babies?
	names of local plants and animals	Mini-lessons		Mini-lesson: How can you tell if a plant is poisonous? Mini-lesson: How can you tell if a mushroom is poisonous? Mini-lesson: Why are pumpkins orange? Mini-lesson: Why do owls say "hoo"?**
	structural features of living thing in the local environment	Plant & Animal Superpowers	Grade 1	Lesson 2: Why do birds have beaks? Lesson 3, Read-Along: Why do baby ducks follow their mother? Lesson 4: Why are polar bears white? Lesson 6: Why don't trees blow down in the wind? Lesson 7, Read-Along: What do sunflowers do when you're not looking?
	behavioral adaptations of animals in the local environment	Mini-lessons Plant Adventures Mini-lessons	Grade 2	Mini-lesson: Could people ever walk on walls? Mini-lesson: What's that red thing on a turkey?** Mini-lesson: Why can't fish breathe on land? Lesson 1: How did a tree travel halfway around the world? Lesson 2: Could a plant survive without light? Lesson 3: Why do trees grow so tall? Lesson 4: Should you water a cactus? Lesson 5: Where do plants grow best? Mini-lesson: Why do bears hibernate?**
Matter is useful because of its properties.	specific properties of materials allow us to use them in different ways	Material Magic Mini-lessons	Grade 2	Lesson 1: Why do we wear clothes? Lesson 6: How do you build a city out of mud? Mini-lesson: How is glass made?

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Grade 1, continued

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Big Idea	BC Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit	Mystery Science Grade	Mystery Science Lessons
Light and sound can be produced and their properties can be changed.	natural and artificial sources of light and sound	Lights & Sounds	Grade 1	Lesson 1: How do they make silly sounds in cartoons? Lesson 2, Read-Along: Where do sounds come from? Lesson 3: What if there were no windows? Lesson 4, Read-Along: Can you see in the dark? Lesson 5: How could you send a secret message to someone far away? Lesson 6, Read-Along: How do boats find their way in the fog? Mini-lesson: How deep does the ocean go? Mini-lesson: Why is the sky blue? Mini-lesson: How do things glow in the dark? Mini-lesson: How is a rainbow made?*
	properties of light and sound depend on their source and the objects with which they interact	Mini-lessons		
Observable patterns and cycles occur in the local sky and landscape.	common objects in the sky	Spinning Sky	Grade 1	Lesson 1: Could a statue's shadow move? Lesson 2, Read-Along: What does your shadow do when you're not looking? Lesson 3: How can the Sun help you if you're lost? Lesson 4, Read-Along: Why do you have to go to bed early in the summer? Lesson 5: When can you see the full moon? Lesson 6: Why do the stars come out at night? Lesson 7, Read-Along: How can stars help you if you get lost? Mini-lesson: Who created the constellations? Mini-lesson: What is the Moon made of? Mini-lesson: What causes the Northern Lights? Mini-lesson: How often do eclipses happen? Mini-lesson: Why are people making such a big deal about the solar eclipse?
	local patterns that occur on Earth and in the sky	Mini-lessons		
	- The knowledge of the First Peoples: - shared First Peoples knowledge of the sky - local First Peoples knowledge of the local landscape, plants, and animals - local First Peoples understanding and use of seasonal rounds			<i>BC specific standard</i>

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Grade 2

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Big Idea	BC Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit	Mystery Science Grade	Mystery Science Lessons
Living things have life cycles defined by their environment.	metamorphic and non-metamorphic life cycles of different organisms	Power of Flowers Mini-lessons	Grade 3	Lesson 1: Why do plants grow flowers? Lesson 2: Why do plants give us fruit? Lesson 3: Why are some apples red and some green? Lesson 4: How could you make the biggest fruit in the world? Mini-lesson: Are butterflies the only animals that start out as caterpillars?** Mini-lesson: Why do leaves change color in the fall?**
	similarities between offspring and parent	Plant & Animal Superpowers Mini-lessons	Grade 1	Lesson 1: How can you help a lost baby animal find its parents? Lesson 5, Read-Along: Why do family members look alike? Mini-lesson: What's the biggest apple in the world?**
	First Peoples use of their knowledge of life cycles			BC specific standard
Materials can be changed through physical and chemical processes.	physical ways of changing materials	Material Magic Mini-lessons	Grade 2	Lesson 4: What materials might be invented in the future? Lesson 5: Could you build a house out of paper? Mini-lesson: Why is snow white?**
	chemical ways of changing materials	Mini-lessons		Mini-lesson: How is plastic made?



Grade 2, continued

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Big Idea	BC Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit	Mystery Science Grade	Mystery Science Lessons
Forces influence the motion of an object.	types of forces	Invisible Forces Mini-lessons	Grade 3	Lesson 1: How could you win a tug-of-war against a bunch of adults? Lesson 2: What makes bridges so strong? Lesson 3: How can you go faster down a slide? Lesson 4: What can magnets do? Lesson 5: How can you unlock a door using a magnet? Mini-lesson: What's the fastest baseball ever thrown?
Water is essential to all living things, and it cycles through the environment.	water sources including local watersheds	Work of Water Mini-lessons	Grade 2	Lesson 1: If you floated down a river, where would you end up? Mini-lesson: Why is the ocean salty?
	water conservation			<i>BC specific standard</i>
	the water cycle	Stormy Skies Mini-lessons	Grade 3	Lesson 1: Where do clouds come from? Lesson 2: How can we predict when it's going to storm? Lesson 4: How can you keep a house from blowing away in a windstorm? Mini-lesson: What is the coldest place on Earth?
	- Local First People's knowledge of water: - water cycles - conservation - connection to other systems			<i>BC specific standard</i>



Grade 3

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Big Idea	BC Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit	Mystery Science Grade	Mystery Science Lessons
Living things are diverse, can be grouped, and interact in their ecosystems.	biodiversity in the local environment	Animal Adventures Animals Through Time Mini-lessons	Grade 2 Grade 3	Lesson 1: How many different kinds of animals are there? Lesson 2: Why would a wild animal visit a playground? Lesson 3: Why do frogs say "ribbit"? Lesson 4: How could you get more birds to visit a bird feeder? Lesson 1: Where can you find whales in a desert? Lesson 2: How do we know what dinosaurs looked like? Lesson 3: Can you outrun a dinosaur? Lesson 4: What kinds of animals might there be in the future? Lesson 5: Can selection happen without people? Lesson 6: Why do dogs wag their tails? Lesson 7: What's the best way to get rid of mosquitoes? Lesson 8: How long can people (and animals) survive in outer space? Mini-lesson: Where do bugs go in winter? Mini-lesson: Do bats really drink blood?
	the knowledge of the First Peoples of ecosystems			<i>BC specific standard</i>
	energy is needed for life	Web of Life*	Grade 5	Lesson 1: Why would a hawk move to New York City? Lesson 2: What do plants eat? Lesson 3: Where do fallen leaves go? Lesson 4: Do worms really eat dirt? Lesson 5: Why do you have to clean a fish tank by not a pond? Lesson 6: Why did the dinosaurs go extinct? Mini-lesson: How do flowers bloom in the spring?**

*[Web of Life](#) was originally designed for Grade 5, but can be taught in Grade 3 with modifications. Expect elements of this unit to be advanced for Grade 3.

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Grade 3, continued

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Big Idea	BC Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit	Mystery Science Grade	Mystery Science Lessons
All matter is made of particles.	matter is anything that has mass and takes up space	Chemical Magic*	Grade 5	Lesson 4: What do fireworks, rubber, and Silly Putty have in common? Lesson 5: Why do some things explode?
	atoms are building blocks of matter			<i>BC specific standard</i>
Thermal energy can be produced and transferred.	sources of thermal energy	Sunny Skies	Grade K	Lesson 1, Read-Along: How could you walk barefoot across hot pavement without burning your feet? Lesson 2: How could you warm up a frozen playground? Lesson 3: Why does it get cold in winter?
	transfer of thermal energy			
Wind, water, and ice change the shape of the land.	major local landforms	Mini-lessons		Mini-lesson: Could a mountain turn into a volcano?
	local First Peoples knowledge of local landforms			<i>BC specific standard</i>
	observable changes in the local environment caused by erosion and deposition by wind, water, and ice	Work of Water	Grade 2	Lesson 2: Why is there sand at the beach? Lesson 3: Where do flash floods happen? Lesson 4: What's strong enough to make a canyon? Lesson 5: How can you stop a landslide?



Grade 4

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Big Idea	BC Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit	Mystery Science Grade	Mystery Science Lessons
All living things sense and respond to their environment.	- sensing and responding: - humans - other animals - plants	Human Machine Waves of Sound Mini-lessons	Grade 4 Grade 4	Lesson 2: What do people who are blind see? Lesson 3: How can some animals see in the dark? Lesson 1: How far can a whisper travel? Lesson 2: What would happen if you screamed in outer space? Lesson 3: Why are some sounds high and some sounds low? Mini-lesson: Why are so many people scared of bugs?*** Mini-lesson: Why do we have allergies? Mini-lesson: Why do cats purr? Mini-lesson: Can animals laugh? Mini-lesson: Why do we yawn?
	biomes as large regions with similar environmental features	Stormy Skies Mini-lessons	Grade 3	Lesson 3: Why are some places always hot? Mini-lesson: Why do beavers build dams?
Matter has mass, takes up space, and can change phase.	phases of matter	Material Magic Mini-lessons	Grade 2	Lesson 2: Can you really fry an egg on a hot sidewalk? Lesson 3: Why are so many toys made out of plastic? Mini-lesson: Can you make lava?
	the effect of temperature on particle movement	Mini-lessons		Mini-lesson: Why does this rock look like a sponge?



Grade 4, continued

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Big Idea	BC Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit	Mystery Science Grade	Mystery Science Lessons
Energy can be transformed.	- energy: - has various forms - is conserved	Energizing Everything Mini-lessons	Grade 4	Lesson 1: How is your body similar to a car? Lesson 2: What makes roller coasters go so fast? Lesson 3: Why is the first hill of a roller coaster always the highest? Mini-lesson: What do garbage trucks do with garbage?
	devices that transform energy	Energizing Everything Mini-lessons	Grade 4	Lesson 6: What if there were no electricity? Lesson 7: How long did it take to travel across the country before cars and planes? Lesson 8: Where does energy come from? Mini-lesson: How do batteries work? Mini-lesson: How are magnets made? Mini-lesson: How do phones work?
The motions of Earth and the moon cause observable patterns that affect living and non-living systems.	local changes caused by Earth's axis, rotation, and orbit	Spaceship Earth	Grade 5	Lesson 1: How fast does the Earth spin? Lesson 2: Who set the first clock? Lesson 3: How can the Sun tell you the season? Lesson 4: Why do the stars change with the seasons? Lesson 5: Why does the Moon change shape? Mini-lesson: Why do places have different times? Mini-lesson: Is there a pole at the North Pole? Mini-lesson: Why does the Moon turn blood red during a lunar eclipse?
	the effects of the relative positions of the sun, moon, and Earth including local First Peoples perspectives	Mini-lessons		



Grade 5

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Big Idea	BC Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit	Mystery Science Grade	Mystery Science Lessons
Multicellular organisms have organ systems that enable them to survive and interact with their environment.	- basic structures and functions of body systems: - digestive - musculo-skeletal - respiratory - circulatory	Human Machine Mini-lessons	Grade 4	Lesson 1: Why do your biceps bulge? Mini-lesson: What would happen if you didn't have a skull?* Mini-lesson: Why do our skeletons have so many bones?* Mini-lesson: How does your heart pump blood?* Mini-lesson: How do broken bones heal? Mini-lesson: Why do we need blood?
Solutions are homogeneous.	solutions and solubility	Watery Planet Chemical Magic	Grade 5 Grade 5	Lesson 2: How much salt is in the ocean? Lesson 1: Are magic potions real? Lesson 2: Could you transform something worthless into gold? Lesson 3: What would happen if you drank a glass of acid?

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Grade 5, continued

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Big Idea	BC Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit	Mystery Science Grade	Mystery Science Lessons
Machines are devices that transfer force and energy.	properties of simple machines and their force effects	Energizing Everything Mini-lessons	Grade 4	Lesson 4: Could you knock down a building using only dominoes? Lesson 5: Can you build a chain reaction machine? Mini-lesson: Do people really use robots?
	- machines: - constructed - found in nature			<i>BC specific standard</i>
	power - the rate at which energy is transferred			<i>BC specific standard</i>
Earth materials change as they move through the rock cycle and can be used as natural resources.	the rock cycle	The Birth of Rocks Mini-lessons	Grade 4	Lesson 1: Could a volcano pop up where you live? Lesson 2: Why do some volcanoes explode? Lesson 3: Will a mountain last forever? Lesson 4: How could you survive a landslide? Mini-lesson: How old is the Earth? Mini-lesson: What's the best place to look for dinosaur fossils?
	local types of earth materials	Mini-lessons		Mini-lesson: How is gold made? Mini-lesson: Where does salt come from? Mini-lesson: How are diamonds made?
	First Peoples concepts of interconnectedness in the environment			<i>BC specific standard</i>
	the nature of sustainable practices around BC's resources	Watery Planet	Grade 5	Lesson 1: How much water is in the world? Lesson 3: When you turn on the faucet, where does the water come from? Lesson 4: Can we make it rain? Lesson 5: How can you save a town from a hurricane?
	First Peoples knowledge of sustainable practices			<i>BC specific standard</i>



Grade 6

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Big Idea	BC Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit	Mystery Science Grade	Mystery Science Lessons
Multicellular organisms rely on internal systems to survive, reproduce, and interact with their environment.	- basic structures and functions of body systems: - excretory - reproductive - hormonal - nervous	Human Machine Mini-lessons	Grade 4	Lesson 4: How does your brain control your body? Mini-lesson: Why do we sweat when we play sports? Mini-lesson: Why can't we remember being babies?** Mini-lesson: What would happen if football players didn't wear helmets? Mini-lesson: Why do you get goosebumps when you're cold? Mini-lesson: Why do we get hiccups? Mini-lesson: Why do we have tears when we cry? Mini-lesson: How does hair grow? Mini-lesson: Why do we have eyebrows?
Everyday materials are often mixtures.	heterogeneous mixtures	Mini-lessons		Mini-lesson: Where does metal come from?
	- mixtures: - separated using a difference in component properties - local First Peoples knowledge of separation and extraction methods			<i>BC specific standard</i>

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Grade 6, continued

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Big Idea	British Columbia Content Learning Standard <i>Students are expected to know the following:</i>	Mystery Science Unit		Mystery Science Lessons
Newton's three laws of motion describe the relationship between force and motion.	Newton's three laws of motion			<i>BC specific standard</i>
	effects of balanced and unbalanced forces in daily physical activities			<i>BC specific standard</i>
	force of gravity	Spaceship Earth Mini-lessons	Grade 5	Lesson 7: Why is gravity different on other planets? Mini-lesson: What is a black hole?
The solar system is part of the Milky Way, which is one of billions of galaxies.	the overall scale, structure, and age of the universe	Spaceship Earth Mini-lessons	Grade 5	Lesson 8: Could there be life on other planets? Mini-lesson: Are aliens real? Mini-lesson: Is Pluto a planet? Mini-lesson: Why isn't Pluto a planet anymore?
	the position, motion, and components of our solar system in our galaxy.	Spaceship Earth Mini-lessons	Grade 5	Lesson 6: What are the wandering stars? Mini-lesson: Is Earth the only planet with life? Mini-lesson: Has a shooting star ever landed on someone? Mini-lesson: How close could an astronaut get to the Sun? Mini-lesson: What would it be like to live on the Moon?