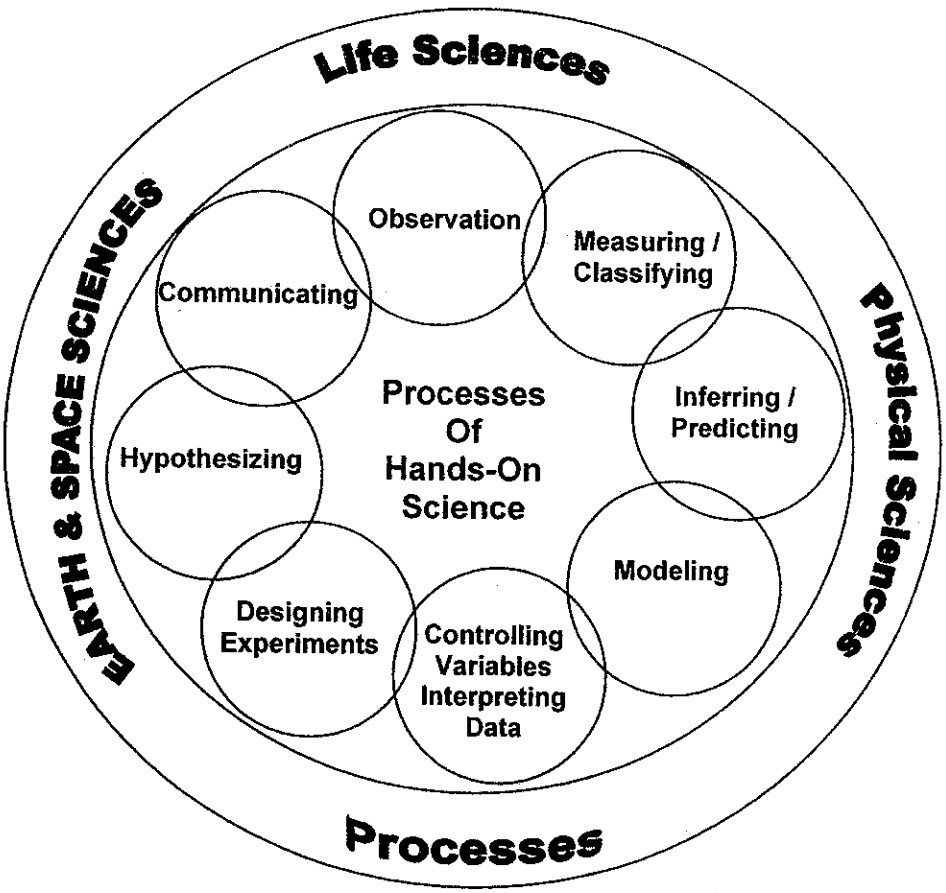
Processes of Hands-On Science

A Balanced Approach

TRACKING SYSTEM



September 2006

BURNABY
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Preface: This is a working document that was developed by the District Science Committee. It is based on the prescribed curriculum, district resources and input from the committee members.

The Purpose: The purpose of this document is to help avoid both gaps and unnecessary repetition of content and resources. The intention is not to dictate your Science program, but rather to allow for choice, while protecting the topics covered in the alternate A/B tracks.

This tracking document should be used in conjunction with the revised **Science K - 7 IRP**. Please log onto www.learn.sd41.bc.ca/science for further curriculum support.

We hope that you find the materials in this document helpful in planning your science program.

"I never came upon any of my discoveries through the process of rational thinking."
-Albert Einstein

Elementary Science Committee Members

Blake Briscoe
Claudio Bortolussi
Janet Chow
Mark Harding
Angela Johnson
Kathy Mathisen
Rennie Maierle
Mark Pierlot
Richard Woo
Kristi Yorke

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Guiding Principles:
The Science IRP provided the foundation for the elementary science learning outcomes for each grade. However, in reality, many students are organized in combined classes, which can pose a number of challenges for teachers. The tracking system was developed to assist teachers and schools to organize their science program in such a way as to:

- avoid unnecessary gaps and duplication in themes and context
- ensure that the Prescribed Learning Outcomes (PLO's) are addressed

Science literacy is an evolving combination of the science-related attitudes, skills, and knowledge students need to:

- develop inquiry, problem solving, and decision making abilities as citizens
- become lifelong learners
- maintain a sense of wonder about the world around them

(Taken from the Revised Science IRP)

1. The Goal:
The Goal of this document is to create a balanced foundation into the inquiry of science. It is based on a hands-on approach, which will instill in students a sense of wonder, where risk taking and creative problem solving can be attained. Through a variety of processes, students learn to develop attitudes, knowledge, skill and relationships that encompass the three strands of our science curriculum.

2. The "Big Ideas":
These are aligned with the four foundation statements from the Pan Canadian Science Framework (Council of Ministers of Education, Canada, 1997) that delineates the four critical aspects of students' scientific literacy.

- Science, technology, society and environment (STSE)
- Skills
- Knowledge
- Attitudes

These ideas should be woven into the curriculum at all grade levels (K-7), regardless of the general topics covered in any specific year.

3. District Zones: The district will continue to be divided into two zones: north and south of the freeway, in order to relieve the pressure on supplementary resources. Starting in September 2006, the **North zone** will be on Track B and the **South Zone** will be on Track A.

Recommended School-Wide Programming

Year	North Zone	South Zone
2005 - 2006	Year A	Year B
2006 - 2007	Year B	Year A
2007 - 2008	Year A	Year B
2008 - 2009	Year B	Year A
2009 - 2010	Year A	Year B
2010 - 2011	Year B	Year A
2011 - 2012	Year A	Year B
2012 - 2013	Year B	Year A
2013 - 2014	Year A	Year B
2014 - 2015	Year B	Year A

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Science K – 7: Topics and Resources at a Glance

	Life Science	Physical Science	Earth & Space Science
Kindergarten	**Characteristics of Living Things** *"My World"* *Explorations in Science*	**Properties of Objects and Materials** *"My World"* *Explorations in Science*	**Surroundings** *"My World"* *Explorations in Science*
Grade 1	**Needs of Living Things** *"It's Alive!"* *Explorations in Science*	**Forces and Motion** *"Let's Move"* *Explorations in Science*	**Daily & Seasonal Changes** *"Earth Watch"* *Explorations in Science*
Grade 2	**Animal Growth & Changes** *"Animals Grow"* *Explorations in Science*	**Properties of Matter** *"Matter Matter Everywhere"* *Explorations in Science*	**Air, Water and Soil** *"Air and Water"* *Explorations in Science*
Grade 3	**Plant Growth & Changes** *"Watch It Grow"* *Explorations in Science*	**Materials and Structures** *"Build It Up"* *Explorations in Science*	**Stars and Planets** *"Stars and Planets"*
Grade 4	**Habitats and Communities** *"Healthy Habitats"* *Explorations in Science* *Science & Technology*	**Sound and Light** *"Sound and Light"* *Explorations in Science* *Science & Technology*	**Weather** *"Weather Watch"* *Science & Technology*
Grade 5	**Human Body** *"Body Works"* *Explorations in Science* *Science & Technology*	**Forces & Simple Machines** *"Putting It In Motion"* *Explorations in Science* *Science & Technology*	**Renewable & Non-Renewable Resources** *"Our Resources"* *Science & Technology*
Grade 6	**Diversity of Life** *BC Science 6* *Science & Technology*	**Electricity** *BC Science 6* *Explorations in Science* *Science & Technology*	**Explorations of Extreme Environments** *BC Science 6* *Explorations in Science* *Science & Technology*
Grade 7	**Ecosystems** *BC Science 7* *Explorations in Science* *Science & Technology*	**Chemistry** *BC Science 7* *Explorations in Science* *Science & Technology*	**Earth's Crust** *BC Science 7* *Explorations in Science* *Science & Technology*

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TRACK A

TRACK B

	Processes	Life Sciences	Physical Sciences	Earth/Space	Processes	Life Sciences	Physical Sciences	Earth/Space
K	*Observing* • Use the five senses to make observations • Share with others information obtained by observing	*Characteristics of Living Things* • Describe features of local plants and animals (e.g. colour, shape, size, texture) • Compare local plants • Compare common animals ---------- **PSCP** "Our World" Lessons: 1, 2, 3, 4, 5* **EinS** "Seeds, Shoots and Sprouts" "On Safari" "Discovering Adaptations"	*Properties of Objects & Materials* • Describe properties of materials including colour, shape, texture, size and weight • Identify materials that make up familiar objects • Describe ways to rethink, refuse, reduce, reuse and recycle ---------- **PSCP** "Our World" Lessons: 5*, 6, 7, 8	*Surroundings* • Demonstrate the ability to observe their surroundings • Describe features of their immediate environment ---------- **PCSP** "Our World" Lessons: 9, 10, 11, 12 **EinS** "Down to Earth"	*Observing* • Use the five senses to make observations • Share with others information obtained by observing	*Characteristics of Living Things* • Describe features of local plants and animals (e.g. colour, shape, size, texture) • Compare local plants • Compare common animals ---------- **PSCP** "Our World" Lessons: 1, 2, 3, 4, 5* **EinS** "Seeds, Shoots and Sprouts" "On Safari" "Discovering Adaptations"	*Properties of Objects & Materials* • Describe properties of materials including colour, shape, texture, size and weight • Identify materials that make up familiar objects • Describe ways to rethink, refuse, reduce, reuse & recycle ---------- **PSCP** "Our World" Lessons: 5*, 6, 7, 8 **EinS** "In Motion"	*Surroundings* • Demonstrate the ability to observe their surroundings • Describe features of their immediate environment ---------- **PCSP** "Our World" Lessons: 9, 10, 11, 12 **EinS** "Down to Earth"

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TRACK A

TRACK B

	Processes	Life Sciences	Physical Sciences	Earth/Space	Processes	Life Sciences	Physical Sciences	Earth/Space
K /1	*Observing* • Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms	*Characteristics of Living Things* • Describe features of local plants and animals (e.g. colour, shape, size, texture) • Compare local plants • Compare common animals ---------- **PSCP** "Our World" Lessons: 1, 2, 3, 4, 5* **EinS** "Seeds, Shoots and Sprouts" "On Safari" "Discovering Adaptations"	*Force/Motion (Magnets)* • Demonstrate how force can be applied to move an object (e.g. attract, repel) • Demonstrate and describe the effects of magnets on different materials ---------- **PCSP** "Let's Move" Lessons: 1*, 2*, 3*, 7 **EinS** "In Motion"	*Surroundings* • Demonstrate the ability to observe their surroundings • Describe features of their immediate environment ---------- **PCSP** "Our World" Lessons: 9, 10, 11, 12 **EinS** "Down to Earth"	*Measuring/ Classifying* • Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms	*Needs of Living Things (Animals & environment)* • Classify living and non-living things • Describe the basic needs of local animals (e.g. food, water, light) • Describe how the basic needs of animals are met in their environment ---------- **PCSP** "It's Alive!" Lessons: 1*, 2, 3*, 4, 7, 8, 9, 10* **EinS** "On Safari"	*Forces & Motion (Friction)* • Demonstrate how force can be applied to move an object (e.g. push, pull) • Compare the effect of friction on the movement of an object over a variety of surfaces ---------- **PCSP** "Let's Move" Lessons: 1*, 2*, 3*, 4, 5, 6 **EinS** "In Motion"	*Seasonal Changes (Global Weather)* • Describe changes that occur in daily and seasonal cycles and their effects on living things (focus on how living things adapt beyond the local environment) • Describe activities of Aboriginal peoples in BC in each seasonal cycle ---------- **PCSP** "Earthwatch" Lessons: 1*, 2*, 3*, 5, 6, 7* **EinS** "Whatever the Weather"

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TRACK A

TRACK B

	Processes	Life Sciences	Physical Sciences	Earth/Space	Processes	Life Sciences	Physical Science	Earth/Space
1	*Measuring/ Classifying* • Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms	*Needs of Living Things (Plants & environment)* • Classify living and non-living things • Describe basic needs of local plants • Describe how basic needs of plants are met in their environment ---------- **PCSP** "It's Alive" Lessons: 1*, 3*, 5, 6, 10* **EinS** "Seeds, Shoots and Sprouts" "Branching Out"	*Force/Motion (Magnets)* • Demonstrate how force can be applied to move an object (e.g. attract, repel) • Demonstrate and describe the effects of magnets on different materials ---------- **PCSP** "Let's Move" Lessons: 1*, 2*, 3*, 7 **EinS** "In Motion"	*Daily Changes (Local Weather)* • Describe changes that occur in daily cycles and their effects on living things (focus on how living things adapt to the local environment) • Describe activities of Aboriginal peoples in BC in each seasonal cycle ---------- **PCSP** "Earthwatch" Lessons: 1*, 2*, 3*, 4, 7* **EinS** "Whatever the Weather"	*Measuring/ Classifying* • Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms	*Needs of Living Things (Animals & environment)* • Classify living and non-living things • Describe the basic needs of local animals (e.g. food, water, light) • Describe how the basic needs of animals are met in their environment ---------- **PCSP** "It's Alive!" Lessons: 1*, 2, 3*, 4, 7, 8, 9, 10* **EinS** "On Safari"	*Force & Motion (Friction)* • Demonstrate how force can be applied to move an object (e.g. push, pull) • Compare the effect of friction on the movement of an object over a variety of surfaces ---------- **PCSP** "Let's Move" Lessons: 1*, 2*, 3*, 4, 5, 6 **EinS** "In Motion"	*Seasonal Changes (Global Weather)* • Describe changes that occur in seasonal cycles and their effects on living things (focus on how living things adapt beyond the local environment) • Describe activities of Aboriginal peoples in BC in each seasonal cycle ---------- **PCSP** "Earthwatch" Lessons: 1*, 2*, 3*, 5, 6, 7* **EinS** "Whatever the Weather"

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	Processes	Life Sciences	Physical Sciences	Earth/Space
1/2	*Measuring/ Classifying* • Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations	*Needs of Living Things (Plants and environment)* • Classify living and non-living things • Describe basic needs of local plants • Describe how basic needs of plants are met in their environment --- **PCSP** "It's Alive" Lessons: 1*, 3*, 5, 6, 10* **EinS** "Seeds, Shoots and Sprouts" "Branching Out"	*Properties of Matter (Changes)* • Identify the properties of solids, liquids and gases • Investigate changes to the properties of matter when it is heated or cooled • Investigate the interactions of liquids and solids --- **PCSP** "Matter, Matter Everywhere" Lessons: 1 – 14 **EinS** "Water, Water Everywhere"	*Daily Changes (Local Weather)* • Describe changes that occur in daily cycles and their effects on living things (focus on how living things adapt to the local environment) • Describe activities of Aboriginal peoples in BC in each seasonal cycle --- **PCSP** "Earthwatch" Lessons: 1*, 2*, 3*, 4, 7* **EinS** "Whatever the Weather"

TRACK B

Processes	Life Sciences	Physical Sciences	Earth/Space
Inferring/ Predicting • Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations	*Animal Growth & Changes (Animals – Life Cycles – land, air, aquatic)* • Classify familiar animals according to similarities and differences in appearance, behaviour and life cycles • Describe some changes that affect animals (e.g. hibernation, migration, decline in population) • Describe how animals are important in the lives of Aboriginal peoples in BC • Describe ways in which animals are important to other living things and the environment --- **PCSP** "Animals Grow" Lessons: 1 – 8, 14* **EinS** "Creatures and Crawlers" "The Safari" "Six Legs or Eight"	*Force & Motion (Friction)* • Demonstrate how force can be applied to move an object (e.g. push, pull) • Compare the effect of friction on the movement of an object over a variety of surfaces --- **PCSP** "Let's Move" Lessons: 1*, 2*, 3*, 4, 5, 6 **EinS** "In Motion"	*Air, Water & Soil (Ecology)* • Identify the importance of clean water for living things, & suggest ways to conserve water (eg. rethink refuse, reduce, reuse, recycle) • Explain why air, water and soil are important for living things --- **PCSP** "Air & Water" Lessons: 1*, 9*, 10-14 "Our World" Lesson: 11* **EinS** "Down to Earth"

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TRACK A

TRACK B

	Processes	Life Sciences	Physical Sciences	Earth/Space	Processes	Life Science	Physical Science	Earth/Space
2	*Inferring/ Predicting*	*Animal Growth & Changes (Humans-Life Cycles)*	*Properties of Matter (Changes)*	*Air, Water & Soil (Physical Properties)*	*Inferring/ Predicting*	*Animal Growth & Changes (Animals – Life Cycles – land, air, aquatic)*	*Properties of Matter (Uses)* *Alternate Topic: Rocks*	*Air, Water & Soil (Ecology)*
	• Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations	• Classify (compare) familiar animals (with humans) according to similarities and differences in appearance, behaviour and life cycles • Describe some changes that affect animals (humans) • Describe how animals are important in the lives of Aboriginal peoples in BC • Describe ways in which animals (humans) are important to other living things and the environment	• Identify the properties of solids, liquids and gases • Investigate changes to the properties of matter when it is heated or cooled • Investigate the interactions of liquids and solids	• Identify physical properties of air, water and soil • Distinguish ways in which air, water and soil interact	• Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations	• Classify familiar animals according to similarities and differences in appearance, behaviour and life cycles • Describe some changes that affect animals (e.g. hibernation, migration, decline in population) • Describe how animals are important in the lives of Aboriginal peoples in BC • Describe ways in which animals are important to other living things and the environment	• Identify the properties of solids, liquids and gases • Investigate changes to the properties of matter when it is heated or cooled • Investigate the interactions of liquids and solids	• Identify the importance of clean water for living things, & suggest ways to conserve water (eg. Rethink refuse, reduce, reuse, recycle) • Explain why air, water and soil are important for living things
		--- **PCSP** "Animals Grow" Lessons: 1*, 9, 10, 11, 12, 13, 14* **EinS** "In the Field" "Creatures and Crawlers"	--- **PCSP** "Matter, Matter Everywhere" Lessons: 1 – 14 **EinS** "Water Water Everywhere"	--- **PCSP** "Air and Wind" Lessons: 1*, 2, 3, 4, 5, 6, 7, 8, 9* "Our World" Lesson: 11* **EinS** "Water Water Everywhere" "Water Works"		--- **PCSP** "Animals Grow" Lessons: 1* – 8, 14* **EinS** "Creatures and Crawlers" "The Safari" "Six Legs or Eight?"	--- **EinS** "Rock Talk" "Rock Solid" K - 3 Kids and Rocks: Geology and Its Impact on Our World (Formerly entitled *K-3 Rocks and Minerals Integrated Science Kit*)	--- **PCSP** "Air & Water" Lessons: 1*, 9*, 10, 11, 12, 13, 14 "Our World" Lesson: 11* **EinS** "Down to Earth"

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	TRACK A				TRACK B			
	Processes	**Life Science**	**Physical Science**	**Earth/Space**	**Processes**	**Life Science**	**Physical Science**	**Earth/Space**
2/3	*Inferring/ Predicting* • Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations • Ask questions to foster investigations and explorations relevant to the context • Measure objects and events	*Animal Growth & Changes (Humans-Life Cycles)* *Alternate Topic: animals (land, air, aquatic)* • Classify (compare) familiar animals (with humans) according to similarities and differences in appearance, behaviour and life cycles • Describe some changes that affect animals (humans) • Describe how animals are important in the lives of Aboriginal peoples in BC • Describe ways in which animals (humans) are important to other living things and the environment ---------- **PCSP** "Animals Grow" Lessons: 1, 9, 10, 11, 12, 13, 14* **EinS** "In the Field" "Creatures and Crawlers"	*Structures (Within the Natural & Human World)* (e.g. buildings, bridges) • Describe shapes that are part of natural and human structures • Compare the effects of different materials, shapes and forces on the strength and stability of different structures • Investigate ways to improve the strength and stability of structures ---------- **PCSP** "Build it Up" Lessons: 1, 2, 3, 4*, 5, 6, 7, 8*, 9-14	*Air, Water & Soil (Physical Properties)* • Identify physical properties of air, water and soil • Distinguish ways in which air, water and soil interact ---------- **PCSP** "Air and Wind" Lessons: 1*, 2, 3, 4, 5, 6, 7, 8, 9* "Our World" Lesson: 11* **EinS** "Water Works" "Water Water Everywhere"	*Communicating* • Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations • Ask questions to foster investigations and explorations relevant to the context Measure objects and events	*Plant Growth & Changes (Uses)* • Describe ways in which plants are important to other living things and the environment • Describe how plants are harvested and used throughout the seasons ---------- **PCSP** "Watch it Grow" Lessons: 4, 9, 10, 11, 12, 13, 14*	*Properties of Matter (Uses)* *Alternate Topic: Rocks* • Identify the properties of solids, liquids and gases • Investigate changes to the properties of matter when it is heated or cooled • Investigate the interactions of liquids and solids ---------- **EinS** "Rock Talk" "Rock Solid" K - 3 Kids and Rocks: Geology and Its Impact on Our World (Formerly entitled *K-3 Rocks and Minerals Integrated Science Kit*)	*Planets* • Describe characteristics and movements of objects in our solar system ---------- **PCSP** "Stars and Planets" Lessons: 1*, 4*, 5*, 6*, 7*, 8, 9, 10, 14

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TRACK A

TRACK B

	Processes	Life Sciences	Physical Sciences	Earth/Space	Processes	Life Sciences	Physical Sciences	Earth/Space
3	*Communicating* • Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations • Ask questions to foster investigations and explorations relevant to the context • Measure objects and events	*Plant Growth & Changes (Growth)* • Compare familiar plants according to similarities & differences in appearance • Describe the life cycles of plants (eg. seeds, photosynthesis, corn, radish, marigold plants) **PCSP** "Watch it Grow" Lessons: 1, 2, 3, 5, 6, 7, 8, 14* **EinS** "Seeds Shoots and Sprouts" "A Walk in the Woods"	*Structures (Within the Natural & Human World)* (e.g. buildings, bridges) • Describe shapes that are part of natural and human structures • Compare the effects of different materials, shapes and forces on the strength and stability of different structures • Investigate ways to improve the strength and stability of structures **PCSP** "Build it Up" Lessons: 1, 2, 3, 4*, 5, 6, 7, 8*, 9-14	*Stars* • Compare familiar constellations in seasonal skies • Demonstrate awareness of the special significance of celestial objects for Aboriginal peoples **PCSP** "Stars and Planets" Lessons: 1, 2, 3, 4*, 5*, 6*, 7*, 11, 12, 13	*Communicating* • Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations • Ask questions to foster investigations and explorations relevant to the context • Measure objects and events	*Plant Growth & Changes (Uses)* • Describe ways in which plants are important to other living things and the environment • Describe how plants are harvested and used throughout the seasons **PCSP** "Watch it Grow" Lessons: 4, 9, 10, 11, 12, 13, 14* **EinS** "Seeds Shoots and Sprouts"	*Structures (Attributes of Materials)* • Compare the effects of different materials, shapes and forces on the strength and stability of different structures • Investigate ways to improve the strength and stability of structures *through the use of different materials* (e.g. airplanes/flight, cars) **PCSP** "Build it Up" Lessons: 4*, 8*, **EinS** "Fantastic Plastic"	*Planets* • Describe characteristics and movements of objects in our solar system **PCSP** "Stars and Planets" Lessons: 1*, 4*, 5*, 6*, 7*, 8, 9, 10, 14

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TRACK A

TRACK B

	Processes	Life Sciences	Physical Sciences	Earth/Space	Processes	Life Sciences	Physical Sciences	Earth/Space
3 / 4	*Communicating* • Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations • Ask questions to foster investigations and explorations relevant to the context • Measure objects and events • Make predictions, supported by reasons and relevant to the content • Use data from investigations to recognize patterns and relationships and reach conclusions	*Plant Growth & Changes (Growth)* • Compare familiar plants according to similarities & differences in appearance • Describe the life cycles of plants (eg. seeds, photosynthesis, corn, radish, marigold plants) ---------- **PCSP** "Watch it Grow" Lessons: 1, 2, 3, 5, 6, 7, 8, 14* **EinS** "Seeds Shoots and Sprouts" "A Walk in the Woods"	*Sound* • Identify sources of sound • Explore properties of sound (transmission, reflection and absorption) ---------- **PCSP** "Sound/Light" Lessons: 1*, 2, 3, 4, 5, 6, 11* **S&T** Pages: 80-81; 107-120 **EinS** "Sound Effects"	*Stars* • Compare familiar constellations in seasonal skies • Demonstrate awareness of the special significance of celestial objects for Aboriginal peoples ---------- **PCSP** "Stars and Planets" Lessons: 1, 2, 3, 4*, 5*, 6*, 7*, 11, 12, 13	*Hypothesizing* • Use the five senses to make observations • Share with others information obtained by observing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations • Ask questions to foster investigations and explorations relevant to the context • Measure objects and events • Make predictions, supported by reasons and relevant to the content Use data from investigations to recognize patterns and relationships and reach conclusions	*Habitats & Communities (Food chains)* • Compare the structures and behaviours of local animals and plants in different habitats and communities • Describe how food webs are composed of simple food chains • Determine how personal choices and actions have environmental consequences ---------- **PCSP** "Healthy Habitats" Lessons: 1*, 6, 7, 8, 9, 10, 11, 12* **S&T** Page: 3*; 22-33; 65-70 **EinS** "The Endangered"	*Structures (Attributes of Materials)* • Compare the effects of different materials, shapes and forces on the strength and stability of different structures • Investigate ways to improve the strength and stability of structures *through the use of different materials* (e.g. airplanes/flight, cars) ---------- **PCSP** "Build it Up" Lessons: 4*, 8* **EinS** "Fantastic Plastic"	*Global Climates* • Analyze impacts of weather conditions on living and non-living things (e.g. impact of sunlight on plant growth, food chain, humans, animals; impact of water/climate on landforms) ---------- **PCSP**: "Weather Watch" Lessons: 5-7, 8*, 9* 11*(part C) **S&T** Pages: 122-126; 136-138; 145 (extensions only); 150-155, 158, 159

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TRACK A

	Processes	Life Sciences	Physical Sciences	Earth/Space
4	*Hypothesizing* • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations • Ask questions to foster investigations and explorations relevant to the context • Measure objects and events • Make predictions, supported by reasons and relevant to the content Use data from investigations to recognize patterns and relationships and reach conclusions	*Habitats & Communities (Animals and Plants)* • Compare the structures & behaviours of local animals & plants in different habitats & communities • Demonstrate awareness of the Aboriginal concept of respect for the environment **PCSP** "Healthy Habitats" Lessons: 1*, 2*, 3*, 4*, 5*, 12 **S&T** Pages 3*; 1-21; 34-78 **EinS** "Discovering Adaptations" "A Walk in the Woods"	*Sound* • Identify sources of sound • Explore properties of sound (e.g. travels in waves, travels in all directions; transmission, reflection and absorption) **PCSP** "Sound & Light" Lessons: 1*, 2, 3, 4, 5, 6, 11* **S&T** Pages 80-81; 107-120 **EinS** "Sound Effects"	*Weather (Local)* • Describe and measure weather in terms of temperature, precipitation, cloud cover, wind speed and direction **PCSP** "Weather Watch" Lessons: 2, 4, 6, 8*, 9-11 **S&T** Pages 122-158

TRACK B

	Processes	Life Sciences	Physical Sciences	Earth/Space
	Hypothesizing • Communicate their observations, experiences, and thinking in a variety of ways (e.g. verbally, pictorially, graphically) • Classify objects, events, and organisms • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations • Ask questions to foster investigations and explorations relevant to the context • Measure objects and events • Make predictions, supported by reasons and relevant to the content Use data from investigations to recognize patterns and relationships and reach conclusions	*Habitats & Communities (Food chains)* • Compare the structures and behaviours of local animals and plants in different habitats and communities • Describe how food webs are composed of simple food chains • Demonstrate how personal choices and actions have environmental consequences **PCSP** "Healthy Habitats" Lessons: 1*, 6, 7, 8, 9, 10, 11, 12* **S&T** Page: 3* Pages 22-33; 65-70 **EinS** "The Endangered"	*Light* • Identify sources of light • Explain properties of light (travels in a straight path, can be reflected; transmission, reflection, refraction and absorption) • Relate differences in colour to differences in wavelengths • Describe how the eye uses light to see **PCSP** "Sound & Light" Lessons: 1*, 7, 8, 9, 10, 11* **S&T** Pages 80-106 **EinS** "Light Moments"	*Global Climates* • Analyze impacts of weather conditions on living and non-living things (E.g. impact of sunlight on plant growth, food chain, humans, animals; impact of water/climate on landforms) **PCSP** "Weather Watch" Lessons: 5-7, 8*, 9* 11*(part C) **S&T** Pages 122-126; 136-138; 145 (extensions only); 150-155; 158, 159

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TRACK A

	Processes	Life Sciences	Physical Sciences	Earth/Space
4/5	*Hypothesizing* • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations. • Ask questions that foster investigations & explorations relevant to the content. • Measure objects and events • Make predictions, supported by reasons and relevant to the content • Use data from investigations to recognize patterns and relationships and reach conclusions • Identify the variables that can be changed in an experiment • Evaluate the fairness of a given experiment • Describe the steps in designing an experiment	*Habitats & Communities (Animals/ plants)* • Compare the structures & behaviours of local animals & plants in different habitats & communities • Demonstrate awareness of the Aboriginal concept of respect for the environment **PCSP** "Healthy Habitats" Lessons: 1*, 2*, 3*, 4*, 5*, 12 **S&T** Pages 3*: 1-21; 34-78 **EinS** "Discovering Adaptations" "A Walk in the Woods"	*Simple Machines* • Demonstrate how various forces can affect the movement of objects • Demonstrate mechanical advantage of simple machines, including lever, wedge, pulley, ramp, screw and wheel • Design a compound machine • Describe applications of simple and compound machines used in daily life in BC communities **PSCP** "Putting it in Motion" Lessons: 1*, 2*, 3*, 8-15 **S&T** Pages 117*, 144-162 **EinS** "By Means of Machines"	*Weather (local)* • Describe & measure weather in terms of temperature, precipitation, cloud cover, wind speed and direction **PCSP**: "Weather Watch" Lessons: 2, 4, 6, 8*, 9-11 **S&T** Pages 122-158

TRACK B

	Processes	Life Sciences	Physical Sciences	Earth/Space
	Designing Experiments • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations. • Ask questions that foster investigations & explorations relevant to the content. • Measure objects and events • Make predictions, supported by reasons and relevant to the content • Use data from investigations to recognize patterns and relationships and reach conclusions • Identify the variables that can be changed in an experiment • Evaluate the fairness of a given experiment • Describe the steps in designing an experiment	*Human Body* • Describe the basic structure and functions of the human digestive, skeletal, muscular systems • Explain how the different body systems are interconnected **PCSP** "Body Works" Lessons: 1*, 2*, 3*, 4, 5, 9*, 10, 11, 14*, 15* **S&T** Pages 9-21, 29—37 **EinS** "Light Moments"	*Light* • Identify sources of light • Explain properties of light (travels in a straight path, can be reflected; transmission, reflection, refraction and absorption) • Relate differences in colour to differences in wavelengths • Describe how the eye uses light to see **PCSP** "Sound & Light" Lessons: 1*, 7, 8, 9, 10, 11* **S&T** Pages 80-106	*Renewable & Non-renewable Resources (Canada)* • Analyze how Canada's living & non-living resources are used • Investigate potential environmental impacts of using Canada's living & non-living resources • Describe methods of extracting & processing Canada's resources **PCSP** "Our Resources" **S&T** Pages 39*; 72-77; 101-114

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TRACK A

TRACK B

	Processes	Life Sciences	Physical Sciences	Earth/Space	Processes	Life Sciences	Physical Sciences	Earth/Space
5	*Designing Experiments* • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations. • Ask questions that foster investigations & explorations relevant to the content. • Measure objects and events • Make predictions, supported by reasons and relevant to the content • Use data from investigations to recognize patterns and relationships and reach conclusions • Identify the variables that can be changed in an experiment • Evaluate the fairness of a given experiment • Describe the steps in designing an experiment	*Human Body* • Describe the basic structure & functions of the human respiratory, circulatory and nervous systems • Explain how the different body systems are interconnected ---------- **PCSP** "Body Works" Lessons: 1*, 2*, 3*, 6, 7, 8, 9*, 12, 13, 14*, 15* **S&T** Pages 9-14; 22-28; 31-37	*Simple Machines* • Demonstrate how various forces can affect the movement of objects (Force is a push/pull) • Demonstrate mechanical advantage of simple machines, including lever, wedge, pulley, ramp, screw and wheel • Design a compound machine • Describe applications of simple and compound machines used in daily life in BC communities ---------- **PSCP** "Putting it in Motion" Lessons: 1*, 2*, 3*, 8-15 **S&T** Pages 117*, 144-162 **EinS** "By Means of Machines"	*Renewable & Non-renewable Resources (B.C.)* • Analyze how BC's living & non-living resources are used • Identify methods of extracting or harvesting and processing BC's resources • Identify resource management practices used by Aboriginal peoples in BC • Investigate potential environmental impacts of using BC's living & non-living resources ---------- **PCSP** "Our Resources Lessons: 3-10, 12 **S&T** Pages: 39*; 40-70; 78-81; 88-100	*Designing Experiments* • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations. • Ask questions that foster investigations & explorations relevant to the content. • Measure objects and events • Make predictions, supported by reasons and relevant to the content • Use data from investigations to recognize patterns and relationships and reach conclusions • Identify the variables that can be changed in an experiment • Evaluate the fairness of a given experiment • Describe the steps in designing an experiment	*Human Body* • Describe the basic structure and functions of the human skeletal, digestive and muscular systems • Explain how the different body systems are interconnected ---------- **PCSP** "Body Works" Lessons: 1*, 2*, 3*, 4, 5, 9*, 10, 11, 14*, 15* **S&T** Pages 9-14; 15-21; 29-30; 31-37	*Forces* • Identify the different types of forces (eg. gravity, centripetal, centrifugal, friction, tension, compression, buoyancy, magnetic, elastic) • Demonstrate & describe how various forces can affect the movement of objects • Identify the interaction of forces found in the local environment (eg. playground slides, Playland amusement rides) ---------- **PCSP** "Putting it in Motion" Lessons: 1*, 2*, 3*; 4-7 **S&T** Pages 117*; 118-143	*Renewable & Non-renewable Resources (Canada)* • Analyze how Canada's living & non-living resources are used • Investigate potential environmental impacts of using Canada's living & non-living resources • Describe methods of extracting & processing Canada's resources (E.g. mining) ---------- **PCSP** "Our Resources" **S&T** Pages 39*; 72-77; 101-114

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	TRACK A				TRACK B			
	Processes	**Life Sciences**	**Physical Sciences**	**Earth/Space**	**Processes**	**Life Sciences**	**Physical Sciences**	**Earth/Space**
5/6	*Designing Experiments* • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations. • Ask questions that foster investigations & explorations relevant to the content. • Measure objects and events • Make predictions, supported by reasons and relevant to the content • Use data from investigations to recognize patterns and relationships and reach conclusions • Identify the variables that can be changed in an experiment • Evaluate the fairness of a given experiment • Describe the steps in designing an experiment • Manipulate and control a number of variables in an experiment • Apply solutions to a technical problem	*Human Body* • Describe the basic structure and functions of the human respiratory, circulatory and nervous systems • Describe how the different body systems are interconnected --- **PCSP** "Body Works" Lessons: 1*, 2*, 3*, 6, 7, 8, 9*, 12, 13, 14*, 15* **S&T** Pages 9-14; 22-28; 31-37	*Electricity* • Evaluate various methods for producing small electrical charges • Investigate a variety of electrical pathways using direct current circuits • Demonstrate that electricity can be transformed into light, heat, sound, motion and magnetic effects • Differentiate between renewable and non-renewable methods of producing electricity --- **BCS6** Unit 2 Chapters 4 & 5 **S&T** Pages: 61-71 **EinS** "Zap! It's Electric"	*Renewable & Non-renewable Resources (BC)* • Analyze how BC's living & non-living resources are used • Identify resource management practices used by Aboriginal peoples in BC • Investigate potential environmental impacts of using BC's living & non-living resources • Describe methods of extracting & processing BC's resources --- **PCSP** "Our Resources Lessons: 3-10, 12 **S&T** Pages 39*; 40-70; 78-81; 88-100	*Controlling Variables/ Interpreting Data* • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations. • Ask questions that foster investigations & explorations relevant to the content. • Measure objects and events • Make predictions, supported by reasons and relevant to the content • Use data from investigations to recognize patterns and relationships and reach conclusions • Identify the variables that can be changed in an experiment • Evaluate the fairness of a given experiment • Describe the steps in designing an experiment • Manipulate and control a number of variables in an experiment • Apply solutions to a technical problem	*Diversity of Life* • Analyze how different organisms adapt to their environments • Distinguish between life forms as single or multi-celled organisms and belonging to one of five kingdoms: Plantae, Animalia, Monera, Protista, Fungi --- **BCS6** Unit 1 Chapters 2 & 3 **S&T** Pages 36-59	*Forces* • Identify the different types of forces (eg. gravity, centripetal, centrifugal) • Demonstrate & describe how various forces can affect the movement of objects • Identify the interaction of forces found in the local environment (eg. playground slides, Playland amusement rides) --- **PCSP** "Putting it in Motion" Lessons: 1*, 2*, 3*; 4-7 **S&T** Pages 117*; 118-143	*Extreme Frontiers (Space)* • Explain obstacles unique to exploration of a specific extreme environment (space) • Assess technologies used for space • Describe contributions of Canadians to exploration technologies --- **BCS6** Unit 3 Chapter 7 **S&T** Pages 82-115

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	TRACK A				TRACK B			
	Processes	**Life Sciences**	**Physical Sciences**	**Earth/Space**	**Processes**	**Life Sciences**	**Physical Sciences**	**Earth/Space**
6	*Controlling Variables/ Interpret Data* • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations. • Ask questions that foster investigations & explorations relevant to the content. • Measure objects and events • Make predictions, supported by reasons and relevant to the content • Use data from investigations to recognize patterns and relationships and reach conclusions • Identify the variables that can be changed in an experiment • Evaluate the fairness of a given experiment • Describe the steps in designing an experiment • Manipulate and control a number of variables in an experiment • Apply solutions to a technical problem	*Cell Structures* (Microscopes) • Demonstrate the appropriate use of tools (eg. microscopes) to examine living things that cannot be seen with the naked eye • Identify the characteristics of various single-celled organisms **BCS6** Unit 1 Chapter 1 Page 276 **S&T** Pages 11-31	*Electricity* • Evaluate various methods for producing small electrical charges • Investigate a variety of electrical pathways using direct current circuits • Demonstrate that electricity can be transformed into light, heat, sound, motion and magnetic effects • Differentiate between renewable and non-renewable methods of producing electricity **BCS6** Unit 2 Chapters 4 & 5 **S&T** Pages 61-71 **EinS** "Zap! It's Electric"	*Extreme Frontiers (Oceanography)* • Explain obstacles unique to exploration of a specific extreme environment (oceans) • Assess technologies used for oceanography • Describe contributions of Canadians to exploration technologies **BCS6** Unit 3 Chapter 7 **S&T** Pages 82-84; 96; 100; 106; 118-127	*Controlling Variables/ Interpreting Data* • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations. • Ask questions that foster investigations & explorations relevant to the content. • Measure objects and events • Make predictions, supported by reasons and relevant to the content • Use data from investigations to recognize patterns and relationships and reach conclusions • Identify the variables that can be changed in an experiment • Evaluate the fairness of a given experiment • Describe the steps in designing an experiment • Manipulate and control a number of variables in an experiment • Apply solutions to a technical problem	*Diversity of Life* • Analyze how different organisms adapt to their environments • Distinguish between life forms as single or multi-celled organisms and belonging to one of five kingdoms: Plantae, Animalia, Monera, Protista, Fungi **BCS6** Unit 1 Chapters 2 & 3 **S&T** Pages 36-59	*Energy Sources* • Demonstrate how energy can be transformed into light, heat, sound, motion and magnetic effects • Investigate renewable & non-renewable methods of producing energy • Identify & describe factors that affect the consumption of a variety of energy sources • Describe how scientific developments have influenced energy use through the ages **BCS6** Unit 2 Chapter 6 **S&T** Pages 61; 73-77	*Extreme Frontiers (Space)* • Explain obstacles unique to exploration of a specific extreme environment (space) • Assess technologies used for space • Describe contributions of Canadians to exploration technologies **BCS6** Unit 3 Chapter 7 **S&T** Pages 82-115

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TRACK A

	Processes	Life Sciences	Physical Sciences	Earth/Space
6/7	*Controlling Variables/ Interpret Data* • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations. • Ask questions that foster investigations & explorations relevant to the content. • Measure objects and events • Make predictions, supported by reasons and relevant to the content • Use data from investigations to recognize patterns and relationships and reach conclusions • Identify the variables that can be changed in an experiment • Evaluate the fairness of a given experiment • Describe the steps in designing an experiment • Manipulate and control a number of variables in an experiment • Apply solutions to a technical problem • Test a hypothesis by planning and conducting an experiment that controls for two or more variables • Create models that help to explain scientific concepts and hypotheses	*Diversity of Life (Microscopes)* • Demonstrate the appropriate use of tools (eg. microscopes) to examine living things that cannot be seen with the naked eye • Identify the characteristics of various single-celled organisms **BCS6** Unit 1 Chapter 1 Page 276 **S&T** Pages: 89-127	*Chemistry (Properties)* • Measure substances and solutions according to pH, solubility and concentration • Classify substances as elements, compounds and mixtures (eg. acids and bases, solutions) • Investigate properties of matter including mass, volume, density & solubility **BCS7** Unit 2 Chapters 4, 5 & 6 **S&T** Pages: 121-156 **EinS** "Stir It Up"	*Extreme Frontiers (Oceanography)* • Explain obstacles unique to exploration of a specific extreme environment (oceans) • Assess technologies used for oceanography • Describe contributions of Canadians to exploration technologies **BCS6** Unit 3 Chapter 7 **S&T** Pages: 82-84; 96; 100; 106; 118-127

TRACK B

	Processes	Life Sciences	Physical Sciences	Earth/Space
6/7	*Modeling* • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations. • Ask questions that foster investigations & explorations relevant to the content. • Measure objects and events • Make predictions, supported by reasons and relevant to the content • Use data from investigations to recognize patterns and relationships and reach conclusions • Identify the variables that can be changed in an experiment • Evaluate the fairness of a given experiment • Describe the steps in designing an experiment • Manipulate and control a number of variables in an experiment • Apply solutions to a technical problem • Test a hypothesis by planning and conducting an experiment that controls for two or more variables • Create models that help to explain scientific concepts and hypotheses	*Ecosystems* • Analyze the roles of organisms as part of interconnected food webs, populations, communities and ecosystems • Assess survival needs and interactions between organisms and the environment • Assess the requirements for sustaining healthy local ecosystems • Evaluate human impacts on local ecosystems **BCS7** Unit 2 Chapter 3 **S&T** Pages 9-59 **EinS** "The Endangered" "A Walk in the Woods"	*Chemistry (Influences)* • Classify changes in matter as chemical and physical • Describe the impact of pollution on the local environment (oil spill, acid rain and greenhouse effect) • Outline stages of recovery of damaged local ecosystems **BCS7** Unit 1 Chapter 2, p. 48 Chapter 3, p. 78-81 Unit 2 Chapter 5 **S&T** Page: 147-152 **EinS** "The Endangered"	*Earth's Crust (Land Forms)* • Use the rock cycle to interpret and explain characteristics of particular rocks • Describe uses of rocks (eg. gems) • Describe the features and formations of a variety of landforms on the planet **BCS7** Unit 3 Chapters 7 & 8 **S&T** Pages: 62-118 **EinS** "Rock Solid"

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TRACK A

	Processes	Life Sciences	Physical Sciences	Earth/Space
7	*Modeling* • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations. • Ask questions that foster investigations & explorations relevant to the content. • Measure objects and events • Make predictions, supported by reasons and relevant to the content • Use data from investigations to recognize patterns and relationships and reach conclusions • Identify the variables that can be changed in an experiment • Evaluate the fairness of a given experiment • Describe the steps in designing an experiment • Manipulate and control a number of variables in an experiment • Apply solutions to a technical problem • Test a hypothesis by planning and conducting an experiment that controls for two or more variables • Create models that help to explain scientific concepts and hypotheses	*Ecosystems (Reproduction)* • Describe the growth and changes in the development of an organism • Outline factors that influence the length and quality of life --- **BCS7** Unit 1 Chapters 1 & 2 **S&T** Pages 37-59	*Chemistry (Properties)* • Measure substances and solutions according to pH, solubility and concentration • Classify substances as elements, compounds and mixtures (eg. acids and bases, solutions) • Investigate properties of matter including mass, volume, density & solubility --- **BCS7** Unit 2 Chapters 4, 5 & 6 **S&T** Pages 121-146 **EinS** "Stir It Up"	*Earth's Crust (Phenomena)* • Describe the composition of the Earth and the dynamics of continental plates • Analyze the dynamics of tectonic plate movement and landmass formation • Explain how the Earth's surface changes over time (eg. earthquakes, volcanoes, floods, tornadoes, avalanches, tsunami) --- **BCS7** Unit 3 Chapter 7, section 7.1 Chapters 8 & 9 **S&T** Pages 62-94

TRACK B

	Processes	Life Sciences	Physical Sciences	Earth/Space
	Modeling • Use their senses to interpret observations • Infer the probable outcome of an event or behaviour based on observations. • Ask questions that foster investigations & explorations relevant to the content. • Measure objects and events • Make predictions, supported by reasons and relevant to the content • Use data from investigations to recognize patterns and relationships and reach conclusions • Identify the variables that can be changed in an experiment • Evaluate the fairness of a given experiment • Describe the steps in designing an experiment • Manipulate and control a number of variables in an experiment • Apply solutions to a technical problem • Test a hypothesis by planning and conducting an experiment that controls for two or more variables • Create models that help to explain scientific concepts and hypotheses	*Ecosystems* • Analyze the roles of organisms as part of interconnected food webs, populations, communities and ecosystems • Assess survival needs and interactions between organisms and the environment • Assess the requirements for sustaining healthy local ecosystems • Evaluate human impacts on local ecosystems --- **BCS7** Unit 1 Chapter 3 **S&T** Pages 9-37 **EinS** "The Endangered" "A Walk in the Woods"	*Chemistry (Influences)* • Classify changes in matter as chemical and physical • Describe the impact of pollution on the local environment (oil spill, acid rain & greenhouse effect) • Outline stages of recovery of damaged local ecosystems --- **BCS7** Unit 1 Chapter 2, p. 48 Chapter 3, p. 78-81 Unit 2 Chapter 5 **S&T** Pages147-152 **EinS** "The Endangered"	*Earth's Crust (Land Forms)* • Compare the characteristics of the Earth's core, mantle, and crust and describe the formation of rocks (e.g. rock cycle) • Describe uses of rocks --- **BCS7** Unit 3 Chapters 7, 8 **S&T** Pages 62; 95-118 **EinS** "Rock Solid"

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Science Materials K-7
www.boreal.com

Grade	Unit	Catalogue Number	Equipment / Supplies Required	Qty Reqd	Unit Price	Qty Ordered
K	*My World*	20024-00	modeling clay (plasticine)	1	$ 5.29	
		20033-00	package assorted buttons pkg 150	1	$ 5.51	
		62659-02	package of pipe cleaners, (pkg of 200)	1	$ 5.44	
		29632-00	straws (pkg of 50)	1	$ 3.95	
		62370-01	magnifier 3X, 6X	6	$ 3.13	
1	*It's Alive*	62810-02	magnifying glasses	6	$ 7.82	
		64259-00	insect pitfall traps pkg 10	1	$ 12.67	
		64551-00	magnifer (bug) boxes	6	$ 3.35	
		66200-00	stethoscope	1	$ 7.82	
		17044-01	tape measure, 150 cm long with metal tips	1	$ 2.91	
		64354-04	ziplip bag (12"x15"), pkg of 50	1	$ 20.15	
1	*Earth Watch*	27365-00	pkg brass fasteners 1/2" pkg 100	1	$ 3.13	
		68127-01	refill for solorgraphics sunprint kit (small)	1	$ 4.40	
		68128-01	refill for solorgraphics sunprint kit	1	$ 13.34	
		47016-00	thermometer	1	$ 6.33	
		63165-00	cobalt chloride papers (vial of 100 strips)	1	$ 8.52	
		63166-00	cobalt chloride sheets, 20 x 25 cm (pkg of 1	1	$ 10.80	
		64354-04	ziplip bag (12"x15"), pkg of 50	1	$ 20.15	
1	*Let's Move*	29632-00	straws pkg of 50	1	$ 3.95	
		29187-00	plastic stir sticks pkg 1000	1	$ 5.89	
		28054-00	craft (popsicle) sticks pkg 500	1	$ 8.57	
		62370-01	magnifier 3X, 6X	6	$ 3.13	
		17044-01	tape measures	6	$ 2.91	
		62330-03	horseshoe magnets (7.5 cm)	6	$ 6.71	
2	*Air and Water*	66389-10	thermometers pkg of 10	6	$ 20.15	
		20024-00	modeling clay (plasticine)	1	$ 5.29	
		17052-02	measuring cups (8 oz) pkg 3	4	$ 7.82	
		64354-04	ziplip bag (12"x15"), pkg of 50	1	$ 20.15	
2	*Matter, Matter Everywhere*	27739-00	Balloons pkg of 20	1	$ 3.50	
		62810-02	magnifying glasses	6	$ 7.82	
		29458-00	bottle food colouring (set of 4)	1	$ 6.33	
		27538-00	plastic beads pkg 144	1	$ 5.59	
		21934-70	fine sand (2.5 kg)	1	$ 5.44	
		21903-20	clear plastic 9 oz cups, (pkg. of 50)	1	$ 13.50	
		66148-00	jumbo paper clips	1	$ 2.61	
2	*Animals Grow*	67007-05	butterfly larvae / nutrient	5	$ 23.95	
		62810-02	magnifying glasses	6	$ 7.82	
		17044-01	tape measure	1	$ 2.91	
		27966-00	roll string 200ft.	1	$ 3.43	
3	*Build It Up*	28054-00	craft (popsicle) sticks (box of 500)	1	$ 8.57	
		29632-00	straws (pkg of 50)	4	$ 3.95	
		246-7410	packages of marbles (pkg of 25)	3	$ 2.25	
		20024-00	modeling clay (plasticine)	1	$ 5.29	
		62659-02	package of pipe cleaners, (pkg of 200)	1	$ 5.44	
			tar paper (18"x36")	1		
3	*Watch It Grow!*	62810-02	magnifying glasses	6	$ 7.82	
		28054-00	craft (popsicle) sticks (box of 500)	1	$ 8.57	
		21903-20	tape measure	1	$ 2.91	
		20362-00	clear 9 oz plastic cups (pkg. of 50)	1	$ 13.50	
		65636-00	package of alfalfa seeds (approx 660 seeds	1	$ 3.35	
		67440-00	Elodea	12	$ 8.57	
		68682-00	plastic forceps	1	$ 1.04	
		62659-02	pipe cleaners (pkg of 200)	1	$ 5.44	
		64354-04	ziplip bag (12"x15"), pkg of 50	1	$ 20.15	
3	*Stars and Planets*	64470-00	flashlights	6	$ 4.40	
		66389-10	thermometers pkg 10	1	$ 20.15	
		29125-00	styrofoam balls 1" diameter each	6	$ 0.37	
		29312-00	styrofoam balls 2" diameter (pkg of 10)	1	$ 8.90	
		27678-00	styrofoam balls 3" diameter pkg 10	1	$ 19.40	
		29632-00	straws (pkg of 50)	1	$ 3.95	

Grade	Unit	Catalogue Number	Equipment / Supplies Required	Qty Reqd	Unit Price	Qty Ordered
4	*Health Habitats*		pencils			
		17119-02	measuring tape 200ft.		$ 9.69	
		60240-00	aquarium gravel		$ 7.38	
		21934-70	sand (fine) 5.5lbs		$ 5.44	
		20110-00	potting soil		$ 4.84	
			leaves			
		17076-04	ruler 30cm clear		$ 0.73	
		67052-12	cabomba pkg 12		$ 11.85	
		67057-00	cactus pkg 12		$ 38.30	
		29596-00	grass seed 30g		$ 1.42	
		67033-12	crickets pkg 12		$ 7.38	
		67002-00	snails pkg 12		$ 13.04	
		67031-12	sowbugs pkg 15		$ 9.69	
			cardboard			
			scissors			
			newspaper			
		66720-25	magnifiers		$ 2.61	
			paper			
			coloured construction paper			
		20024-00	clay 1lb 4 colours		$ 5.29	
		62659-02	pipe cleaners (white)		$ 5.44	
		27966-00	string 200ft		$ 3.43	
4	*Sound and Light*	17057-02	rubber bands	1	$ 1.49	
			plastic combs	6		
		62011-01	safety goggles chemical	6	$ 8.20	
			foam peanuts	1		
		27251-00	tissue paper asst colours pkg 20	1	$ 6.93	
		45683-00	plastic prisms set of 3	3	$ 22.30	
		62250-38	concave and convex lens set of 6	1	$ 26.80	
4	*Weather Watch*	68554-02	large plastic container		$ 34.20	
		20361-00	graduated plastic cup 10oz pkg 25	1	$ 10.00	
		21903-20	small plastic cup 9oz pkg 50	1	$ 13.50	
			pens/pencils			
			cardboard			
		29310-00	balloons pkg 35 9"		$ 5.59	
			shoeboxes			
		65070-00	thermometers -20 to 150 C	6	$ 7.08	
			coloured paper			
			scissors			
			tape			
			marker			
			clear plastic wrap			
		45171-00	lamp gooseneck		$ 19.30	
			clear plastic 3L bottles			
			milk cartons			
			2L plastic bottles			
		20024-00	modelling clay		$ 5.29	
		20110-00	soil potting 1.8kg		$ 4.84	
			ziplock bag			
		21934-70	sand fine 2.5kg		$ 5.44	
		21157-00	measuring cup 500mL		$ 3.43	
			small rocks			
			sponge			
			limestone chips			
		27251-00	tissue paper		$ 6.93	
		21913-00	blue food colouring		$ 4.84	
			small jar with cap			
		27327-00	wooden dowel 4" x 1/8" pkg 12		$ 5.40	
		62011-01	safety goggles		$ 8.20	
			insulating material (wool,polar fleece)			
		62659-02	pipe cleaners white pkg 200		$ 5.44	
		29312-00	2" styrofoam ball pkg 10		$ 8.90	
			marker			
			plastic wrap			
		64352-00	flash light		$ 4.40	
		17057-02	rubber band		$ 1.42	

Grade	Unit	Catalogue Number	Equipment / Supplies Required	Qty Reqd	Unit Price	Qty Ordered
4	*Weather Watch (cont'd)*	17122-03	ruler		$ 0.82	
		29227-00	straws		$ 4.17	
		63603-00	weather station		$ 14.83	
		20521-00	identical jars 8oz	5	$ 17.04	
		29486-00	lids	5	$ 13.44	
5	*Body Works*		toilet paper tubes			
		20024-00	modelling clay		$ 5.29	
		63439-05	toothpicks round box 250		$ 2.61	
			bowls			
		17122-03	ruler 30cm		$ 0.82	
			plastic wrap			
		27882-00	cotton balls		$ 3.95	
			tape			
		21903-20	plastic cups 9oz pkg 50	12	$ 13.50	
		30362-42	magnifiers	6	$ 5.89	
		28054-00	craft sticks pkg 500		$ 8.57	
			vinyl plastic tubing 1ft. Assort sizes avail.	2		
		17023-01	28 dominoes		$ 14.08	
			ziploc			
		97046-06	iodine 500mL reagent grade		$ 9.69	
		29214-00	eyedropper pkg 6	2	$ 3.65	
		62925-06	scissors		$ 5.89	
		28960-00	balloons 15" pkg 10	16	$ 3.35	
		20165-00	balloons 5" pkg 35	35	$ 5.14	
		17057-02	rubber bands		$ 1.49	
		29227-00	straws flexible		$ 4.17	
		20047-00	red food colouring 30mL		$ 4.84	
		62645-03	grease pencil		$ 1.49	
		20321-00	stopwatch		$ 11.55	
		29221-00	rubber ball hi-bounce pkg 6		$ 3.13	
		29395-00	index cards blank 3x5 pkg 100		$ 2.68	
			markers			
			hole punch			
			paper fasteners			
			ribbon			
			plastic forks			
			marbles			
			glue			
		79704-30	Human Body - microslide 8 examples		$ 11.85	
		69702-02	small pipette bulb		$ 16.80	
5	*Putting It In Motion*	66370-00	slinky		$ 11.85	
			marbles			
		27966-00	string 200ft. Cotton		$ 3.43	
			straws			
			small blocks of wood			
			rulers			
			masking tape			
			paper towel rolls			
		20321-00	stopwatch		$ 11.55	
		68028-00	weights hooked set of 20		$ 67.00	
			masking tape			
			balls of different shapes and sizes			
		27328-00	wooden dowelling 12" x1/8" pkg 12		$ 7.20	
		47490-00	clamp pulley	12	$ 18.25	
			cotton spools			
		69981-05	spring scales 500g	3	$ 8.87	
		27493-00	nails 5cm pkg 50		$ 4.25	
			screws			
		64576-00	screwdriver all-in-one		$ 23.40	
			cardboard strips			
			push pins			
		47000-06	hammer		$ 14.83	
			jar lids			
		29542-00	petroleum jelly		$ 4.84	
		61825-00	electric tape		$ 3.20	
		62375-00	magnifiers	6	$ 6.33	
			waterproof markers			
			brass fasteners			
			ziploc			

Grade	Unit	Catalogue Number	Equipment / Supplies Required	Qty Reqd	Unit Price	Qty Ordered
5	*Our Resources*	65635-00	humus 1.8kg		$ 4.84	
		68152-00	jiffy mix 3.5L		$ 8.87	
		66726-07	plant pots 6.25cm pkg 12		$ 4.40	
		20110-00	soil potting		$ 4.84	
			clear plastic bags			
			metal pie plate			
			plastic dishpan			
		21934-70	sand fine 2.5kg		$ 5.44	
		60240-05	gravel 2.5kg		$ 6.56	
			ball bearings			
		63439-01	toothpicks box 750		$ 2.46	
		17012-05	fake money (bag with assorted types)		$ 7.38	
			wire wisk			
5	*Our Resources (cont'd)*	65166-00	bucket		$ 3.80	
		62677-00	large square plastic pan		$ 10.13	
		27782-00	window screen		$ 5.29	
			iron			
			rolling pin			
		21157-00	measuring cup 500mL		$ 3.43	
			tea towels			
		29458-00	colour dye set of 4 colours		$ 6.33	
			clear plastic sheet			
		21903-20	plastic cup 9oz pkg 50		$ 13.50	
			tape			
			large rubber band			
		68028-00	weights hooked set of 20		$ 67.00	
		29600-00	radish seeds 30g pkg		$ 2.01	
		29402-00	cheescloth 2m		$ 4.47	
			salt			
		28090-00	vanilla flavoring		$ 3.35	
			sugar			
		46234-01	latex gloves medium pkg 50		$ 14.83	
			1L milk carton duct tape			
			stapler			
		66720-74	funnel 227ml poly		$ 5.59	
		45009-00	Duct tape		$ 11.40	
6 (Ch. 1)	*1 - Diversity of Life*	28871-00	Poly containers 1L	4	$1.19	
		29640-00	masking tape		$3.58	
		62948-00	bean seeds 60 seeds		$3.73	
		20110-00	potting soil		$4.84	
		21157-00	measuring cup 500mL		$3.43	
		47783-00	sharpie set of 4		$18.65	
		69190-01	animal cell slide		$6.11	
		69190-02	plant cell slide		$6.56	
			ziploc			
		01735-08	600mL beaker		$5.59	
		30362-42	magnifier		$5.89	
		68851-47	petri dish set of 20		$14.83	
		57904-00	microscope 4x10x40 cordless LED		$340.00	
		62501-01	microscope slides pkg 72		$9.31	
		62230-00	lens paper pkg 50		$1.48	
		69173-01	human cheek prepared slide		$7.30	
			onion skin prepared slide			
(Ch. 2)		63405-00	tongs		$7.82	
		20048-00	tweezers		$2.61	
6 (Ch. 3)		29214-00	medicine dropper pkg 6		$3.65	
		57904-00	microscope 4x10x40 cordless LED		$340.00	
		62510-01	microscope slides pkg 72		$9.31	
		62473-00	cover slips pkg 100		$5.14	
		68100-06	pond life guide		$10.36	
		67426-06	assorted protists set of 5		$13.78	
		01735-08	600mL beaker		$5.59	
		29458-00	food colouring 4 colours		$6.33	
		20399-00	spray bottle		$3.65	
		45099-00	duct tape		$11.40	
			ziploc			
			sharpie			

Grade	Unit	Catalogue Number	Equipment / Supplies Required	Qty Reqd	Unit Price	Qty Ordered
6 (Ch. 4)	*2 - Electricity*	29312-00	styrofoam balls 2" pkg 10		$8.90	
		61960-06	glass rods 6mm	2	$16.70	
		64305-01	petri dish with lid pkg 20		$8.87	
		69994-00	D cell battery		$4.10	
		46481-00	battery holder		$4.40	
		66723-23	copper wires with alligator clips on end		$5.59	
		62210-06	1.5V light bulb pkg 10		$16.40	
		29220-00	mini light holder		$14.16	
		01735-08	600mL beaker	4	$5.59	
		63635-16	heavy gauge copper wire		$5.89	
		18103-00	headphones		$13.34	
			galvanized nail			
(Ch. 5)		69994-00	D cell battery	2	$4.10	
		62210-06	1.5V light bulb	2	$16.40	
		66723-23	copper wire with alligator clips	6	$5.59	
		29220-00	mini bulb holder	2	$14.16	
		60950-00	1.5V buzzer		$17.15	
		62795-00	switches		$5.89	
			iron rod 5cm			
		63635-24	15-20cm copper wire		$6.71	
(Ch. 6)		65070-01	thermometers	2	$7.82	
		69994-00	1.5V 'D' battery	2	$4.10	
		46481-00	battery holder	2	$4.40	
		66723-23	copper wires with alligator clips	5	$5.59	
		62210-03	3V light bulb pkg 10	1	$23.10	
			1 amp fuse			
6 (Ch. 7)	*3 - Exploring Extreme Environments*		20cm plastic tube			
		27966-00	string 200ft cotton		$3.43	
			marbles			
		17044-01	tape measure		$2.91	
		20321-00	stopwatch		$11.55	
		29127-00	jar with screw top lid 1 gallon		$11.18	
		45009-00	duct tape		$11.40	
(Ch. 8)		74386-06	digital camera (optional)		$300.00	
		48048-00	binoculars (optional)		$52.25	
		31027-03	telescope (optional)		$375.00	
		61190-00	compass		$4.40	
		47246-01	safety goggles		$7.38	
7 (Ch. 1)	*1 - Ecosystems*	21903-20	Plastic drinking cups 9oz pkg 50		$13.50	
			salt (30mL)			
		62948-00	bean seeds 60		$3.73	
			sharpie			
		62190-27	large wide mouthed jar 473mL pkg 12		$24.12	
		66720-75	large plastic funnel		$7.82	
		45171-00	desk lamp with flexible arm		$19.30	
		62375-00	magnifier		$6.33	
		57904-00	microscope 4x10x40 cordless LED		$340.00	
		60225-02	dip net		$4.02	
			tent pegs	4		
		63352-02	thermometer -20 to 110C		$1.18	
		60527-00	plant field guide		$23.85	
		60026-00	insect field guide		$25.40	
		47355-00	bird field guide		$16.35	
		61764-05	plant pots pkg 10		$7.82	
(Ch. 2)		66171-00	meal worms pkg 50	1	$15.30	
		20321-00	stopwatch		$11.55	
			whistle			
			20 strips of cloth 2 colours			
			oven mitt			
		61764-05	plastic plant pots pkg 10		$7.82	
		25106-00	watering can		$6.71	
		20110-00	potting soil		$4.84	
		62948-00	bean seeds 60		$3.73	
		21942-30	birdseed 1lb		$3.50	
		67055-01	aquatic plant 3		$11.25	
(Ch. 3)		74386-06	camera digital 4.0MP		$300.00	
			asst plant seeds (various avail specify)			

Grade	Unit	Catalogue Number	Equipment / Supplies Required	Qty Reqd	Unit Price	Qty Ordered
7	*2 - Chemistry*		film containers	5		
(Ch. 4)		17121-03	triple beam balance		$179.00	
		21157-00	measuring cup 500mL		$3.43	
		61366-15	graduated cylinder 500mL		$11.92	
		47979-00	bike pump		$68.00	
			tall container with lid			
		46234-01	rubber gloves medium pkg 50		$14.83	
		63439-01	tooth picks box 750		$2.46	
		61245-00	cork pkg 100		$16.35	
		29458-00	food colouring set of 4 colours		$6.33	
(Ch. 5)		27485-00	iron nail pkg 50		$3.35	
		62320-00	magnet horse shoe		$14.83	
			1L styrofoam packing peanuts			
			1L marbles			
		62677-00	large basin		$10.13	
(Ch. 6)		62645-03	grease pen		$1.49	
		29187-00	stir sticks pkg 1000		$5.89	
		17056-05	measuring spoons pkg 6		$2.31	
		01735-06	250mL beaker	2	$3.87	
		61967-01	stirring rod poly	2	$2.31	
		17121-03	triple beam balance		$179.00	
		20321-00	stopwatch		$11.55	
		66030-01	sieve set of 4		$106.00	
		94185-06	epsom salt		$8.79	
		69642-03	universal pH paper		$2.01	
		01737-03	test tubes 14mL	9	$0.75	
		63280-00	test tube rack 6		$12.29	
		61366-07	50mL graduated cylinder poly		$5.89	
		69394-66	hot plate		$187.00	
		63435-00	tongs		$3.95	
		01735-07	beaker 400mL		$4.32	
		01735-08	beaker 600mL		$5.59	
		46902-00	magnet bar set of 8		$5.80	
		66720-74	funnel		$5.59	
		61655-11	filter paper		$8.57	

7	*3 - Earth's Crust*		750mL plastic jug	2		
(Ch. 7)		64000-00	assorted mineral and rock set		$74.50	
		30362-42	magnifier		$5.89	
		64469-00	streak plate		$4.32	
			10% HCL			
		01737-03	test tubes	2	$0.75	
		01737-07	400mL beaker	2	$4.32	
		61366-08	graduated cylinder 100mL poly		$5.89	
		01735-06	250mL beaker		$3.87	
		67310-74	stirring rod 12"		$3.73	
		69394-66	hot plate		$187.00	
		63021-01	scoopula 60mL		$13.44	
		94111-04	copper II sulfate anhydrous 500g		$15.45	
		94095-06	plaster of paris 500g		$8.05	
		29542-00	petroleum jelly		$4.84	
		57441-00	binocular microscope		$940.00	
(Ch. 8)		20048-00	tweezers		$2.61	
		29214-00	medicine dropper pkg 6		$3.65	
		29426-00	1kg cornstarch (500g each)		$4.92	
		46234-01	latex gloves medium pkg 50		$14.83	
(Ch. 9)		21934-70	sand fine 2.5kg		$5.44	
			sponges			
		94282-06	borax powder 500g		$11.62	
		21157-00	measuring cup 500mL		$3.43	
		66370-00	slinky		$11.85	
			coiled spring			

Please note that prices are subject to change without notification. Please check current pricing @ www.boreal.com or contact Kevin Noseworthy at 604.760.7967 or kevin_noseworthy@vwreducation.com.