

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change	R	D	C	changed outcomes
Unit 1 – Interactions Within Ecosystems				
1.01 Identify questions related to a local ecosystem such as “What types of species live in a particular ecosystem?” (208-2, 208-3)				
1.02 Describe an ecosystem as a group of interacting living and nonliving things.				
1.03 Identify examples of ecosystems within Newfoundland and Labrador. Include: (i) ocean (ii) forest (iii) pond (iv) arctic				
1.04 List examples of organisms that live in each ecosystem.				
1.05 Demonstrate the importance of choosing words that are scientifically appropriate. (109-12)				
1.06 Define and use terms in context. Include: (109-12, 109-13) (i) ecosystem (ii) abiotic (iii) biotic (iv) species (v) organism (vi) population				
1.07 Investigate the biotic and abiotic factors of a local ecosystem. (306-3)				
1.08 Define and delimit questions to investigate in a local ecosystem. (208-3)				

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change	R	D	C	changed outcomes
Unit 1 – Interactions Within Ecosystems				
1.09 Organize and record information collected in an investigation of an ecosystem using instruments effectively and accurately. (209-3, 209-4)				
1.10 Communicate questions, ideas, plans, and results, using lists, notes in point form, sentences, oral language, and other means. (211-2)				
1.11 Work cooperatively with team members to develop and carry out a plan, and troubleshoot problems as they arise (211-3)				
1.12 Evaluate individual and group processes used in planning, decision making, and completing a task (211-4)				
1.13 Describe the following abiotic factors of local ecosystems. (i) intensity of sunlight (ii) air, soil and water temperature (iii) wind direction and speed				
1.14 Use a key to identify the biotic factors observed in the local ecosystem. (210-1)				
1.15 Identify the biotic factors of a local ecosystem.				

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change	R	D	C	changed outcomes
Unit 1 – Interactions Within Ecosystems				
1.16 Describe interactions between biotic and abiotic factors in an ecosystem. (306-3) Include: (i) biotic-abiotic (ii) abiotic-abiotic (iii) biotic-biotic				
1.17 Describe symbiotic relationships as a form of biotic interactions				
1.18 Define symbiosis				
1.19 Define and give examples of parasitism, mutualism and commensalism				
1.20 Investigate an interaction between a biotic and an abiotic factor in an ecosystem				
1.21 Design and carry out an experiment controlling major variables (208-6, 209-1)				
1.22 Organize, compile and display data using tables (209-4, 210-2)				
1.23 Defend a given position on an issue or problem based on their findings (211-5)				
1.24 Identify the niche of producers, consumers, and decomposers in a local ecosystem. (304-2)				
1.25 Define and use in context the terms producer, consumer and decomposer.				
1.26 Given a diverse group of organisms, classify them as producers, consumers, or decomposers. (304-1)				
1.27 Explain that observations and identification of similar characteristics enables classification in an ecosystem. (109-1)				

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R

D

C

changed outcomes

Unit 1 – Interactions Within Ecosystems

1.28 Relate the conditions necessary for the growth and reproduction of microorganisms to various aspects of the human food supply. (304-3)

1.29 Identify the conditions that affect microorganism growth.

- (i) temperature
- (ii) moisture
- (iii) light
- (iv) acidity
- (v) salinity

1.30 Provide examples of how knowledge of microorganisms has resulted in the development of food production and preservation techniques. (111-1)

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R

D

C

changed outcomes

Unit 1 – Interactions Within Ecosystems

1.31 Describe how the following food preservation techniques inhibit the growth and reproduction of microorganisms. Include:

- (i) pickling
- (ii) salting
- (iii) drying
- (iv) smoking
- (v) refrigeration
- (vi) freeze-drying
- (vii) radiation
- (viii) canning

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R

D

C

changed outcomes

Unit 1 – Interactions Within Ecosystems

1.32 Describe how energy is supplied to, and how it flows through, a food chain. (306-1)

1.33 Explain how producers use light energy, carbon dioxide, and water (photosynthesis) to produce energy for the ecosystem.

1.34 Define food chain.

1.35 Construct simple food chains using local examples.

1.36 Define herbivores, carnivores and omnivores in terms of different types of consumers.

1.37 Classify the organisms within food chains as producers, herbivores, carnivores and omnivores

1.38 Apply the concept of a food web as a tool for interpreting the structure and interactions of an ecosystem. (111-6)

1.39 Define food web.

1.40 Construct food webs using organisms from local ecosystems.

1.41 Describe, using an ecological pyramid, how energy flows through a food web. (210-2, 306-1)

1.42 Draw and interpret a pyramid of energy.

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R

D

C

changed outcomes

Unit 1 – Interactions Within Ecosystems

1.43 Identify the limitations of a pyramid of energy to accurately portray energy flow in a food web. (210-3) Include:

- (i) they do not always indicate the exact amount of food energy required, but are simple generalizations.
- (ii) that energy is transformed into other types of energy (heat) and is not always transferred to the next level in the pyramid.
- (iii) approximately 90% of the energy is lost at each step

1.44 Explain using examples why energy pyramids and food webs are not always useful.

1.45 Describe how matter is recycled in an ecosystem through interactions among plants, animals, fungi and microorganisms. (306-2)

1.46 Illustrate and explain the nutrient cycle.

1.47 Identify changes that have occurred in a local ecosystem over time. (306-4)

1.48 Define succession.

1.49 Predict what an ecosystem will look like in the future based on the characteristics of the area. (208-5)

1.50 Define pioneer species.

1.51 Define climax community.

1.52 Distinguish between primary and secondary succession.

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R

D

C

changed outcomes

Unit 1 – Interactions Within Ecosystems

1.53 Construct a flow chart of images to illustrate the changes occurring during primary and secondary succession. (210-2) Include:

- (i) bare rock to forest (primary)
- (ii) forest re-growth after fire (secondary)

1.54 Describe the ecosystem changes that occur in the examples above. Include:

- (i) soil composition
- (ii) plant types
- (iii) animal types
- (iv) amount of light

1.55 Describe how our need for a continuous supply of wood resulted in the development of silvaculture practice. (112-3)

1.56 Make informed decisions about forest harvesting techniques taking into account the environmental advantages and disadvantages. (113-9)

1.57 Provide examples of how our understanding of boreal forest ecology has influenced our harvesting practices identifying the positive effects of these practices. (111-1, 113-1)

1.58 Identify various science- and technology-based careers related to forest management and harvesting. (112-9)

1.59 Propose and defend a course of action to protect the local habitat of a particular organism. (113-11, 211-5)

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R

D

C

changed outcomes

Unit 1 – Interactions Within Ecosystems

1.60 Describe how humans have influenced the environment. Include:

- (i) habitat loss/destruction
- (ii) harvesting resources
- (iii) pollution
- (iv) introduced species

1.61 Debate the pros and cons of habitat conservation. Pros

- (i) sustainability of resource
- (ii) preservation of biodiversity
- (iii) eco-tourism

Cons

- (i) artificial habitats
- (ii) economic loss (job loss, etc.)
- (iii) limited human use

1.62 Provide examples of problems that arise in the environment that cannot be solved using only scientific or technological knowledge. (113-10) Include:

- (i) decline in cod stocks
- (ii) oil slicks/spills
- (iii) acid rain

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R **D** **C**

changed outcomes

Unit 1 – Interactions Within Ecosystems

1.63 Use various sources to research individuals or groups in Canada interested in protecting the environment. (112-4, 112-8, 209-5) Include:

- (i) local groups and individuals
- (ii) national groups and individuals
- (iii) international groups and individuals

Unit 2 - Heat

2.01 Relate personal activities in formal and informal settings to temperature. (109-10)

2.02 Define temperature operationally.

2.03 Relate temperature to everyday experiences. Include:

- (i) daily temperature changes
- (ii) cooking temperatures
- (iii) refrigeration temperatures
- (iv) average temperatures in different geographic areas

2.04 Predict and identify the temperature of various familiar objects. Include:

- (i) human body temperature
- (ii) temperatures of boiling and freezing water
- (iii) comfortable room temperature

2.05 Provide examples of temperature measuring technologies used in the past. (110-7) Include:

- (i) Galileo’s air thermometer
- (ii) Early liquid thermometers

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change	R	D	C	changed outcomes
Unit 2 - Heat				
2.06 Identify scales used in temperature measurement. Include: (i) Celsius (ii) Fahrenheit (iii) Kelvin				
2.07 Select appropriate methods and tools in order to construct and test a thermometer. (208-8, 210-13)				
2.08 Compile and display data collected in the test of the design of the constructed thermometer. (210-2)				
2.09 Describe various instruments used to measure temperature. (308-1) Include: (i) liquid-in-glass thermometer (ii) thermocouple (iii) resistance thermometer (digital thermometers) (iv) bimetallic strip (thermostat) (v) infrared thermometer				
2.10 Define temperature using the Particle Theory of Matter. (308-2)				
2.11 Define matter				

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change	R	D	C	changed outcomes
Unit 2 - Heat				
2.12 Describe the Particle Theory of Matter. Include: (i) All matter is made up of tiny particles. (ii) These particles are always moving - they have energy. The more energy the particles have, the faster they move. (iii) There is space between all particles. (iv) There are attractive forces between the particles. (v) The particles of one substance differ from the particles of other substances.				
2.13 Define kinetic energy.				
2.14 Define temperature as a measure of the average kinetic energy of the particles of a substance.				
2.15 Explain how each state of matter reacts to changes in temperature. (308-3)				
2.16 Compare the characteristics of the three states of matter in terms of: (i) volume (ii) shape				
2.17 Describe the three states of matter using the particle theory of matter in terms of: (i) arrangement of particles (ii) movement of particles				
2.18 Define expansion and contraction				
2.19 Use the particle theory of matter to explain expansion and contraction in the three states of matter.				
2.20 Explain changes of state using the Particle Theory of Matter. (308-4) Include: (i) melting (ii) freezing (iii) evaporation				

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change	R	D	C	changed outcomes
Unit 2 - Heat				
2.21 State a hypothesis, carry out an experiment, identify and control major variables and state a conclusion based on experimental data (208-5, 208-6, 210-11)				
2.22 Use heating and measuring tools accurately and safely (209-6)				
2.23 Organize, compile and display data using tables and graphs (209-4, 210-2)				
2.24 Compare transmission of heat by conduction, convection, and radiation. (308-5)				
2.25 Define conduction, convection and radiation in terms of: (i) particle movement (ii) state(s) in which it occurs				
2.26 List common examples of the three processes of heat transfer. Include: (i) conduction - cookware, ice pack (ii) convection - air currents, heating a liquid (iii) radiation - fireplace, sunlight				
2.27 Provide examples of heat technologies used past and present to heat homes in Newfoundland and Labrador. (110-7) Include: (i) wood stove (ii) electric heat (iii) oil furnace (iv) air to air heat pump (v) hot water radiation (vi) geothermal (vii) solar				

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change	R	D	C	changed outcomes
Unit 2 - Heat				
2.28 Identify different approaches taken to solve the problem of heating homes during cold times of the year (109-7)				
2.29 Make informed decision about the various technologies used to heat our homes, taking into account potential advantages and disadvantages (110-7, 113-8)				
2.30 Provide examples of how the technologies used to heat homes have improved over time (110-8)				
2.31 Provide examples of how our understanding of evaporation and condensations of liquids resulted in the development of heat pumps (111-1)				
2.32 Describe how various surfaces absorb radiant heat (308-6)				
2.33 Design and conduct an experiment to test identified questions, state a hypothesis, identify and control major variables. (208-3, 208-5, 209-1)				
2.34 Use experimental apparatus and tools safely. (209-6)				
2.35 Organize and display data using tables and graphs. (209-4, 210-2)				
2.36 State a conclusion, based on experimental data, and explain how evidence gathered supports or refutes an initial idea. (210-11)				
2.37 Distinguish between thermal conductors and insulators.				
2.38 Provide examples of insulating technologies used today and in the past. (109-4) Include: (i) animal fur (ii) sod (iii) fiberglass (iv) thermos				

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change	R	D	C	changed outcomes
Unit 2 - Heat				
2.39 Compare, in qualitative terms, the specific heat capacities of some common materials. (308-7) Include: (i) water (ii) ice (iii) aluminum (iv) concrete (v) steel				
2.40 Distinguish between heat and temperature.				
2.41 Define specific heat capacity.				
2.42 Describe how our needs related to heat can lead to developments in science and technology. (112-1)				
2.43 Identify examples of science- and technology-based careers that are associated with heat and temperature. (112-9)				
Unit 3 – Mixtures and Solutions				
3.01 Define the Particle Theory of Matter.				
3.02 Distinguish between pure substances and mixtures using the particle theory of matter. (307-1)				
3.03 Using observations, categorize substances as pure or mixtures.				
3.04 Define the terms pure substance and mixture using the Particle Theory of Matter.				

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R

D

C

changed outcomes

Unit 3 – Mixtures and Solutions

3.05 Identify various pure substances. Include:

- (i) distilled water (H₂O)
- (ii) sugar (C₁₂H₂₂O₁₁)
- (iii) copper (Cu)
- (iv) oxygen (O₂)
- (v) carbon dioxide (CO₂)

3.06 Identify various mixtures that are found in or around student homes. Include:

- (i) salad dressing
- (ii) chocolate chip cookie
- (iii) Kool-aid
- (iv) concrete
- (v) air

3.07 Distinguish between heterogeneous (mechanical) and homogeneous (solution) mixtures using the particle theory of matter. (307-3)

3.08 Identify that homogeneous mixtures appear as one substance and light will pass through unaffected.

3.09 Identify that heterogeneous mixtures may appear as more than one substance and light will reflect perpendicular to the incident beam.

3.10 Identify some mixtures as combinations of heterogeneous and homogeneous mixtures. Include:

- (i) orange juice
- (ii) milk
- (iii) soft drink

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change	R	D	C	changed outcomes
Unit 3 – Mixtures and Solutions				
3.11 Describe the characteristics of solutions using the Particle Theory of Matter and precise scientific language. Include the terms: (307-3) (i) dissolving (ii) solute (iii) solvent (iv) solubility (soluble/insoluble)				
3.12 Identify that solutions can form between the three states of matter. Include: (i) solid solute - liquid solvent (ii) gas solute - liquid solvent (iii) gas solute - gas solvent (iv) solid solute - solid solvent (v) liquid solute - liquid solvent				
3.13 Define solute and solvent				
3.14 Given an example of a solution and its components, identify the solute and solvent. Include: (i) alloys such as brass, bronze (ii) air (iii) salt water (iv) rubbing alcohol (v) soda water				
3.15 Describe the concentrations of solutions qualitatively and quantitatively. (307-4)				
3.16 Distinguish between a quantitative and a qualitative description.				
3.17 Define the terms quantitative and qualitative.				
3.18 Define concentration.				

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R **D** **C**

changed outcomes

Unit 3 – Mixtures and Solutions

3.19 Describe the concentrations of solutions qualitatively using the terms:

- (i) dilute
- (ii) concentrated
- (iii) saturated
- (iv) unsaturated

3.20 Describe the concentrations of solutions quantitatively as the amount of solute per unit volume.

3.21 Express concentration of solutions in g/L. (210-9)

3.22 Convert given concentrations in g/mL to g/L.

3.23 Identify different measures of concentration. (109-7) Include:

- (i) percentage by mass
- (ii) ppm (parts per million)

3.24 State a hypothesis based on background information or an observed pattern of events. (208-5)

3.25 Identify and delimit questions and problems to facilitate investigation. (208-2, 208-3)

3.26 Identify the line of best fit and interpolate or extrapolate based on the line of best fit. (210-5)

3.27 Develop a testable hypothesis on the effect of temperature on solubility. (208-1)

3.28 Carry out procedures controlling the major variables to study the effect of temperature on solubility. (209-1)

Name: _____			Course: <u>Grade 7 Science</u>	
R – retain D – delete C - change	R	D	C	changed outcomes
Unit 3 – Mixtures and Solutions				
3.29 Describe qualitatively the factors that affect the solubility of a solid and a gas. (307-5) Include: (i) temperature (ii) pressure				
3.30 Using apparatus safely, identify and separate the components of a variety of mixtures. (209-6, 307-2) Include: (i) mechanical sorting (flotation, magnetism, etc.) (ii) filtration (iii) evaporation (iv) distillation (v) paper chromatography				
3.31 Describe how to use different methods to separate a variety of mixtures. Include: (i) mechanical sorting (flotation, magnetism) (ii) filtration (iii) evaporation (iv) distillation (v) paper chromatography				
3.32 Identify separation techniques used in or around student homes. Include: (i) straining spaghetti in colander (ii) skimming fat off soup (iii) drying clothes (separating water from fabric) (iv) window screens allowing air in while keeping insects out (v) making coffee using ground coffee beans				
3.33 Choose an appropriate separation technique when given a known mixture (students know the identity of the components)				
3.34 Describe the science underlying a distillation apparatus, using the following terms: boiling, evaporation, condensation. (111-5)				

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change	R	D	C	changed outcomes
Unit 3 – Mixtures and Solutions				
3.35 Define distillation				
3.36 Explain how a distillation apparatus is used to separate a solution.				
3.37 Describe where boiling, evaporation and condensation occurs in a distillation apparatus.				
3.38 Carry out procedures controlling the major variables to answer questions arising from practical problems (208-2, 209-1)				
3.39 Use tools and instruments safely and accurately when carrying out procedures and collecting data. (209-3, 209-6)				
3.40 Evaluate the potential applications of findings related to distillation and paper chromatography. (210-12)				
3.41 Identify, and suggest explanations for, discrepancies in data. (210-7)				
3.42 Answer new questions that result from the mixture separation activities. (210-16)				
3.43 Using distillation as an example show how refining and separation techniques have evolved. (109-4) Include: - simple distillation - fractional distillation				
3.44 Relate the formation and separation of everyday mixtures to disciplines such as chemistry and engineering. (109-10)				
3.45 Provide examples of how science, related to mixtures and solutions, affect our lives. (112-7)				
3.46 Identify some positive and negative effects and intended and unintended consequences of using salt on highways. (113-1)				

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change	R	D	C	changed outcomes
Unit 3 – Mixtures and Solutions				
3.47 Describe how our understanding of the properties of solutions has resulted in better road de-icing technologies. (111-1)				
3.48 Provide examples of how road de-icing technologies have affected our lives, our communities, and our environment. (112-7)				
3.49 Evaluate the methods used to improve the de-icing ability of sodium chloride including time of application, road weather information, and pre-wetting. (113-6)				
3.50 Make an informed decision about the use of road salt as our main road de-icing chemical taking into account the environmental, social, and economics advantages and disadvantages. (113-9)				
Unit 4 – Earth’s Crust				
4.01 Classify minerals based on their physical properties. (210-1, 310-2a)				
4.02 Define mineral				
4.03 List and describe properties of minerals. Include: (i) colour (ii) streak (iii) lustre (iv) hardness (v) cleavage (vi) fracture				
4.04 Use a mineral classification key to investigate questions arising from practical problems (208-2, 210-1)				
4.05 Select appropriate methods and tools for collecting and organizing data to identify minerals (208-8, 209-4)				

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R

D

C

changed outcomes

Unit 4 – Earth’s Crust

4.06 Using a classification key, identify common minerals. Include: (210-1)

- (i) quartz
- (ii) calcite
- (iii) magnetite
- (iv) mica
- (v) pyrite
- (vi) galena
- (vii) gypsum
- (viii) talc
- (ix) feldspar
- (x) hematite

4.07 Classify rocks based on their characteristics and method of formation: (310-2b)

4.08 Define rock.

4.09 Define igneous rock and describe their formation.

4.10 Differentiate between magma and lava.

4.11 Differentiate between intrusive and extrusive igneous rocks using examples. Include:

- (i) granite (intrusive) magma
- (ii) basalt (extrusive) lava

4.12 Relate crystal size in igneous rocks to rate of cooling.

4.13 Define sedimentary rock.

4.14 List and show examples of sedimentary rocks. Include:

- (i) Shale (small particles)
- (ii) Sandstone (medium particles)
- (iii) Conglomerate (large particles)
- (iv) Limestone (plant and animal particles)

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R

D

C

changed outcomes

Unit 4 – Earth’s Crust

4.15 Define metamorphic rock.

4.16 Describe the formation of metamorphic rocks.

4.17 List examples of metamorphic rocks and their parent rock. Include:

- (i) slate from shale
- (ii) marble from limestone
- (iii) quartzite from sandstone
- (iv) gneiss from granite

4.18 Identify questions to investigate arising from the study of the rock cycle. (208-2)

4.19 Sketch and label a diagram of the rock cycle.

4.20 Recognize the relationship between various types of rocks (igneous, sedimentary, metamorphic).

4.21 Explain how society’s needs led to developments in technologies designed to use rocks. (112-3)

4.22 Identify various minerals and rocks mined past and present, including but not limited to:

- (i) gold (Nugget Pond)
- (ii) granite (Lumsden)
- (iii) iron ore (Labrador City)
- (iv) slate (Burgoyne’s Cove)
- (v) gypsum (Flat Bay)

4.23 Describe the characteristics of Earth’s crust and some of the technologies which have allowed scientists to study geological features in and on the earth’s crust. (109-7, 111-2, 310-1)

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R

D

C

changed outcomes

Unit 4 – Earth’s Crust

4.24 Sketch and label a model of Earth’s layered interior. Include:

- (i) inner core
- (ii) outer core
- (iii) mantle
- (iv) crust

4.25 Describe how the composition of the Earth’s crust is determined.

4.26 Recognize that Earth’s crust is broken into plates and movement occurs where plate margins meet (plate tectonics).

4.27 Describe how plate tectonic theory has evolved in light of new geological evidence. (110-4)

4.28 Identify Alfred Wegener as the person responsible for proposing the Continental Drift Theory.

4.29 Describe the Continental Drift Theory and the evidence supporting it; Include evidence from:

- (i) continental fit (paleogeographic)
- (ii) fossils (biological)
- (iii) rock layers (geological)
- (iv) climate (meteorological)

4.30 Identify the technological advances that have provided evidence to support the current theory of Plate Tectonics. Include:

- (i) sonar
- (ii) magnetometers
- (iii) deep sea drilling

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change	R	D	C	changed outcomes
Unit 4 – Earth’s Crust				
4.31 Identify types of plate boundaries. Include: (i) Divergent (pulling apart) (ii) Convergent (pushing together) (iii) Transform (sliding past)				
4.32 Identify convection currents in the Earth as the driving force mechanism behind plate tectonics.				
4.33 Provide examples of Canadian contributions to our understanding of local, regional, and global geology. (112-12)				
4.34 Describe how our explanations of how the Earth has changed over time is based on the collection of evidence and finding relationships between various observations in imaginative ways. (109-2)				
4.35 Describe how our understanding of the forces that shaped our Earth have changed over time as new evidence was collected. (110-5)				
4.36 Identify the Theory of Continental Drift as one early explanation for how our Earth changed over time. (110-1)				
4.37 Identify the Theory of Plate Tectonics as an example of a major shift in our world view. (110-3)				
4.38 Compare some of the catastrophic events, such as earthquakes and volcanic eruptions that occur on or near Earth’s surface. (311-4)				
4.39 Define earthquakes.				
4.40 Explain why earthquakes occur using the concept of plate tectonics.				
4.41 Define volcano.				
4.42 Identify how and where volcanoes form. Include : (i) areas where plates collide (ii) areas where plates separate (iii) areas where plates pass over stationary hot spots				

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R

D

C

changed outcomes

Unit 4 – Earth’s Crust

4.43 Organize and analyze data on the geographical distribution of earthquakes and volcanoes to determine patterns and trends. (209-4, 210-6, 311-5)

4.44 Provide examples of theories used in the past to explain volcanic activity, earthquakes, and mountain building. (110-1)

4.45 Identify explanations of volcanic and earthquake activity from the past. Include:
 (i) Pele
 (ii) Glooscap

4.46 Explain the processes of mountain formation. (311-1)

4.47 Define folding and faulting.

4.48 Explain how mountains are formed using the theory of Plate Tectonics. Include:
 (i) folding
 (ii) faulting
 (iii) volcanic eruption

4.49 Develop a chronological model or geological time scale of major events in Earth’s history. (209-4, 311-6)

4.50 Describe the geologic time scale in terms of the four main eras and the major events that occurred in each. Include:
 (i) Precambrian – formation of the Earth and appearance of simple life forms.
 (ii) Paleozoic – appearance of more complex life forms
 (iii) Mesozoic – appearance and extinction of dinosaurs
 (iv) Cenozoic – appearance of humans

4.51 Explain various ways in which rocks can be weathered. (311-2)

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change

R

D

C

changed outcomes

Unit 4 – Earth’s Crust

4.52 Define weathering.

4.53 Identify types of weathering. Include:

- (i) mechanical
- (ii) chemical

4.54 Define Erosion

4.55 Identify the various agents of erosion. Include:

- (i) water in motion
- (ii) meteorological processes (rain and wind)
- (iii) geological processes (gravity and glaciers)

4.56 Differentiate between weathering and erosion

4.57 Relate various meteorological, geological, chemical and biological processes to the formation of soils. (311- 3) Include:

- (i) rain and wind
- (ii) glaciers and gravity
- (iii) plants and acidic action

4.58 List the basic types of soil. Include:

- (i) clay
- (ii) sand
- (iii) gravel

4.59 Define porosity and permeability.

4.60 Relate porosity and permeability to soil types.

Name: _____

Course: Grade 7 Science

R – retain D – delete C - change	R	D	C	changed outcomes
Unit 4 – Earth’s Crust				
4.61 Classify various types of soil according to their characteristics. (310-3) Include: (i) coarse-textured (sandy gravel) soil (ii) medium-textured (loamy) soil (iii) fine-textured (clay) oil				
4.62 Carry out procedures controlling the major variables to answer questions arising from practical issues. (208-2, 209-1)				
4.63 Use instruments effectively and accurately for collecting data. (209-3)				
4.64 Compile, organize and display data, using a tabular format. (209-4, 210-2, 211-2)				
4.65 Interpret patterns and trends in data, and infer and explain relationships among the variables. (210-6)				
4.66 State a conclusion, based on experimental data, and explain how the data gathered supports or refutes and initial idea. (210-11)				
4.67 Provide examples of how science and technology, associated with soil enrichment, affect communities. (112-7)				
4.68 Define fertilizer.				
4.69 Define composting				
4.70 Identify some positive and negative effects and intended and unintended consequences of enriching soils (113-1)				

Name: _____		Course: <u>Grade 7 Science</u>		
R – retain D – delete C - change	R	D	C	changed outcomes
Unit 4 – Earth’s Crust				
4.71 Identify positive and negative effects of enriching soil. Include: (i) Positive: enhanced plant growth decreased erosion more food aesthetic (ii) Negative runoff algal bloom decreased water oxygen levels increased fish mortality				
4.72 Suggest solutions to problems or issues related to soil use and misuse. (113-7) Include: (i) reduced reliance on chemical fertilizers (ii) limiting runoff (iii) planting wind breaks (iv) no-till farming				
4.73 Define desertification.				
4.74 Identify solutions to desertification of farm soil.				