

You Be The Chemist Grades 5-8 – Curriculum Connections

Atlantic Canada Science Curriculum, Pan-Canadian Outcomes for Grades 5 - 8

Connections for the joint curriculum of New Brunswick, Nova Scotia, Newfoundland and Labrador, and Prince Edward Island

Lesson 1: Goofy Putty

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 300-12 identify the source of materials found in an object and describe the changes to the natural materials required to make the object
- 301-10 identify and describe changes to materials that are reversible and some which are not
- 301-11 describe changes that occur in the properties of materials when materials interact with each other

Grade 6: none

Grade 7: PHYSICAL SCIENCE: MIXTURES AND SOLUTIONS

- 307-1 distinguish between pure substances and mixtures, using the particle model of matter
- 307-3 describe the characteristics of solutions, using the particle model of matter

Grade 8: none

Lesson 2: Goldenrod Detector

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 301-9 identify changes that can be made to an object without changing the properties of the material of which it is made
- 301-11 describe changes that occur in the properties of materials when materials interact with each other

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 3: Rusting Wool

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 301-10 identify and describe changes to materials that are reversible and some which are not
- 301-11 describe changes that occur in the properties of materials when materials interact with each other

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 4: Buoyant Butter

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

Grade 6: none

Grade 7: none

Grade 8: PHYSICAL SCIENCE: FLUIDS

- 210-12 identify and evaluate potential applications of findings
- 307-8 describe the relationship between the mass, volume, and density of solids, liquids, and gases using the particle model of matter
- 307-11 analyse quantitatively the density of various substances

Lesson 5: Rubber Eggs

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 301-10 identify and describe changes to materials that are reversible and some which are not
- 301-11 describe changes that occur in the properties of materials when materials interact with each other

LIFE SCIENCE: MEETING BASIC NEEDS AND MAINTAINING A HEALTHY BODY

- 302-9 describe nutritional and other requirements for maintaining a healthy body

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 6: The Moving Molecule Stomp

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 300-9 group materials as solids, liquids, or gases, based on their properties

Grade 6: none

Grade 7: PHYSICAL SCIENCE: HEAT

- 308-3 explain how each state of matter reacts to changes in temperature
- 308-4 explain changes of state, using the particle model of matter
- 308-2 explain temperature, using the concept of kinetic energy and the particle model of matter

Grade 8: FLUIDS

- 307-9 explain the effects of changes in temperature on the density of solids, liquids, and gases and relate the results to the particle model of matter

Lesson 7: Lumpy Liquids

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 300-9 group materials as solids, liquids, or gases, based on their properties
- 301-10 identify and describe changes to materials that are reversible and some which are not
- 301-11 describe changes that occur in the properties of materials when materials interact with each other

Grade 6: none

Grade 7: PHYSICAL SCIENCE: MIXTURES AND SOLUTIONS

- 111-5 describe the science underlying particular technologies designed to explore natural phenomena, extend human capabilities, or solve practical problems
- 307-1 distinguish between pure substances and mixtures, using the particle model of matter

Grade 8: none

Lesson 8: Milk Rainbow

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 9: Egg-Dye Solutions

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 301-10 identify and describe changes to materials that are reversible and some which are not
- 301-11 describe changes that occur in the properties of materials when materials interact with each other

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 10: Iron In Cereal

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

LIFE SCIENCE: MEETING BASIC NEEDS AND MAINTAINING A HEALTHY BODY

- 302-9 describe nutritional and other requirements for maintaining a healthy body

Grade 6: none

Grade 7: PHYSICAL SCIENCE: MIXTURES AND SOLUTIONS

- 209-6 use tools and apparatus safely
- 307-1 distinguish between pure substances and mixtures, using the particle model of matter

Grade 8: none

Lesson 11: The Great Escape

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 300-9 group materials as solids, liquids, or gases, based on their properties
- 301-10 identify and describe changes to materials that are reversible and some which are not
- 301-11 describe changes that occur in the properties of materials when materials interact with each other
- 301-12 describe examples of interactions between materials that result in the production of a gas

Grade 6: none

Grade 7: PHYSICAL SCIENCE: MIXTURES AND SOLUTIONS

- 209-6 use tools and apparatus safely
- 307-1 distinguish between pure substances and mixtures, using the particle model of matter
- 307-2 identify and separate the components of mixtures
- 307-5 describe qualitatively the factors that affect solubility

Grade 8: none

Lesson 12: Diaper Polymers

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 301-9 identify changes that can be made to an object without changing the properties of the material of which it is made
- 301-10 identify and describe changes to materials that are reversible and some which are not
- 301-11 describe changes that occur in the properties of materials when materials interact with each other

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 13: Disappearing Glass

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

Grade 6: none

Grade 7: none

Grade 8: PHYSICAL SCIENCE: OPTICS

- 208-5 state a prediction and a hypothesis based on background information or an observed pattern of events
- 209-6 use tools and apparatus safely
- 308-10 describe qualitatively how visible light is refracted

Lesson 14: Wacky Waxy Watercolours

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 15: Floating Paper Clips

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 16: Fountain Of Soda

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 301-10 identify and describe changes to materials that are reversible and some which are not
- 301-11 describe changes that occur in the properties of materials when materials interact with each other
- 301-12 describe examples of interactions between materials that result in the production of a gas

Grade 6: none

Grade 7: PHYSICAL SCIENCE: MIXTURES AND SOLUTIONS

- 307-1 distinguish between pure substances and mixtures, using the particle model of matter

Grade 8: none

Lesson 17: Blubber In Sea Mammals

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

Grade 6: LIFE SCIENCE: DIVERSITY OF LIFE

- 302.12 describe how microorganisms meet their basic needs, including obtaining food, water, and air and moving around

Grade 7: none

Grade 8: none

Lesson 18: Puffed Rice Fleas

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

Grade 6: PHYSICAL SCIENCE: ELECTRICITY

- 303-22 compare the characteristics of static and current electricity
- 303-28 identify various methods by which electricity can be generated

Grade 7: none

Grade 8: none

Lesson 19: Hold The Salt

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 301-9 identify changes that can be made to an object without changing the properties of the material of which it is made
- 301-10 identify and describe changes to materials that are reversible and some which are not

Grade 6: none

Grade 7: PHYSICAL SCIENCE: MIXTURES AND SOLUTIONS

- 111-5 describe the science underlying particular technologies designed to explore natural phenomena, extend human capabilities, or solve practical problems
- 209-6 use tools and apparatus safely
- 307-1 distinguish between pure substances and mixtures, using the particle model of matter
- 307-2 identify and separate the components of mixtures

Grade 8: PHYSICAL SCIENCE: FLUIDS

- 111-1 provide examples of scientific knowledge that have resulted in the development of technologies

Lesson 20: Liquid Rainbow

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

Grade 6: none

Grade 7: PHYSICAL SCIENCE: MIXTURES AND SOLUTIONS

- 307-1 distinguish between pure substances and mixtures, using the particle model of matter

Grade 8: none

Lesson 21: Making Paper

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

Grade 6: none

Grade 7: PHYSICAL SCIENCE: MIXTURES AND SOLUTIONS

- 111-5 describe the science underlying particular technologies designed to explore natural phenomena, extend human capabilities, or solve practical problems
- 307-1 distinguish between pure substances and mixtures, using the particle model of matter

Grade 8: none

Lesson 22: Balloon Rockets

Grade 5: PHYSICAL SCIENCE: FORCES AND SIMPLE MACHINES

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 303-13 observe and describe how various forces, such as magnetic, mechanical, wind induced, and gravitational, can act directly or from a distance to cause objects to move
- 303-14 demonstrate and describe the effect of increasing and decreasing the amount of force applied to an object

Grade 6: PHYSICAL SCIENCE: FLIGHT

- 6-2-01. Use appropriate vocabulary related to their investigations of flight.

Grade 7: none

Grade 8: none

Lesson 23: Paper Chromatography

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures

- 205-5 make observations and collect information that is relevant to a given question or problem
- 301-10 identify and describe changes to materials that are reversible and some which are not
- 301-11 describe changes that occur in the properties of materials when materials interact with each other

Grade 6: none

Grade 7: PHYSICAL SCIENCE: MIXTURES AND SOLUTIONS

- 111-5 describe the science underlying particular technologies designed to explore natural phenomena, extend human capabilities, or solve practical problems
- 307-1 distinguish between pure substances and mixtures, using the particle model of matter
- 307-2 identify and separate the components of mixtures

Grade 8: none

Lesson 24: Exploding Bags

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 301-10 identify and describe changes to materials that are reversible and some which are not
- 301-11 describe changes that occur in the properties of materials when materials interact with each other
- 301-12 describe examples of interactions between materials that result in the production of a gas

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 25: Gasping For Air

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 26: Capillary Carnations

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 27: Melting Ice With Salt

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 301-9 identify changes that can be made to an object without changing the properties of the material of which it is made
- 301-10 identify and describe changes to materials that are reversible and some which are not
- 301-11 describe changes that occur in the properties of materials when materials interact with each other

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 28: Separating Salt & Pepper

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

Grade 6: none

Grade 7: PHYSICAL SCIENCE: MIXTURES AND SOLUTIONS

- 111-5 describe the science underlying particular technologies designed to explore natural phenomena, extend human capabilities, or solve practical problems
- 209-6 use tools and apparatus safely
- 307-1 distinguish between pure substances and mixtures, using the particle model of matter
- 307-2 identify and separate the components of mixtures

Grade 8: none

Lesson 29: Antigravity Water

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

PHYSICAL SCIENCE: FORCES AND SIMPLE MACHINES

- 301-12 investigate different kinds of forces used to move objects or hold them in place

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 30: Solid Or Liquid?

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

- 300-9 group materials as solids, liquids, or gases, based on their properties
- 301-10 identify and describe changes to materials that are reversible and some which are not
- 301-11 describe changes that occur in the properties of materials when materials interact with each other

Grade 6: none

Grade 7: PHYSICAL SCIENCE: MIXTURES AND SOLUTIONS

- 307-1 distinguish between pure substances and mixtures, using the particle model of matter
- 307-3 describe the characteristics of solutions, using the particle model of matter

Grade 8: PHYSICAL SCIENCE: FLUIDS

- 307-7 describe factors that can modify the viscosity of a liquid

Lesson 31: Balloon In A Bottle

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 301-9 identify changes that can be made to an object without changing the properties of the material of which it is made

Grade 6: none

Grade 7: none

Grade 8: PHYSICAL SCIENCE: FLUIDS

- 307-9 explain the effects of changes in temperature on the density of solids, liquids, and gases and relate the results to the particle model of matter
- 309-4 explain qualitatively the relationship among pressure, volume, and temperature when liquid and gaseous fluids are compressed or heated

Lesson 32: Rubber-Band Racers

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem

PHYSICAL SCIENCE: FORCES AND SIMPLE MACHINES

- 303-13 observe and describe how various forces, such as magnetic, mechanical, wind induced, and gravitational, can act directly or from a distance to cause objects to move
- 303-16 demonstrate the use of rollers, wheels, and axles in moving objects

Grade 6: none

Grade 7: none

Grade 8: none

Lesson 33: T-shirt Tye-Dye

Grade 5: PHYSICAL SCIENCE: PROPERTIES OF AND CHANGES IN MATERIALS

- 205-3 follow a given set of procedures
- 205-5 make observations and collect information that is relevant to a given question or problem
- 301-10 identify and describe changes to materials that are reversible and some which are not
- 301-11 describe changes that occur in the properties of materials when materials interact with each other

Grade 6: none

Grade 7: PHYSICAL SCIENCE: MIXTURES AND SOLUTIONS

- 111-5 describe the science underlying particular technologies designed to explore natural phenomena, extend human capabilities, or solve practical problems
- 209-6 use tools and apparatus safely
- 307-1 distinguish between pure substances and mixtures, using the particle model of matter
- 307-2 identify and separate the components of mixtures

Grade 8: none