Sky Watchers Curriculum Correlation

Territory: Northwest Territories
Curriculum: Science and Technology (2004), Earth and Space Systems
Grade: 5
Date of Correlation: March 1, 2008

Chapter	General and Specific Learning Outcomes Addressed [1]	Cross Curricular Connections
Chapter 1 **First Steps**	***General Learning Outcome*** ▪ Investigate the major climatic factors associated with weather, and design, construct, and test a variety of instruments for recording various features of the weather. ***Specific Learning Outcomes*** ▪ Explain the difference between weather and climate and the factors that influence both these systems (e.g., temperature, relative humidity, wind, air pressure, the sun). ▪ Explain the formation of clouds and the effects of different cloud formations on weather and climate (e.g., create a model of a cloud in a jar and relate it to the water cycle; describe the relationship between the formation of cumulonimbus clouds and thunderstorms). ▪ Identify and describe the major could types/formations. ▪ Use appropriate vocabulary, including correct science and technology terminology, in describing their investigations and observations (e.g., use terms such as temperature, precipitation, relative humidity, wind chill factor, barometric pressure, and cloud cover). ▪ Compile data gathered through investigation in order to record and present results, tally charts, tables, and labeled graphs produced by hand or with a computer (e.g., record both qualitative and quantitative data from observations of weather over a period of time; accurately use a thermometer to read and record the results). ▪ Communicate the procedures and results of investigations for specific purposes and to specific audiences, using electronic	▪ Activity, page 4: Technology (Internet) ▪ Throughout chapter: Math (measurement)

	media, oral presentations, written notes and descriptions, drawings, and charts (e.g., draw a labeled diagram of the water cycle).	
Chapter 2 **What Makes Weather?** **Includes Activities 1 to 6 on pages 61 to 68**	***General Learning Outcome*** ▪ Investigate the major climatic factors associated with weather, and design, construct, and test a variety of instruments for recording various features of the weather. ***Specific Learning Outcomes*** ▪ Explain the difference between weather and climate and the factors that influence both these systems (e.g., temperature, relative humidity, wind, air pressure, the sun). ▪ Recognize large-scale and local weather systems (e.g., fronts, air masses, storms). ▪ Identify patterns in air movement (e.g., low pressure and high pressure). ▪ Describe the ways in which energy from the sun affects weather conditions (e.g., evaporation of water results in condensation, which in turn results in precipitation). ▪ Identify the effects of air pressure (e.g., low pressure air masses are associated with mild temperature and create conditions that cause thunderstorms or clouds; high pressure air masses are cooler and are often associated with clear weather conditions). ▪ Design, construct, and test a variety of weather instruments (e.g., weather vane, anemometer, rain gauge, wind sock, hydrometer). ▪ Use appropriate vocabulary, including correct science and technology terminology, in describing their investigations and observations (e.g., use terms such as temperature, precipitation, relative humidity, wind chill factor, barometric pressure, and cloud cover).	▪ Activity, page 14: Math (measurement) ▪ Activity number 4, page 64: Math (measurement)
Chapter 3 **Weather Elements** **Includes Activities 7 to 12 on pages 69 to 73**	***General Learning Outcomes*** ▪ Demonstrate an understanding of the major climatic factors and patterns associated with weather, based on altitude and latitude. ▪ Investigate the major climatic factors associated with weather, and design, construct, and test a variety of instruments for recording various features of the weather. ***Specific Learning Outcomes*** ▪ Explain the difference between weather and climate and the	▪ Activity, page 22: Social Studies (mapping) ▪ Activity, page 23: Math (data management) ▪ Activity, page 30: Science (sound), and Language (writing) ▪ Activity, page 31: Math (measurement) ▪ Activity, number 7 page 69: Math (measurement and data management)

	factors that influence both these systems (e.g., temperature, relative humidity, wind, air pressure, the sun). ▪ Explain the formation of clouds and the effects of different cloud formations on weather and climate (e.g., create a model of a cloud in a jar and relate it to the water cycle; describe the relationship between the formation of cumulonimbus clouds and thunderstorms). ▪ Describe the water cycle in terms of evaporation, condensation, and precipitation. ▪ Describe the ways in which energy from the sun affects weather conditions (e.g., evaporation of water results in condensation, which in turn results in precipitation). ▪ Identify and describe the major could types/formations. ▪ Design, construct, and test a variety of weather instruments (e.g., weather vane, anemometer, rain gauge, wind sock, hydrometer). ▪ Use appropriate vocabulary, including correct science and technology terminology, in describing their investigations and observations (e.g., use terms such as temperature, precipitation, relative humidity, wind chill factor, barometric pressure, and cloud cover). ▪ Compile data gathered through investigation in order to record and present results, tally charts, tables, and labeled graphs produced by hand or with a computer (e.g., record both qualitative and quantitative data from observations of weather over a period of time; accurately use a thermometer to read and record the results). ▪ Communicate the procedures and results of investigations for specific purposes and to specific audiences, using electronic media, oral presentations, written notes and descriptions, drawings, and charts (e.g., draw a labeled diagram of the water cycle).	
Chapter 4 **Severe Weather in Canada** **Includes Activity 13 on page**	***General Learning Outcome*** ▪ Examine how weather forecasts influence decisions concerning human activity and how humans have adapted to a variety of weather conditions. ***Specific Learning Outcomes*** ▪ Explain the difference between weather and climate and the	▪ Throughout chapter: Health (severe weather safety) ▪ Activity, page 4-2: Math (measurement) ▪ Activity, page 4-9: Language (writing)

74	factors that influence both these systems (e.g., temperature, relative humidity, wind, air pressure, the sun). ▪ Recognize large-scale and local weather systems (e.g., fronts, air masses, storms). ▪ Explain the formation of clouds and the effects of different cloud formations on weather and climate (e.g., create a model of a cloud in a jar and relate it to the water cycle; describe the relationship between the formation of cumulonimbus clouds and thunderstorms). ▪ Use appropriate vocabulary, including correct science and technology terminology, in describing their investigations and observations (e.g., use terms such as temperature, precipitation, relative humidity, wind chill factor, barometric pressure, and cloud cover). ▪ Describe ways in which weather conditions affect the activities of humans and other animals (e.g., people refrain from strenuous physical activity in extreme heat; animals hibernate in extreme cold; animal fur thickens with cold weather).	
Chapter 5 **Weather and Canadians** **Includes Activities 14 to 17 on pages 75 to 79**	***General Learning Outcome*** ▪ Examine how weather forecasts influence decisions concerning human activity and how humans have adapted to a variety of weather conditions. ***Specific Learning Outcomes*** ▪ Explain the difference between weather and climate and the factors that influence both these systems (e.g., temperature, relative humidity, wind, air pressure, the sun). ▪ Use appropriate vocabulary, including correct science and technology terminology, in describing their investigations and observations (e.g., use terms such as temperature, precipitation, relative humidity, wind chill factor, barometric pressure, and cloud cover). ▪ Compile data gathered through investigation in order to record and present results, tally charts, tables, and labeled graphs produced by hand or with a computer (e.g., record both qualitative and quantitative data from observations of weather over a period of time; accurately use a thermometer to read and record the results).	▪ Activity, page 39: Language (reading and media literacy) ▪ Activity number 14, page 75: Math (data management), and Technology (spreadsheets) ▪ Activity number 15, page 76: Social Studies (mapping) ▪ Activity number 16, page 77: Social Studies (mapping) ▪ Activity number 17, pages 78 to 79: Social Studies (mapping)

	▪ Communicate the procedures and results of investigations for specific purposes and to specific audiences, using electronic media, oral presentations, written notes and descriptions, drawings, and charts (e.g., draw a labeled diagram of the water cycle). ▪ Describe ways in which weather conditions affect the activities of humans and other animals (e.g., people refrain from strenuous physical activity in extreme heat; animals hibernate in extreme cold; animal fur thickens with cold weather). ▪ Explain how climatic and weather conditions influence the choice of materials used for building shelters (e.g., wood/bricks are often used for building in cold climates, stone, and marble in warmer climates). ▪ Understand and explain the importance of weather forecasting for people in certain occupations (e.g., fishers, hunters, farmers, pilots).	
Chapter 6 **Ultraviolet Radiation** **Includes Activities 19 to 23 on pages 80 to 84**	***General Learning Outcome*** ▪ Examine how weather forecasts influence decisions concerning human activity and how humans have adapted to a variety of weather conditions. ***Specific Learning Outcomes*** ▪ Compile data gathered through investigation in order to record and present results, tally charts, tables, and labeled graphs produced by hand or with a computer (e.g., record both qualitative and quantitative data from observations of weather over a period of time; accurately use a thermometer to read and record the results). ▪ Communicate the procedures and results of investigations for specific purposes and to specific audiences, using electronic media, oral presentations, written notes and descriptions, drawings, and charts (e.g., draw a labeled diagram of the water cycle).	▪ Throughout chapter: Health (sun safety), and Social Studies/Science (environment) ▪ Activity number 20, page 81: Health (sun safety), and Math (data management) ▪ Activity number 21, page 82: Health (sun safety), and Math (percentage) ▪ Activity number 22, page 83: Health (sun safety), and Math (percentage) ▪ Activity number 23, page 84: Health (sun safety), Math (percentage)
Chapter 7 **Putting It All Together**	***General Learning Outcome*** ▪ Investigate the major climatic factors associated with weather, and design, construct, and test a variety of instruments for recording various features of the weather. ***Specific Learning Outcomes***	▪ Activity, page 52: Language (oral communication) ▪ Activity, page 53: Language (writing and oral communication) ▪ Activity, page 57: Math (measurement)

Includes Activity number 18 on page 80	▪ Explain the difference between weather and climate and the factors that influence both these systems (e.g., temperature, relative humidity, wind, air pressure, the sun). ▪ Recognize large-scale and local weather systems (e.g., fronts, air masses, storms). ▪ Predict local weather patterns using data from their own observations of weather and from weather reports. ▪ Explain the formation of clouds and the effects of different cloud formations on weather and climate (e.g., create a model of a cloud in a jar and relate it to the water cycle; describe the relationship between the formation of cumulonimbus clouds and thunderstorms). ▪ Identify the effects of air pressure (e.g., low pressure air masses are associated with mild temperature and create conditions that cause thunderstorms or clouds; high pressure air masses are cooler and are often associated with clear weather conditions). ▪ Identify and describe the major could types/formations. ▪ Use appropriate vocabulary, including correct science and technology terminology, in describing their investigations and observations (e.g., use terms such as temperature, precipitation, relative humidity, wind chill factor, barometric pressure, and cloud cover). ▪ Compile data gathered through investigation in order to record and present results, tally charts, tables, and labeled graphs produced by hand or with a computer (e.g., record both qualitative and quantitative data from observations of weather over a period of time; accurately use a thermometer to read and record the results). ▪ Communicate the procedures and results of investigations for specific purposes and to specific audiences, using electronic media, oral presentations, written notes and descriptions, drawings, and charts (e.g., draw a labeled diagram of the water cycle). ▪ Explain how advances in technology and science enable humans to make predictions about weather (e.g., satellite images of the Earth allow us to track weather patterns on a larger scale; computer modeling and automated weather stations).	▪ Activity number 18, page 80: Language (writing)

Supplement One **Air Quality** **Includes Activities 1 to 6 on pages 9 to 17 (Supplement One)**	***General Learning Outcomes*** ▪ Examine how weather forecasts influence decisions concerning human activity and how humans have adapted to a variety of weather conditions. ***Specific Learning Outcomes*** ▪ Compile data gathered through investigation in order to record and present results, tally charts, tables, and labeled graphs produced by hand or with a computer (e.g., record both qualitative and quantitative data from observations of weather over a period of time; accurately use a thermometer to read and record the results). ▪ Communicate the procedures and results of investigations for specific purposes and to specific audiences, using electronic media, oral presentations, written notes and descriptions, drawings, and charts (e.g., draw a labeled diagram of the water cycle).	▪ Throughout chapter: Social Studies/ Science (environment) ▪ Activity, page 4: Technology (internet) ▪ Activity number 2A, page 10: Math (data management), and Technology (internet) ▪ Activity number 2B, page 11: Math (data management) ▪ Activity number 3, pages 12-13: Reading

[1] The chapter provides teacher information and/or student activities to support the teaching of the general or specific learning outcome.

This curriculum correlation was conducted by Curriculum Services Canada (CSC), the Pan-Canadian standards agency for quality assurance in learning products and programs at www.curriculum.org.