Correlation of Sky Watchers to the Manitoba Science Curriculum - Grade 5 Weather (Cluster 4)

An ☒ indicates that the chapter provides teacher information and/or student activities to support the teaching of the specific learning outcome.

Specific Learning Outcome Number	Specific Learning Outcome	Chapter							
		1	2	3	4	5	6	7	Supple -ment 1
5-4-01	Use appropriate vocabulary related to their investigations of weather. Include: weather; properties; volume; pressure; air masses; fronts; weather instrument; severe weather; forecast; accuracy; water cycle; climate; terms related to public weather reports, and cloud formations GLO: C6, D5	☒	☒	☒	☒	☒	☒	☒	☒
5-4-02	Describe how weather conditions may affect the activities of humans and other animals. *Examples: heavy rainfall may cause roads to wash out; stormy conditions may prevent a space shuttle launching; in excessive heat, cattle may produce less milk* GLO: D5	☐	☐	☐	☒	☒	☐	☐	☐
5-4-03	Describe properties of air. Include: has mass/weight and volume; expands to fill a space; expands and rises when heated; contracts and sinks when cooled; exerts pressure; moves from areas of high pressure to areas of low pressure GLO: D3	☐	☒	☐	☐	☐	☐	☐	☐
5-4-04	Recognize that warm and cold air masses are important components of weather, and describe what happens when these air masses meet along a front. Include: in a cold front the cold air mass slides under a warm air mass, pushing the warm air upwards; in a warm front the warm moist air slides up over a cold air mass GLO: D5, E2	☐	☒	☐	☐	☐	☐	☐	☐
5-4-05	Use the design process to construct a weather instrument. *Examples: an instrument that measures wind direction, wind speed, rainfall* GLO: C3, D5	☐	☒	☒	☐	☐	☐	☐	☐
5-4-06	5-4-06 Observe and measure local weather conditions over a period of time, using student-constructed or standard instruments, and record and analyze these data. GLO: A2, C2,C5, D5	☒	☐	☒	☐	☐	☐	☒	☐

5-4-07	Identify and describe components of public weather reports from a variety of sources. Include: temperature; relative humidity; wind speed and direction; wind chill; barometric pressure; humidex; cloud cover; ultraviolet index; warm and cold fronts; amount, types, and probability of precipitation GLO: C6, D5	☒	☒	☒	☐	☐	☒	☒	☒
5-4-08	Describe the key features of a variety of weather phenomena. *Examples: wind speed and precipitation of blizzards* GLO: D5, E1, E2	☒	☒	☒	☒	☐	☐	☒	☐
5-4-09	Provide examples of severe weather forecasts, and describe preparations for ensuring personal safety during severe weather and related natural disasters. *Examples: tornado, thunderstorm, blizzard, extreme wind chill, flood, forest fire* GLO: B3, C1, D5	☐	☐	☐	☒	☐	☐	☐	☐
5-4-10	5-4-10 Investigate various ways of predicting the weather, and evaluate their usefulness. Examples: weather-related sayings, traditional knowledge, folk knowledge, observations of the natural environment GLO: A2, A4, B2, C8	☐	☒	☐	☐	☐	☐	☒	☐
5-4-11	Contrast the accuracy of short- and long-term weather forecasts, and discuss possible reasons for the discrepancies. Include: long-term forecasts may not be accurate as weather is a complex natural phenomenon that science is not yet able to predict accurately GLO: A1, C2	☐	☐	☐	☐	☐	☐	☐	☐
5-4-12	Describe examples of technological advances that have enabled humans to deepen their scientific understanding of weather and improve the accuracy of weather predictions. *Examples: satellites collect data that scientists analyze to increase understanding of global weather patterns; computerized models predict weather* GLO: A2, A5, B1, D5	☐	☐	☐	☐	☐	☐	☒	☐
5-4-13	Explain how the transfer of energy from the Sun affects weather conditions. Include: the Sun's energy evaporates water and warms the Earth's land, water, and air on a daily basis GLO: D4, D5, E4	☐	☒	☒	☐	☐	☐	☐	☐

5-4-14	Explain how clouds form, and relate cloud formation and precipitation to the water cycle. GLO: D5, E2	☐	☐	☒	☐	☐	☐	☐	☐
5-4-15	Identify and describe common cloud formations. Include: cumulus, cirrus, stratus GLO: D5, E1	☒	☐	☒	☐	☐	☐	☒	☐
5-4-16	Differentiate between weather and climate. *Examples: weather includes the atmospheric conditions existing at a particular time and place; climate describes the long-term weather trend of a particular region* GLO: D5, E1	☐	☐	☐	☐	☒	☐	☐	☐
5-4-17	Identify factors that influence weather and climate in Manitoba and across Canada, and describe their impacts. *Examples: jet stream, proximity to water, elevation, Chinook* GLO: D5, E2	☐	☒	☒	☐	☒	☐	☐	☐
5-4-18	Recognize that climates around the world are ever changing, and identify possible explanations. *Examples: volcanic eruptions, ozone depletion, greenhouse effect, El Nino, deforestation* GLO: B5, D5, E2, E3	☐	☐	☐	☐	☒	☒	☐	☐