**Grade 4 Winter Birds Curricular Connections**

| Subject Area | Curriculum Connections | Notes |
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| **Mathematics** | D1.1 describe the difference between qualitative and quantitative data, and describe situations where each would be used<br><br>D1.3 select from among a variety of graphs, including multiple-bar graphs, the type of graph best suited to represent various sets of data; display the data in the graphs with proper sources, titles, and labels, and appropriate scales; and justify their choice of graphs<br><br>D1.4 create an infographic about a data set, representing the data in appropriate ways, including in frequency tables, stem-and-leaf plots, and multiple-bar graphs, and incorporating any other relevant information that helps to tell a story about the data<br><br>D1.5 determine the mean and the median and identify the mode(s), if any, for various data sets involving whole numbers, and explain what each of these measures indicates about the data<br><br>D2.2 make and test predictions about the likelihood that the mean, median, and mode(s) of a data set will be the same for data collected from different populations | Teachers will be able to use the bird-count data to create graphs. The outdoor education staff will also be using graphs to present the data.<br><br>If students combine the data with other variables such as the weather during the bird count, they will be able to tell some interesting stories.<br><br>The data may include observations that the students themselves have created. That might make the data more authentic for them. |
| **Language** | **Reading**<br><br>    1. read and demonstrate an understanding of a variety of literary, graphic, and informational texts, using a range of strategies to construct meaning;audience<br><br>1.4 demonstrate understanding of a variety of texts by summarizing important ideas | |

| | and citing supporting details | |
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| **Science** | 1.1 analyse the positive and negative impacts of human interactions with natural habitats and communities, taking different perspectives into account, and evaluate ways of minimizing the negative impacts<br><br>1.2 identify reasons for the depletion or extinction of a plant or animal species, evaluate the impacts on the rest of the natural community, and propose possible actions for preventing such depletions or extinctions from happening<br><br>2.3 use scientific inquiry/research skills to investigate ways in which plants and animals in a community depend on features of their habitat to meet important needs<br><br>3.1 demonstrate an understanding of habitats as areas that provide plants and animals with the necessities of life (e.g., food, water, air, space, and light)<br><br>3.2 demonstrate an understanding of food chains as systems in which energy from the sun is transferred to producers (plants) and then to consumers (animals)<br><br>3.3 identify factors (e.g., availability of water or food, amount of light, type of weather) that affect the ability of plants and animals to survive in a specific habitat<br><br>3.5 classify organisms, including humans, according to their role in a food chain (e.g., producer, consumer, decomposer)<br><br>3.6 identify animals that are carnivores, herbivores, or omnivores | The Christmas bird count has been an annual event in North America for over 100 years. Students can research historical data here:<br><br>https://netapp.audubon.org/CBCObservation/Historical/ResultsBySpecies.aspx?1<br><br>Students can track changes in numbers of birds over time using historical data.<br><br>The website www.ebird.org also gives access to global data on every species of bird on the planet.<br><br>Habitats are areas that provide animals with all of the requirements for their survival. What makes Waterloo Region suitable habitat for some birds in winter and not others? It is not that it is too cold for some birds…<br><br>Individual species of birds can be classified as herbivore/omnivore/carnivore.<br><br>Birds are ideal animals to study adaptations. Students can examine how different beaks are designed to attain different foods. Different bird feet are designed to help survive in different habitats. |

| | 3.7 describe structural adaptations that allow plants and animals to survive in specific habitats

3.8 explain why changes in the environment have a greater impact on specialized species than on generalized species | |