

# Turtle Tally Graphing

Grade 4 – Mathematics



## Lesson Details

<b>Grade Level:</b>	4	<b>Curriculum Links:</b>	Mathematics, Science and Technology	<b>Time Needed:</b>	2 hours
<b>Learning Goal</b>	To gain practice and confidence in surveying a natural area for turtles, collecting data, and interpreting the data in a graph using math skills.				
<b>Success Criteria</b>	By the end of this lesson, students will have successfully created a graph based on their collected data while surveying turtles.				
<b>Specific Expectations</b>	<p><i>Mathematics – Data Management and Probability</i></p> <ul style="list-style-type: none"> <li>Collect and organize discrete primary data and display the data using charts and graphs, including stem-and-leaf plots and double bar graphs;</li> <li>Read, describe, and interpret primary data and secondary data presented in charts and graphs, including stem-and-leaf plots and double bar graphs;</li> <li>Collect data by conducting a survey or an experiment to do with themselves, their environment, issues in their school or the community, or content from another subject, and record observations or measurements;</li> <li>Collect and organize discrete primary data and display the data in charts, tables, and graphs that have appropriate titles, labels, and scales that suit the range and distribution of the data, using a variety of tools;</li> <li>Demonstrate, through investigation, an understanding of the median, and determine the median of a set of data.</li> </ul> <p><i>Science and Technology – Understanding Life Systems: Habitats and Communities</i></p> <ul style="list-style-type: none"> <li>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.</li> </ul>				
<b>Materials Needed</b>	Worksheet (attached), Pencil, Graph Paper, Clipboard (Optional), Appropriate Outdoor Clothing (Rainboots), Binoculars (Optional).				

## Lesson Description

<b>Overview</b>	Students will visit a natural area to collect data about the turtles who are present, then graph their data and interpret the results.
<b>Activity</b>	<ol style="list-style-type: none"> <li>1. Introduce the 8 different species of Ontario Turtles to the class.</li> <li>2. Next, plan a visit to a natural area where turtles will be present. Note: Turtles begin basking in April/May and begin egg laying in late May to early June – this is the best time to see them.</li> <li>3. Once at the natural area split the class either into small groups or pairs. Remind the students to always leave nature where you found it (do not take anything you did not already arrive with).</li> <li>4. Hand out the attached worksheet so students can write down their observations and the number of each turtle species they find.</li> <li>5. Back in the classroom, have the students tally their results and share with the instructor.</li> <li>6. As a class, create a bar graph representing the total number of turtles seen by the class.</li> <li>7. Next, students will create their own graph about the total number of turtles they saw and interpret the results.</li> </ol>

## Lesson Description

<b>Blacklist Masters</b>	<ul style="list-style-type: none"><li>• Worksheet (attached)</li><li>• Video Link(s): <a href="#">Ontario Turtle Identification</a> and <a href="#">Wetlands and Turtles in Ontario</a></li><li>• For more information, please visit <a href="https://www.turtleguardians.com/sample-page/id-turtles/">https://www.turtleguardians.com/sample-page/id-turtles/</a></li></ul>
<b>Place-Based Learning</b>	Students will explore a natural area. This will allow the students to become more aware of their local wildlife.
<b>Inquiry-Based Learning</b>	Using <b>Structured Inquiry</b> , students will collect data and complete the worksheet.  Ask the students: <ul style="list-style-type: none"><li>• What are the 8 different species of Ontario Turtles?</li><li>• Where do turtles live?</li></ul>
<b>Turtle Stories</b>	Turtles are active for many months of the year. Re-visit the natural area you visited today and continue surveying the number of turtles. You can share this information with your local wildlife centre. Students are encouraged to share their experience, pictures, and collected data on the Turtle Stories website, found here: <a href="https://www.turtlestories.ca/">https://www.turtlestories.ca/</a>
<b>Turtle Guardian Program Links</b>	After completing <b>Level 1</b> (Ontario Turtle Identification) of the <b>Turtle Guardian Program</b> , students can move onto <b>Level 2</b> (Wetland Watchers). In this level the students learn the importance of wetland protection and how to protect turtle nests. They then can become official nest sitters and wetland watchers (when accompanied by an adult). For more information, please visit <a href="https://www.turtleguardians.com/what-is-a-turtle-guardian/">https://www.turtleguardians.com/what-is-a-turtle-guardian/</a>

## My Notes



# Turtle Tally

Species	Date:	Time:	Seen on land or in water?
	Number of Individuals	Description of Species	
Blanding's Turtle			
Common Snapping Turtle			
Midland Painted Turtle			
Western Painted Turtle			
Northern Map Turtle			
Spiny Softshell Turtle			
Spotted Turtle			
Stinkpot (Musk) Turtle			
Wood Turtle			

## Graphing and Reflection

On a separate piece of graphing paper, create a double bar graph to illustrate the total number of turtles of each species you saw compared to the total of the class. Don't forget to properly label your graph with the appropriate titles.

**Q1. What trends are seen in the graph?**

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**Q2. Define median. What is the median within your data? The median within the classes data?**

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**Q3. How does the data you collected compare to the data collected by the class?**

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**Q4. Where did you see the most turtles? On land? In the water? Why?**

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