

Turtle Tally Graphing

Grade 5 – Mathematics



Lesson Details

Grade Level:	5	Curriculum Links:	Mathematics, Science and Technology	Time Needed:	2 hours
Learning Goal	To gain practice and confidence in surveying a natural area for turtles, collecting data, and interpreting the data in a graph using math skills.				
Success Criteria	By the end of this lesson, students will have successfully created a graph based on their collected data while surveying turtles.				
Specific Expectations	<p><i>Mathematics – Data Management and Probability</i></p> <ul style="list-style-type: none"> Collect and organize discrete or continuous primary data and secondary data and display the data using charts and graphs, including broken-line graphs; Read, describe, and interpret primary data and secondary data presented in charts and graphs, including broken-line graphs; Collect data by conducting a survey or an experiment to do with themselves, their environment, issues in their school or community, or content from another subject, and record observations or measurements; Collect and organize discrete or continuous primary data and secondary 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; Calculate the mean for a small set of data and use it to describe the shape of the data set across its range of values, using charts, tables, and graphs. <p><i>Science and Technology – Understanding Life Systems: Human Organ Systems</i></p> <ul style="list-style-type: none"> 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. 				
Materials Needed	Worksheet (attached), Pencil, Graph Paper, Clipboard (Optional), Appropriate Outdoor Clothing (Rainboots), Binoculars (Optional).				

Lesson Description

Overview	Students will visit a natural area to collect data about the turtle's present, then graph their data and interpret the results.
Activity	<ol style="list-style-type: none"> 1. Introduce the 8 different species of Ontario Turtles to the class. 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. 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). 4. Hand out the attached worksheet so students can write down their observations and the number of each turtle species they find. 5. Back in the classroom, have the students tally their results and share with the instructor. 6. As a class, create a broken-line graph representing a species of turtles that was found over a length of time. You may repeat this for a few different species. 7. Next, students will create their own graph about the total number of turtles over a length of time they saw and interpret the results.

Lesson Description

Blacklist Masters	<ul style="list-style-type: none">• Worksheet (attached)• Video Link(s): Ontario Turtle Identification and Wetlands and Turtles in Ontario• For more information, please visit https://www.turtleguardians.com/sample-page/id-turtles/
Place-Based Learning	Students will explore a natural area. This will allow the students to become more aware of their local wildlife.
Inquiry-Based Learning	Using Structured Inquiry , students will collect data and complete the worksheet. Ask the students: <ul style="list-style-type: none">• What are the 8 different species of Ontario Turtles?• Where do turtles live?
Turtle Stories	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: https://www.turtlestories.ca/
Turtle Guardian Program Links	After completing Level 1 (Ontario Turtle Identification) of the Turtle Guardian Program , students can move onto Level 2 (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 https://www.turtleguardians.com/what-is-a-turtle-guardian/

My Notes



Turtle Tally

Species	Date:			
	Number of Individuals	Time Seen per individual	Description of Species	Seen on land or in water?
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 broken-line 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?

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

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

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