Turtle Math Worksheets

Grade 5 – Mathematics

Turtle Guardians

Turtle Math Worksheets

Lesson Details

Grade Level:	5	**Curriculum Links:**	Mathematics	**Time Needed:**	40 minutes – 1 hour
Learning Goal	To gain practice and confidence in math, as well as explore applications related to the real world.				
Success Criteria	By the end of this lesson, students will have successfully completed the worksheet.				
Specific Expectations	*Quantity Relationships* • Read, represent, compare, and order whole numbers to 100,000, decimal numbers to hundredths, proper, and improper fractions, and mixed numbers; • Demonstrate an understanding of place value in whole numbers and decimal numbers from 0.01 to 100,000, using a variety of tools and strategies; • Round decimal numbers to the nearest tenth, in problems arising from the real-life situations; • Solve problems that arise from real-life situations and that relate to the magnitude of whole numbers up to 100,000. *Operational Sense* • Solve problems involving the addition, subtraction, and multiplication of whole numbers, using a variety of mental strategies; • Add and subtract decimal numbers to hundredths, including money amounts, using concrete materials, estimation, and algorithms; • Multiply two-digit whole numbers by two-digit whole numbers, using estimation, student-generated algorithms, and standard algorithms; • Divide three-digit whole numbers by two-digit whole numbers, using concrete materials, estimation, student-generated algorithms, and standard algorithms; • Multiply decimal numbers by 10, 100, 1000, and 10,000, and divide decimal numbers by 10 and 100, using mental strategies. *Attributes, Units and Measurement Sense* • Determine the relationships among units and measurable attributes, including the area of a rectangle and the volume of a rectangular prism. *Measurement Relationships* • Solve problems requiring conversion from metres to centimetres and from kilometres to metres; • Solve problems requiring the estimation and calculation of perimeters and areas of rectangles.				
Materials Needed	Worksheet (attached), Pencil, Calculator (optional).				

Lesson Description

Overview	Students will complete fun math problems, related to turtles, in the attached worksheet.
Activity	1. Hand out the worksheet to the students. 2. Optional: Students can work individually or in small groups. 3. Optional: As a class, take up the worksheet.
Blacklist Masters	• Worksheet (attached) • For more information, please visit https://www.turtleguardians.com/

Lesson Description

Place-Based Learning	Students can relate what they have learned about turtles to their local wildlife.
Inquiry-Based Learning	Using **Structured Inquiry**, students will complete the worksheet. Ask the students: • What food does a turtle eat? • How can we help protect turtle nests found on the side of roads?
Turtle Stories	Try your hand at making new math problems for others to solve. Students are encouraged to share what they have learned and any new problems created on the Turtle Stories website, found here: https://www.turtlestories.ca/
Turtle Guardian Program Links	In **Level 1** (Ontario Turtle Identification) of the **Turtle Guardian Program**, students will learn how to identify all 8 species of Ontario's turtles, information about their habitats and how to help them. For more information, please visit https://www.turtleguardians.com/what-is-a-turtle-guardian/

My Notes

Turtle Guardians

Turtle Math Worksheet

1

Wood Turtles love to eat worms and have developed a special technique for hunting them. These intelligent turtles will thump their feet on the ground to imitate the sound of rain and will snatch up the worms once they rise to the surface. In one thumping session a Wood Turtle found 8 worms weighing 1.1 g, 1.0 g, 2.0 g, 2.99 g, 1.5 g, 1.56 g, 1.78 g and 1.67 g.

A. List the worms the Wood Turtle ate from heaviest to lightest.

2.99 g, 2.0 g, 1.78 g, 1.67 g, 1.56 g, 1.5 g, 1.1 g, 1.0 g

2

Jenny went to the hardware store so that she could buy some fencing for the Spotted Turtle nests that needed protection from raccoons and skunks. She bought 15 pieces of fencing.

A. If each square piece of fencing has a perimeter of 80 cm, what is the length of each side?

20 cm

B. If she built a cube shaped cage using 5 of the pieces of fencing (the sixth side is the ground), what is the volume of the cage? Give your final answer in meters.

0.008 m^3 (or 8000 cm^3)

3

Robin plans to build several turtle enclosures at a local turtle rehabilitation centre. This will allow the turtles to go outside and get sun on nice days while they are recuperating. If she builds three enclosures back-to-back she will cut down on the amount of fencing needed to buy as they will be able to share edges.

A. Robin would like to build three equally sized square enclosures. She has 50 meters of fencing, what is the area of the enclosure?

25 cm^2

B. If the fencing is 3 metres tall, what is the volume of each enclosure?

75 m^3

C. If Robin wanted to make five square enclosures instead of three how, how long would each side be?

3.13 m

D. What would be the area of the new cages?

9,79 m^2

E. What would the volume of the new cages be?

29.39 m^3

4

William wants to build a new outdoor enclosure for the education turtles at the Turtle Guardians Headquarters. He needs to buy some lumber to build the enclosure. Each piece of lumber costs $15.99. He needs 10 pieces of lumber.

A. Use multiplication to find out how much it will cost.

$159.90

5

Victoria is taking the education turtles to a Farmer's Market to teach people about how cool turtles are. The wagon she wants to put the turtles in can handle 60 pounds of weight. Timothy the Snapping Turtle weighs 25.4 pounds. Betty Boop the Red-Eared Slider weighs 6.2 pounds. Each turtle will be in their own tank that weigh 5.5 pounds each with water in them.

A. How much do the turtles weight all together? Use addition.

31.6 pounds

B. Use multiplication to determine how much the 2 tanks full of water will weigh.

11 pounds

C. Can the wagon handle the weight of the 2 turtle tanks? Use addition and answer in a full sentence.

42.6 pounds

The total weight is 42.6 lbs, therefore the wagon will not carry all the weight.

6

There are 300 Painted Turtles in a population. Their ecosystem has 10 different wetlands.

A. If there are equal amounts of turtles in each wetland, how many painted turtles are in each wetland? Use division to solve and answer in a full sentence.

30

There are 30 turtles in each wetland.

Mica the Musk Turtle is having a pool party. She wants to know how big her pool is. Mica knows the length of one long side of the pool is 24 cm. She knows the length of the short side is half of the long side. The height of the pool is 3 cm.

A. Draw a diagram of Mica's pool.

B. What is the perimeter of the pool?

72 cm

C. What is the area of the pool?

288 cm^2

D. Mica needs to know how long it will take to fill her pool with water. Mica knows that it will take 1 minute to fill every 24 cm^3 of water. Determine the volume of the pool, and then how long it will take to fill the pool. Write your answer as a full sentence.

864 cm^3 36 minutes

_The volume of the pool is 864 cm^3, therefore it will take 36 minutes to fill the pool.____

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