

DOLPHIN RESEARCH CENTER

Turtle Trouble

Grade Level: 5th

Objective: Students will understand the different ways numbers are represented and used in the real world, the effects of operations on numbers and the relationship among these operations, select appropriate operations, and to compute for problem solving. Students will select the appropriate operation to solve specific problems involving addition, subtraction, and multiplication of whole numbers.

Florida Sunshine State Standards:

Mathematics

MA.A.1.2.3: The student understands concrete and symbolic representations of whole numbers, fractions, decimals, and percents in real-world situations.

MA.A.3.2.2: The student selects the appropriate operation to solve specific problems involving addition, subtraction, and multiplication of whole numbers, decimals, and fractions, and division of whole numbers.

Science

SC.D. 2.2.1: (3-5) The student knows that reusing, recycling, and reducing the use of natural resources improve and protect the quality of life.

SC.G.1.2.1 The student knows ways that plants, animals, and protists interact.

SC.G.1.2.2 The student knows that living things compete in a climatic region with other living things and that structural adaptations make them fit for an environment.

Social Studies

SS.B.2.2.4: The student understands how factors such as population growth, human migration, improved methods of transportation and communication, and economic development affect the use and conservation of natural resources.

National Science Education Standards:

Content Standard A (5-8) - Understandings about Scientific Inquiries: Mathematics is important in all aspects of scientific inquiry

Content Standard F (5-8) - Natural Hazards: Human activities also can induce hazards through resource acquisition, urban growth, land-use decisions, and waste disposal. Such activities can accelerate many natural changes.

Background: Refer to *Threats to Dolphins* information file for more information about marine debris and entanglement threats to marine life.

Coastal development has become a large threat to sea turtles because they are losing their nesting grounds, but an even larger threat is the artificial lighting. Hatchlings instinctively move towards the brightest light after leaving the nest. Years ago this would have been the moon, but now turtles are headed towards condos, beach houses and roads.



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Turtle Trouble

A female sea turtle lays her eggs in a deep hole that she digs with her hind flippers. For 45 minutes she will lay her eggs – possibly more than 100 in all. Temperature determines if the turtle develops into a male or a female. The warmer eggs in the middle of the hole will become female and the cooler eggs, the ones closer to the sand will become male (Hint to remember- Chicks are hot and boys are cool!) If you ever see a female sea turtle coming on to the beach to lay her eggs, **please do not disturb** her. If she becomes frightened, she will return to the water to deposit her eggs. They will not be properly incubated and most likely will be eaten.

Materials:

- Hand out
- Pencils
- Book, ***Turtle, Turtle, Watch Out!***

Procedure:

1. Read the book aloud to the class.
2. Introduce the background information to the students. As a class or individually, have students complete the hand out.

Wrap up: Share answers and check each other's or individual work.

Taking it further:

- Read more on what you can do to save endangered species like sea turtles.
- Make a graph of statistics of different endangered species and how many are left in the world today.



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Turtle Trouble

Name _____

Date _____

Solve the following word problems in the space provided. Feel free to show your work:

Three Green turtles laid eggs. One green turtle laid 74 eggs. One turtle laid 128 eggs, and one turtkeaid 98 eggs. How many eggs in total were laid?

Predators, such as dogs, raccoons, birds, and humans, hunt turtle eggs. This accounts for $\frac{3}{4}$ of their deaths each year. If $\frac{3}{4}$ of the eggs are eaten, how many turtle eggs are left to hatch?

After the eggs hatch they must run to the sea. This may seem easy, however, bright lights of cities, streets and homes easily confuse baby turtles. This causes them to head inland instead of the water. From the amount of eggs that hatched, 44 became confused and died due to lack of food and water or were eaten by predators. How many turtle babies are left?

The danger does not stop when they reach the sea. Now the baby turtles must face the journey to the kelp forests where they will feed and grow. On their way, they will encounter sharks and other large fishes that have a taste for turtles. Twenty-five of the baby turtles that made it to the sea have become lunch for a hungry predator. How many turtle babies made the journey safely to the kelp forest?

Out of every 100 turtles that hatch how many will survive to become adults?

Five of the seven sea turtles can be found along the East Coast, the Gulf shore, or in the Caribbean. These are the Atlantic ridley, hawksbill, green turtle, loggerhead and the leatherback.



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Turtle Trouble

The Atlantic Ridley measures 2 feet long
The Hawksbill can grow up to 2 feet long
The Green turtle can be a length of 4 feet
The Loggerhead can grow to be 5 feet
The Leatherback measures 8 feet long.
(Hint: 12 inches in 1 foot)

How many inches longer is the Leatherback to the Hawksbill?

How many inches shorter is the Atlantic Ridley to the loggerhead?

If all the turtles were in a row how long would the line measure?
In feet? In inches?

