

Tail Measurements

Grade Level: Grades 1 & 2

Mathematics Skills:

Florida Sunshine State Standards:

Grade 1: MA.1.A.1.1, MA.1.G.5.2 (length)

Grade 2: MA.2.A.2.1, MA.2.G.3.1

Description: Students will practice measuring in different units while learning the parts of Winter's tail and constructing a paper Winter doll.

Materials:

- "Winter's Tail" photograph/transparency
- "The Tale of the Tail: Winter's Story" story
- "Tail Measurements" worksheet
- "Tail Measurements Cut Outs" sheet
- Scissors
- Rulers
- Paper Fasteners
- Clear tape
- Cardstock paper (optional)

Additional Materials:

- Book – "Winter's Tale" by Joanne Benazzi Friedland available for purchase online (optional)
- Book – "Winter's Tail" by Juliana Hatkoff, Isabella Hatkoff, and Craig Hatkoff - available for purchase online (optional)
- Activity Book – "Winter: The dolphin who lost her tail" – available free online (optional)
- Video – "Winter: The Dolphin that Could" – available for purchase online (optional)

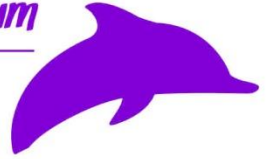
Preparations:

Print off enough copies of the "Tail Measurements" worksheets and "Tail Measurements Cut Outs" sheet for each student to have one (you may print on cardstock for sturdier Winter paper dolls).

Group desks into threes or fours, and put one pair of scissors, clear tape, and one ruler at each set of desks. Put a paper fastener on each individual desk.

Procedures:

- 1) Familiarize the class with Winter's story by reading the included "The Tale of a Tail: Winter's Story" or other, including books or videos listed in the additional materials.
- 2) Pass out the "Tail Measurements Cut Outs" sheet and "Tail Measurements" worksheet to students.
- 3) With students at their grouped desk, read aloud the directions on the "Tail Measurements Cut Outs" and have student share the scissors to cut out their tail pieces.
- 4) Once all of the tail pieces and the Winter photo are cut out, have students take turns measuring each part of Winter's tail.
- 5) When all the pieces are measured individually, have students tape their tails together (the clear tape helps to provide support).
- 6) Have students measure the length of their completed tail.
- 7) Have students measure Winter without her tail.
- 8) Attach the tail using a paper fastener (so that Winter's tail can move up and down) and then measure Winter with her tail on.



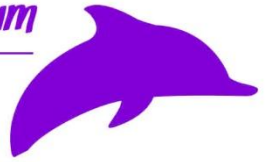
The Tale of the Tail: Winter's Story

On the calm waters of Mosquito Lagoon one December morning, a crab trap buoy floated gently on the surface of the water. Beneath the buoy was a long rope and tied to the long rope was a crab trap. To a young dolphin calf, it looked like the perfect toy! The dolphin calf grabbed the rope in her mouth and began to play. She swam back and forth, up and down, twisting and turning around the rope. Suddenly, she realized that the rope was tangled all around her body. It was twisted around her fin on top, called a dorsal fin. It was twisted around her fins on the side, called pectoral fins. Most tightly, it was twisted around her tail, called her flukes. The young dolphin needed help and quick!

Luckily, a fisherman nearby saw the crab trap buoy bouncing around on the top of the water. He directed his boat closer and saw the little dolphin all wrapped up in the line of the crab trap. He called for help and waited until a rescue team arrived. The rescue team saw that the little dolphin would need the care of an animal doctor, called a veterinarian, and took her all the way across the state of Florida to Clearwater Marine Aquarium.

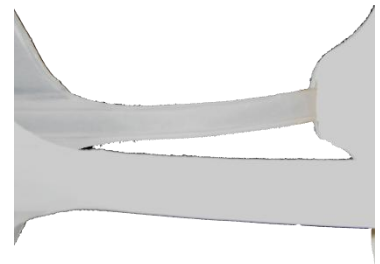
Once she was at Clearwater Marine Aquarium, the young dolphin was named Winter after the season in which she was found. The veterinarian and the animal care team at the aquarium realized that Winter's tail was very damaged from her experience with the crab trap – so damaged that she would never be able to use it again. Sure enough, her tail slowly began to fall off until it was completely gone.

Winter didn't let her missing tail slow her down. She learned how to swim side-to-side, like a fish swims. But the animal care team at CMA knew that swimming like that could hurt Winter's back – a dolphin's tail is supposed to move up and down! They worked with a group of people from Hanger Prosthetics, a company that makes artificial legs and arms for people. The doctors at Hanger designed a new tail for Winter. When Winter wears it, she can swim like a normal dolphin does – up and down!

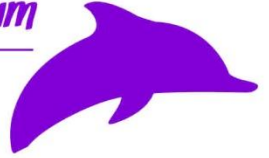


Tail Measurements Cut Outs

Directions: Cut out the pieces of Winter's tail below and the picture of Winter on the following page. Follow the directions on your worksheet to take measurements and create your own moving paper Winter doll.







Tail Measurements

Name: _____

Part One Directions: After cutting out all the pieces of Winter's tail and the picture of Winter, answer the following questions.

- 1) How many inches long is Winter's tail strap? _____ inches
- 2) How many inches long is Winter's tail rod? _____ inches
- 3) How many inches long is Winter's tail cup? _____ inches
- 4) How many inches long are Winter's tail flukes? _____ inches
- 5) Add the answers to #'s 1 through 4 to find the total length of Winter's tail:
_____ inches
- 6) How many inches long is Winter without her tail on? _____ inches
- 7) How many inches long will Winter be with her tail on? (*Hint: Add the answers to #'s 5 and 6*)
_____ inches

- 8) How many centimeters long is Winter's tail strap? _____ cm
- 9) How many centimeters long is Winter's tail rod? _____ cm
- 10) How many centimeters long is Winter's tail cup? _____ cm
- 11) How many centimeters long are Winter's tail flukes? _____ cm
- 12) Add the answers to #'s 8 through 11 to find the total length of Winter's tail:
_____ cm
- 13) How many centimeters long is Winter without her tail on? _____ cm
- 14) How many centimeters long will Winter be with her tail on? (*Hint: Add the answers to #'s 13 and 14*)
_____ cm

Winters' Tail



FLUKES

CUP
ROD

STRAP