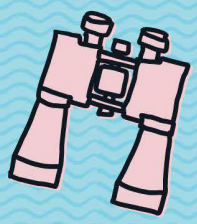
CAMP GoldieBlox

WHALE TAIL BOOKMARK

Have you ever seen fins or a tail poking out of the ocean? Scientists can identify whale or dolphin species by studying these shapes. For example, a tail is made up of two flukes and the shape of each species' flukes are a little different. From there, scientists can study the unique patterns on each mammal's flukes or body to identify the individual.

Gracie Ermi designs software that helps identify orcas based on the unique patterns on their bodies. She also loves to make crochet stuffed animals.



Activity:

In this activity, we'll copy the "fluking up" shape that whales and dolphins love to make. But our flukes will be sticking out of a book instead of the ocean. Scroll to the end to find three patterns based on three different species.

FUN FACT:

Orcas are actually not whales. They are the largest species in the dolphin family.

YOU WILL NEED:

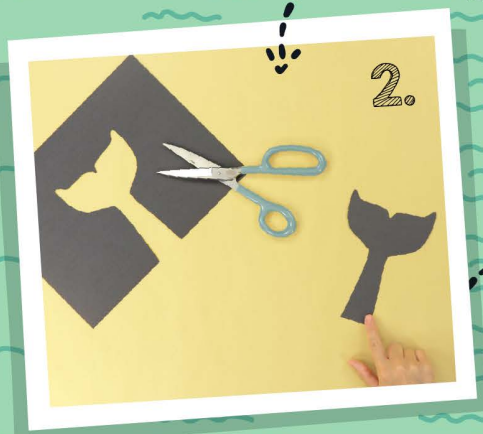
Black and white construction paper
Pencil
Scissors
Glue stick

FUN FACT:

Whales and dolphins are mammals, and they paddle their flukes up and down to propel themselves forward. This is very different from the side-to-side motion that fish make when they swim.

STEP 1:

Cut out the pattern of your choice and trace it onto construction paper. (Black for orca, and humpback, or white for beluga.)

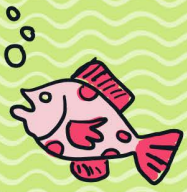


STEP 2:

Cut out pattern.

STEP 3:

For orca and humpback whale, trace pattern again onto white paper. Cut out pattern, but this time 1-2 centimeters smaller than the pattern you traced.

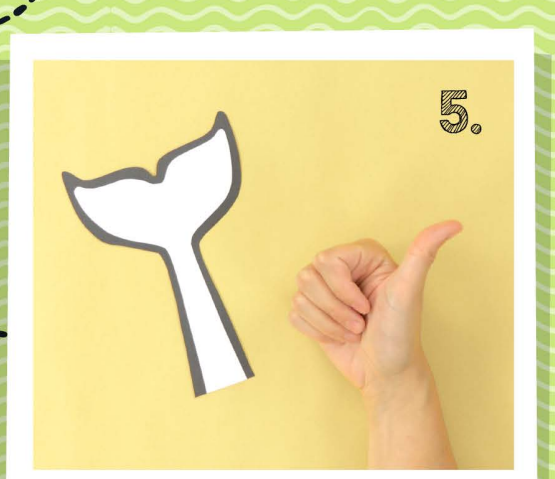


STEP 4:

For orca and humpback whale, glue white paper on top of black paper. Let dry.

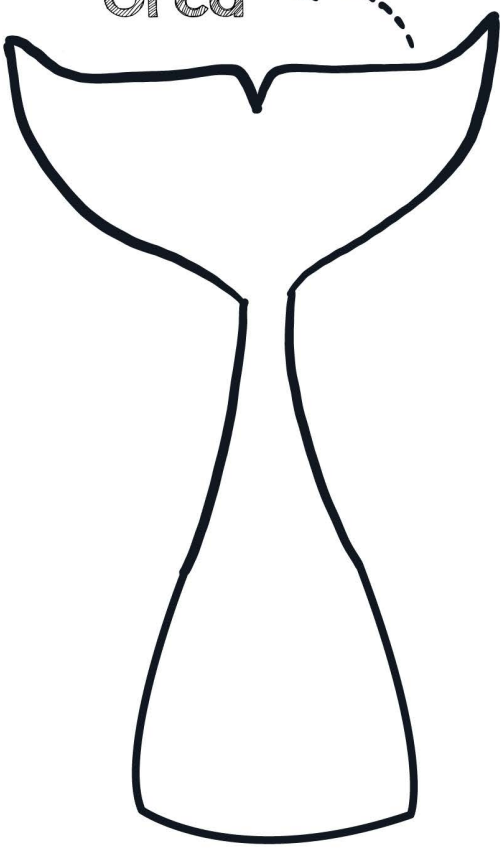
STEP 5:

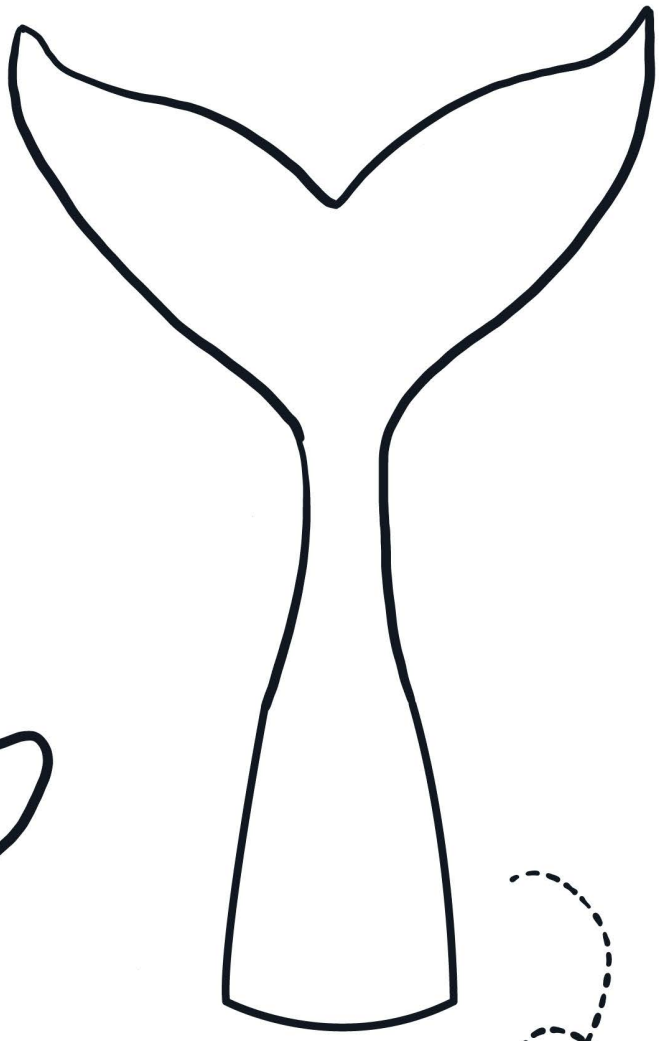
If you'd like, you can draw unique patterns onto your whale tails and name them. Then place them in your favorite book!



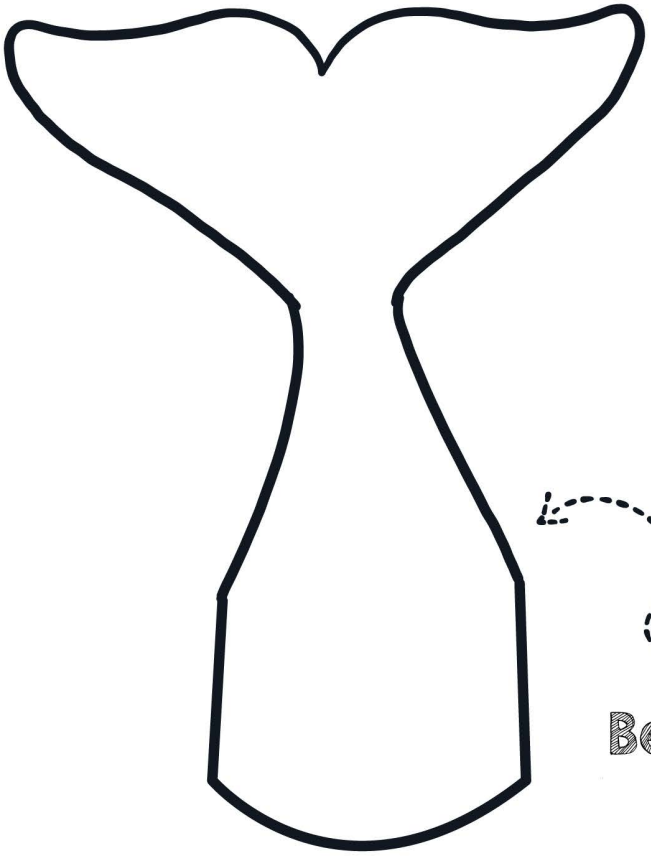
Whale Tail Patterns

Orca





Humpback Whale



Beluga Whale

THINK ABOUT IT!

Orcas have no predators in the ocean--except for humans. Pollution and fishing nets can harm or kill them, and some people around the world still hunt and kill orcas while others capture them to display in marine parks. But it's hard to track how many orcas are living in the ocean right now. Gracie's software helps identify each individual orca, so scientists can count how many are left. When scientists are armed with that data, they can help urgently protect the remaining orcas.

Why do you think it's important to protect wildlife like orcas?

The next time you see a fluke poking out of the ocean, do you think you'd be able to quickly take a photo and then identify which species of whale or dolphin it is? In what ways could artificial intelligence (AI) help this process? Artificial intelligence algorithms, like the one Gracie designed, teach computers how to make decisions based on data.

Do you think AI is faster or slower than humans? Do you think AI is more accurate or less accurate than humans?

LEARN MORE:

Whales: An Illustrated Celebration
by Kelsey Oseid
Ten Speed Press, 2018

https://kids.nationalgeographic.com/animals/mammals/orca/

https://happywhale.com/