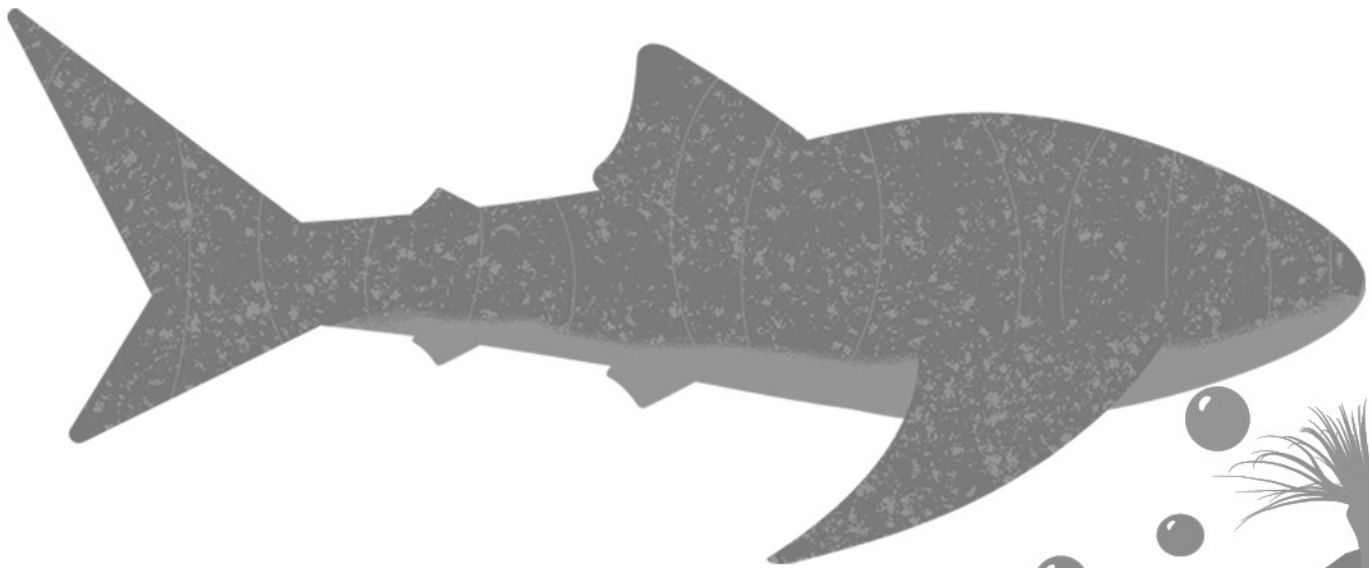


C

Math and Science Under the Sea



Before We Start...

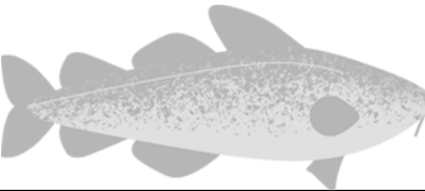
What do you think is the biggest fish in the world? How big do you think it is? On the next pages, you'll find out!

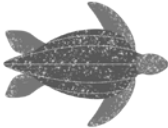
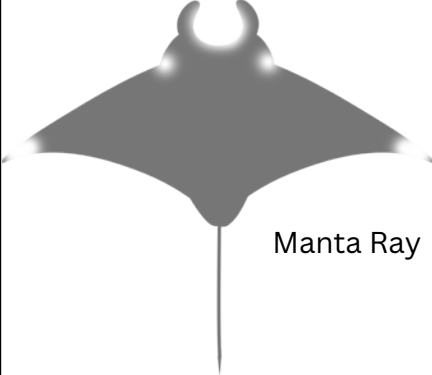
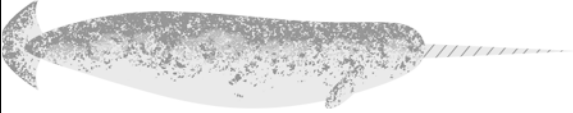
What do you think is the biggest fish? Draw it below.

How big do you think that fish is?

Measuring

On this and the next page, measure the animals using a ruler. For this page, times the result in inches by 2 and for the next by 8. The result is how many feet the animal is long in real life.

 Blue Fin Tuna	3 in x 2 = 6 ft long
 Atlantic Cod	
 Flathead Catfish (Biggest fish in Kansas)	
 Great Barracuda	
 Brown Trout	
 Blue Tilapia	
 Mangrove Horseshoe Crab	
 Common Sea Star	

 Bluefin Tuna  Leatherback Sea Turtle	
 Manta Ray  Giant Spider Crab	
 Great White Shark	
 Narwhal	
 Oarfish	
 Whale Shark	

Multiplication

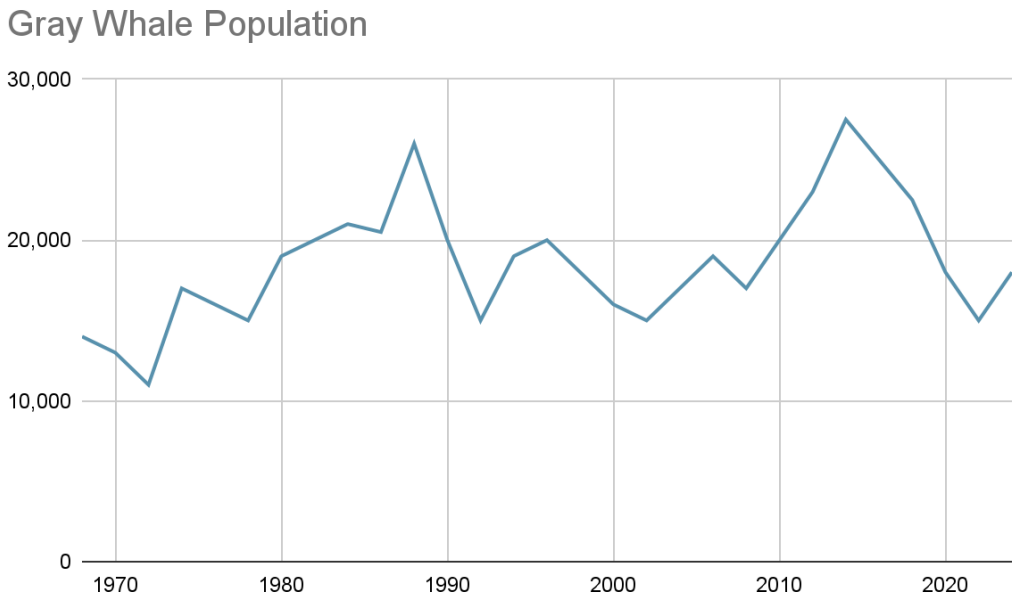
On this and the next page, read about the mating habits of animals. Then, figure out how many children they'd have in 3 years by multiplying. If the mating season is labeled as "days," find out for 24 days instead of 3 years.

Animal Habits	Work
<u>Blue Whale</u> 1 per litter, 1 litter per season, 1 season every 3 years	$1 \text{ calf} \times 1 \text{ season} = 1 \text{ calf per season}$ 1 season per 3 years 1 calf per 3 years
<u>Great White</u> 6 per litter, 1 litter per season, 1 season every 2 years	
<u>Pufferfish</u> 50 per clutch, 9 clutches per season, 1 season yearly	
<u>Green Sea Turtle</u> 150 per clutch, 3 clutches per season, 1 season every 3 years	

Animal Habits	Work
<u>Sea Horses</u> 750 per clutch, 18 clutch per season, 1 season every year	
<u>Salmon</u> 7,500 per clutch, 1 clutch per season, 1 season every 4 years	
<u>Moray Eel</u> 10,000 per clutch, 1 clutch per season, 1 season every year	
<u>Clownfish</u> 500 per clutch, 1 clutch per season, 1 season every 12 days	
<u>Lionfish</u> 15,000 per clutch, 2 clutch per season, 1 season every 3 days	

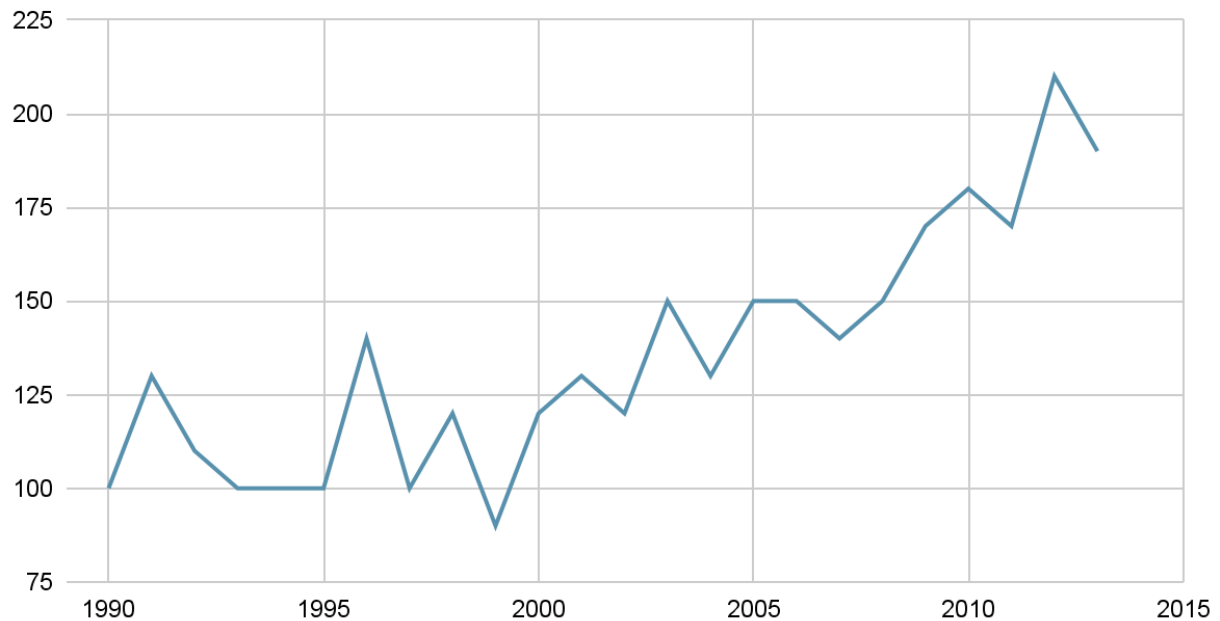
Population

The number of animals changes all the time, largely due to people. These animals were lucky enough to gain population, but many aren't. Answer these questions to learn about how their numbers changed over time.



Approximately how many Gray Whales were there in 1972?	11,000 Gray Whales
Approximately how many Gray Whales were there in 1991?	
Approximately how many Gray Whales were there in 2019?	

West Scottish Coast Dolphin Population (very rough estimates)



How many more dolphins were there in 2013 than 1994?

How many less dolphins were there in 2005 than 2010?

How many more dolphins were there in 2013 than 1990?

How many less dolphins were there in 1999 than 2012?

Stingers

In the deep sea, creatures need every defense they can get. One of the most common is venomous stingers and spines! On this and the next page, solve these problems to find how many stingers these animals have.

Problem and Animal	Work
<u>Stingray</u> $8796 - (2 \times 4398) + 1 =$	$8796 - (8796) + 1$ $0 + 1$ 1 stinger
<u>Blue Tang</u> $68 + 74 + 543 + 399 - 1082 =$	
<u>Stonefish</u> $1 + 2 + 3 + 4 + 5 - 1 =$	
<u>Box Jellyfish</u> $(5 \times 9) - 12 + (3 \times 4) =$	

Problem and Animal	Work
<u>Lionfish</u> $8,888 - 22 + 12 - 8,860 =$	
<u>Cone Snail</u> $(6 \times 25) - (3 \times 25) =$	
<u>Sea Anemone</u> $(2 \times 50) + 33 + 67 =$	
<u>Porcupine Fish</u> $(64 - 44) + (2,222 - 1,622) =$	
<u>Sea Urchin</u> $(2 \times 45) \times (2 \times 5) =$	

Favorites

What's your favorite creature of the sea or river? Draw it in the space below and say why it's your favorite in the bottom box.

Teeth

The ocean is full of teeth! Scary teeth, little teeth and even normal teeth. Solve these problems to find how many teeth each animal has.

Problem and Animal	Work
<u>Stingray</u> $(5 \times 8) \div 10 =$	$40 \div 10$ 4 teeth
<u>Parrotfish</u> $(3,652 \div 1,862) - 822 + 72 =$	
<u>Saltwater Crocodile</u> $(132 \div 2) + 22 + 44 - 22 =$	
<u>Sperm Whale</u> $(12 \times 9 \div 2) - 6 =$	

Problem and Animal	Work
<u>Sea Snake</u> $(5 \times 5 \times 4 \times 10 + 8) \div 56 =$	
<u>Great White</u> $3 \times 30 \times 60 \div 30 \div 60 \times 100 =$	
<u>Lingcod</u> $(5 \times 6 \times 5 \times 10) + 5 =$	
<u>Whale Shark</u> Great White's total $\times 10 =$	
<u>Sturgeon</u> Lingcod's total $\times 0 =$	

Reefs

Coral reefs are a small part of the ocean as a whole, but they hold huge amounts of fish and other animals. Find out how big some of the largest reefs in the world are by solving these problems!

Reef	Work
<u>MesoAmerican Barrier Reef</u> $(6 \times 127) + (522 \div 9) - 57$	$822 + 58 - 57$ 823 square miles
<u>Red Sea Coral Reef</u> $(8,741,000 - 287) \div 1,000$	
<u>New Caledonia Barrier Reef</u> $(2 \times 2 \times 5 \times 2 \times 5 \times 2 \times 5 \times 7) + (54 \times 10) + 4$	
<u>Great Barrier Reef</u> $(98 \times 786) + (432 \times 313) + (9 \times 1476)$	

Tutor (316)

About Us

Tutor (316) is dedicated to enhancing children's literacy and mathematical development. Tutor (316) partners with local elementary schools to support elementary students in their classrooms and after-school programs.

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