



Videoconferencing pre/post materials

Dear Teacher,

We are looking forward to our interactive videoconference with you and your students. During the program your students will have the opportunity to explore the unique animals of the Pacific Ocean.

In order to better prepare your students for their virtual visit to the Aquarium of the Pacific, we have compiled both pre- and post materials. These materials will provide your students with fun activities that will enrich their knowledge of ocean life and challenge what they learned. We have placed the activities in the following categories based on California standards. However, feel free to look through all the materials and use anything that you deem appropriate for your current curriculum.

Fishial Pursuit (grades 6-8)

* Water, water everywhere	Activity Sheet	Post
* Marine Life World Puzzle	Activity Sheet	Post
* Marine Mammal Adaptations	Activity Sheet	Pre or Post
* Echinoderm word jumble	Activity Sheet	Post
* Water, water everywhere	Answer Sheet	
* Marine Life World Puzzle	Answer Sheet	
* Marine Mammal Adaptations	Answer Sheet	
* Echinoderm word jumble	Answer Sheet	

You may find additional activities for your students in pre/post materials from other programs. The programs conducted by the Aquarium, pre-visit materials and post-visit materials incorporate parts or all of the following California Science Standards:

6th Grade: Ecology (life sciences) - 5a, 5b, 5c, 5d, 5e

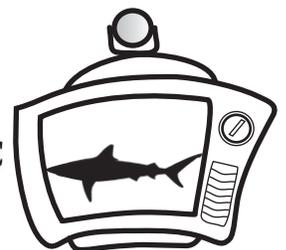
7th Grade: Structure and Function in living systems - 5a, 5c

8th Grade: Density and Buoyance - 8d

Thank you for your interest in our programs. We are excited to connect with your school!

Sincerely,

Aquarium of the Pacific Education Staff



Water, Water Everywhere, but How Much Can We Drink?

You are given 100 ml of water to equal 100% of the world's water. Complete steps 1-3 and answer the questions at the bottom.

1. Complete Table A.
2. Complete Table B by coloring in the box with the labeled color.
3. Color in the graduated cylinder using the information from Table A and Table B. (you may need to draw lines in yourself).

Table A

100% total world's water = 100ml
97% salt (ocean) water = ____ ml
2% glaciers = ____ ml
1% ground water, lakes,
rivers, & streams = ____ ml

Table B

World Water Key

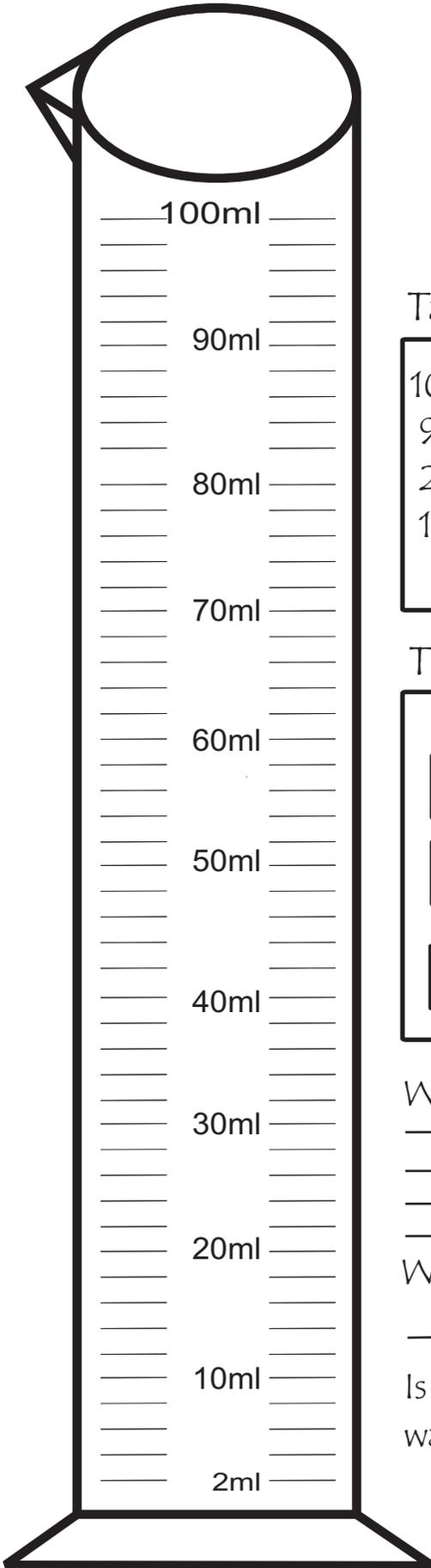
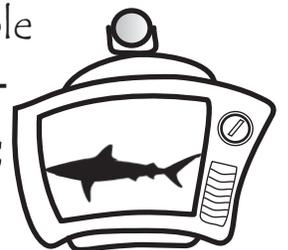
blue	salt (ocean) water
green	glaciers
red	ground water, lakes, rivers & streams

What are some sources of available fresh water?

What percent of our world's water is drinkable?

____%

Is this a large or small amount of drinkable water on our planet? _____



Marine Life Word Puzzle

Fill in the blanks below during your "fishial Pursuit" program. After the program, find these words in the puzzle below.

The _____ is the largest animal on the planet.

Fish like _____ change sex at some point in their life

Most of the ocean is _____ deep.

You are more likely to injure yourself on the _____ than you are to be bitten by a shark.

A _____ can hold its breath longer than a dolphin. It can hold its breath up to 40 minutes or longer.

Sea otters are the only marine mammal that does not have _____.

_____ are fish that use a modified dorsal fin to lure fish in close so they can eat them!

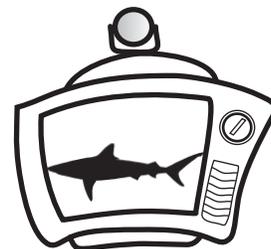
Sea stars actually breath through their _____.

Some _____ can hold their breath longer than a movie and a TV show combined.

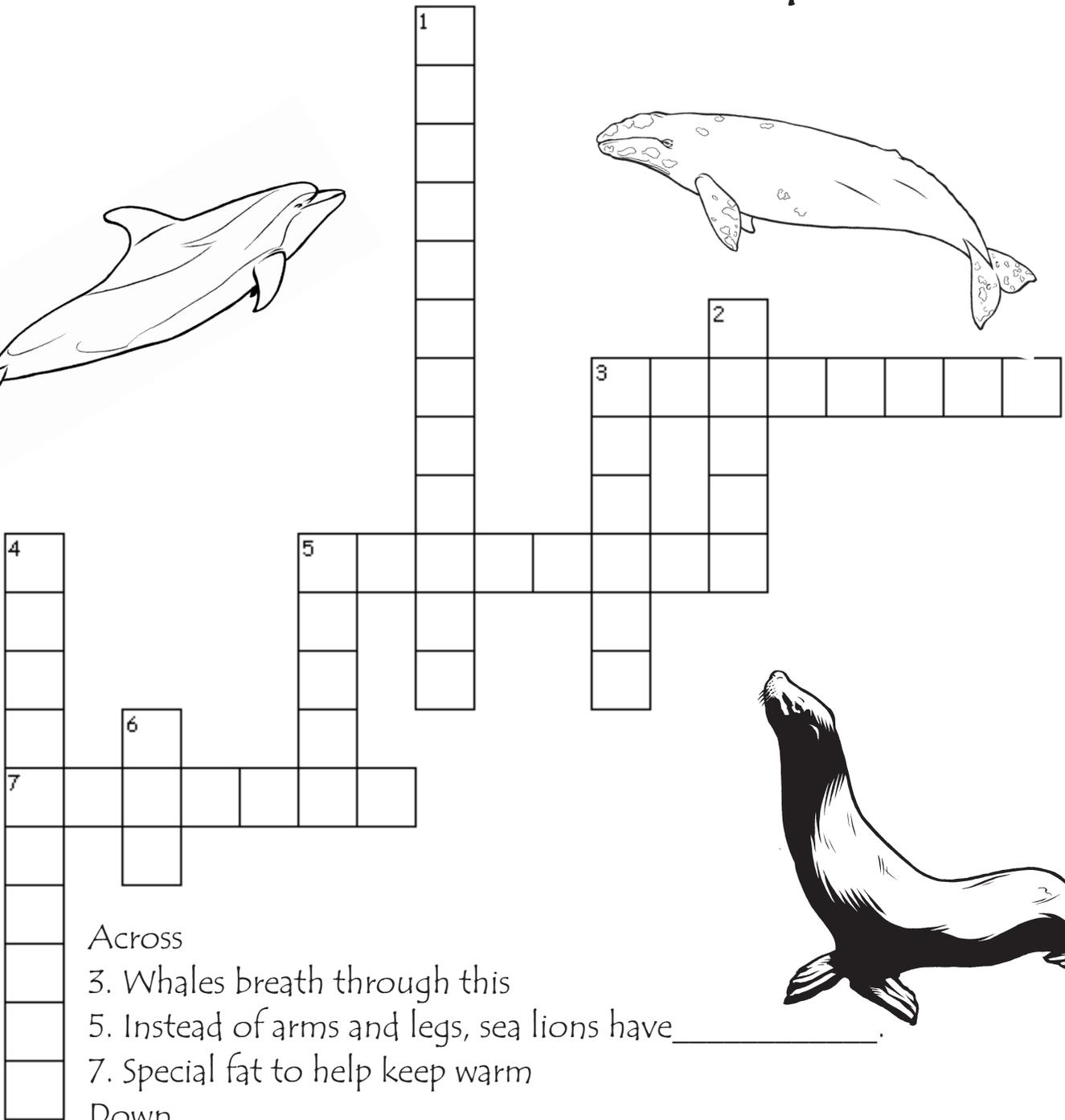
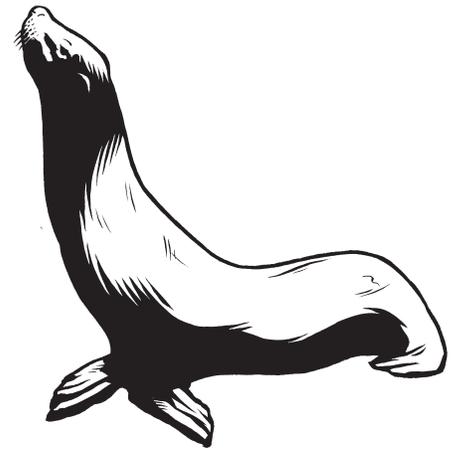
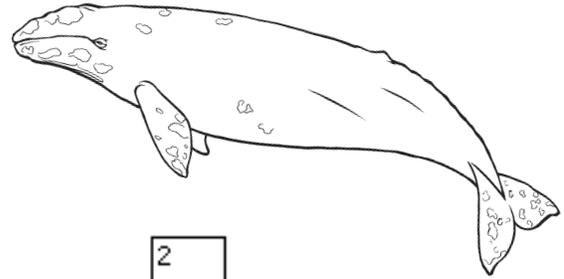
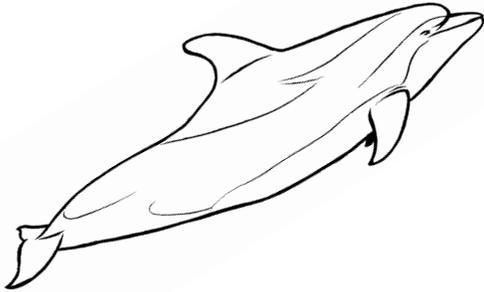
All sharks do not have to _____ in order to breathe.

H O Q T W F F P G U V R T E K
S Q G C W H O G X Q E I O Q Y
I C N H R E H W T B O E I B B
F H A G B C L W B O K Y L J N
R L L U N T B U W U S Q E I S
E D T F H T L I W R W U T L B
L L D E N B E I W G A D K A E
G S E L I M X U J I V S T E U
N T U R T L E S L I E D S S S
A W S R N S G O Y B V H Y E L
K E L A V T W K P F O Y Z D V
A K E G U B Y I R I E O K V W
G B T Q O T B S M T J J M D M
Y A R M M E E O V W S E Z V J
F E E T Q L V G G O Y N X N T

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Marine Mammal Adaptations



Across

3. Whales breath through this

5. Instead of arms and legs, sea lions have _____.

7. Special fat to help keep warm

Down

1. Toothed whales use this to find food

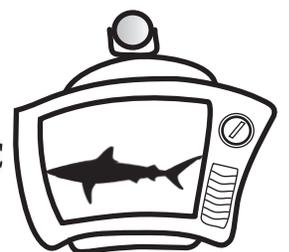
2. Some pinnipeds swallow these to help weigh them down

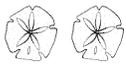
3. Some whales have teeth, others have this

4. Otters have a high _____ to help keep them warm

5. The tail of a whale is also known as this

6. Instead of blubber, sea otters have lots of this





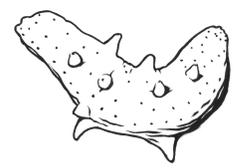
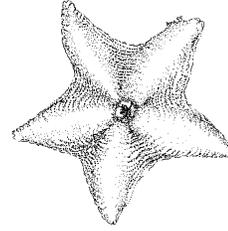
Echinoderm Word Jumble



During "Fishial Pursuit" we learned that sea stars use their tube feet to breathe. Sea stars are in the Phylum Echinodermata and are related to sea urchins, sea cucumbers and more! Unscramble the words below to learn more about this group of animals. Transfer the letter above each number below to find out the name of a sea urchin's mouth.

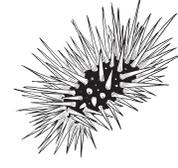
1. Echinoderm means

----- yipns snik
1 2



2. This animal is not a vegetable

----- ase rbuccume
3 4

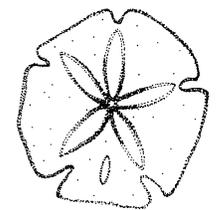


3. Sea stars can re-grow lost arms. This is called

----- grthnoiameee
5 6

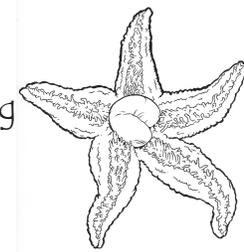
4. This animal has a prickly personality

----- eas chunir
7 8



5. Echinoderms use these for walking, breathing and eating

----- etbu etef
9 10

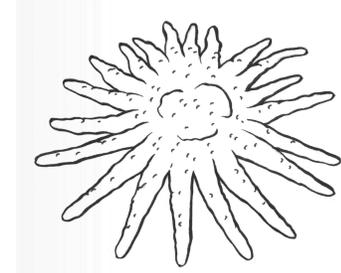


6. This animal might be "valuable".

----- snda lodlar
11 12

7. When eating, sea stars spit out their....

----- scmthaos
13

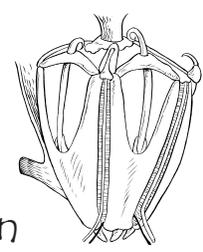


8. Another way to say five-part symmetry is:

----- darail yymmtser
14 15

This animal does not live in the night sky

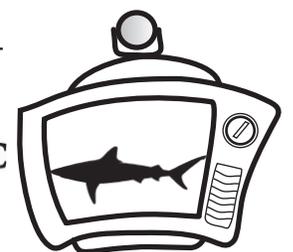
----- aes rast



This is the name for the five part mouth of a sea urchin

3 4 8 2 6 13 6 12 9 7

14 11 1 10 9 15 5



Water, Water Everywhere, but How Much Can We Drink?

Answer Key

You are given 100 ml of water to equal 100% of the world's water. Complete steps 1-3 and answer the questions at the bottom.

1. Complete Table A.
2. Complete Table B by coloring in the box with the labeled color.
3. Color in the graduated cylinder using the information from Table A and Table B. (you may need to draw lines in yourself).

Table A

100% total world's water = 100ml
97% salt (ocean) water = 97 ml
2% glaciers = 2 ml
1% ground water, lakes,
rivers, & streams = 1 ml

Table B

World Water Key

<input type="checkbox"/> blue	salt (ocean) water
<input type="checkbox"/> green	glaciers
<input type="checkbox"/> red	ground water, lakes, rivers & streams

What are the sources of available fresh water?

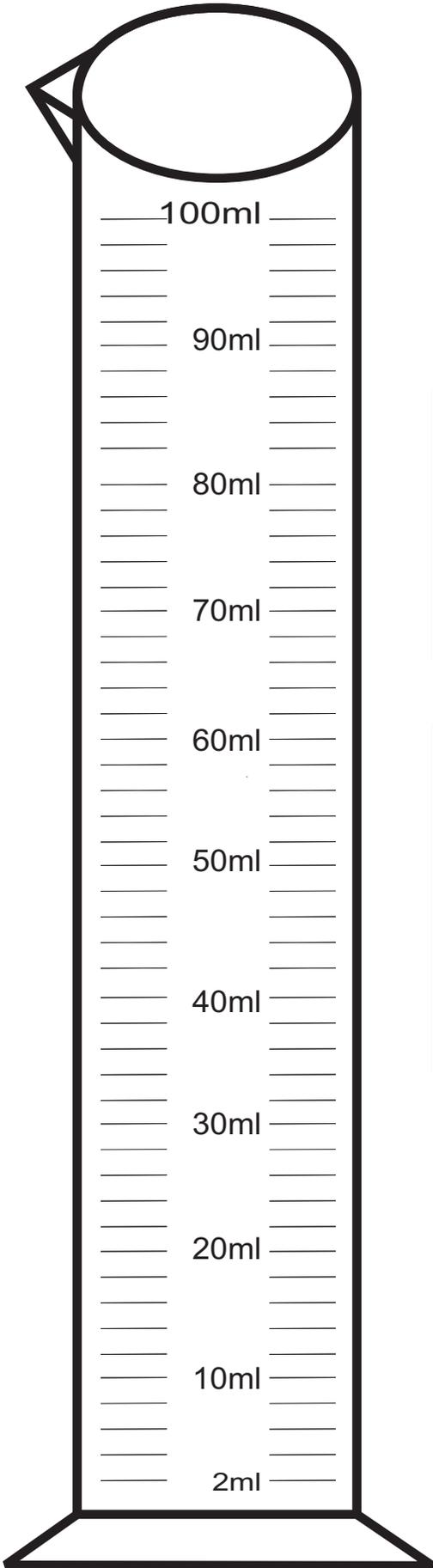
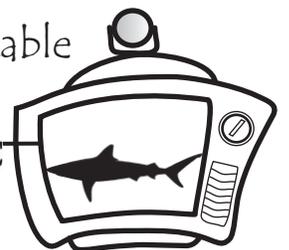
Lakes, rivers, streams and ground water.

Glaciers are frozen.

What percent of our world's water is drinkable?

1 %

Is this a large or small amount of drinkable water on our planet? small



Marine Life Word Puzzle

Answer Key

Fill in the blanks below during your "fishial Pursuit" program. After the program, find these words in the puzzle below.

The BLUE WHALE is the largest animal on the planet.

Fish in a family called WRASSE change sex at some point in their life

Most of the ocean is TWO MILES deep.

You are more likely to injure yourself on the TOILET than you are to be bitten by a shark.

A SEAL can hold its breath longer than a dolphin. It can hold its breath up to 40 minutes or longer.

Sea otters are the only marine mammal that does not have BLUBBER.

ANGLERFISH are fish that use a modified dorsal fin to lure fish in close so they can eat them!

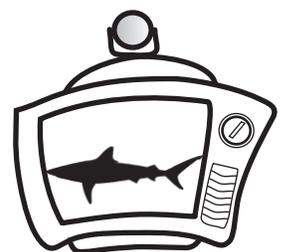
Sea stars actually breath through their FEET.

Some SEA TURTLES can hold their breath longer than a movie and a TV show combined.

All sharks do not have to SWIM in order to breathe.

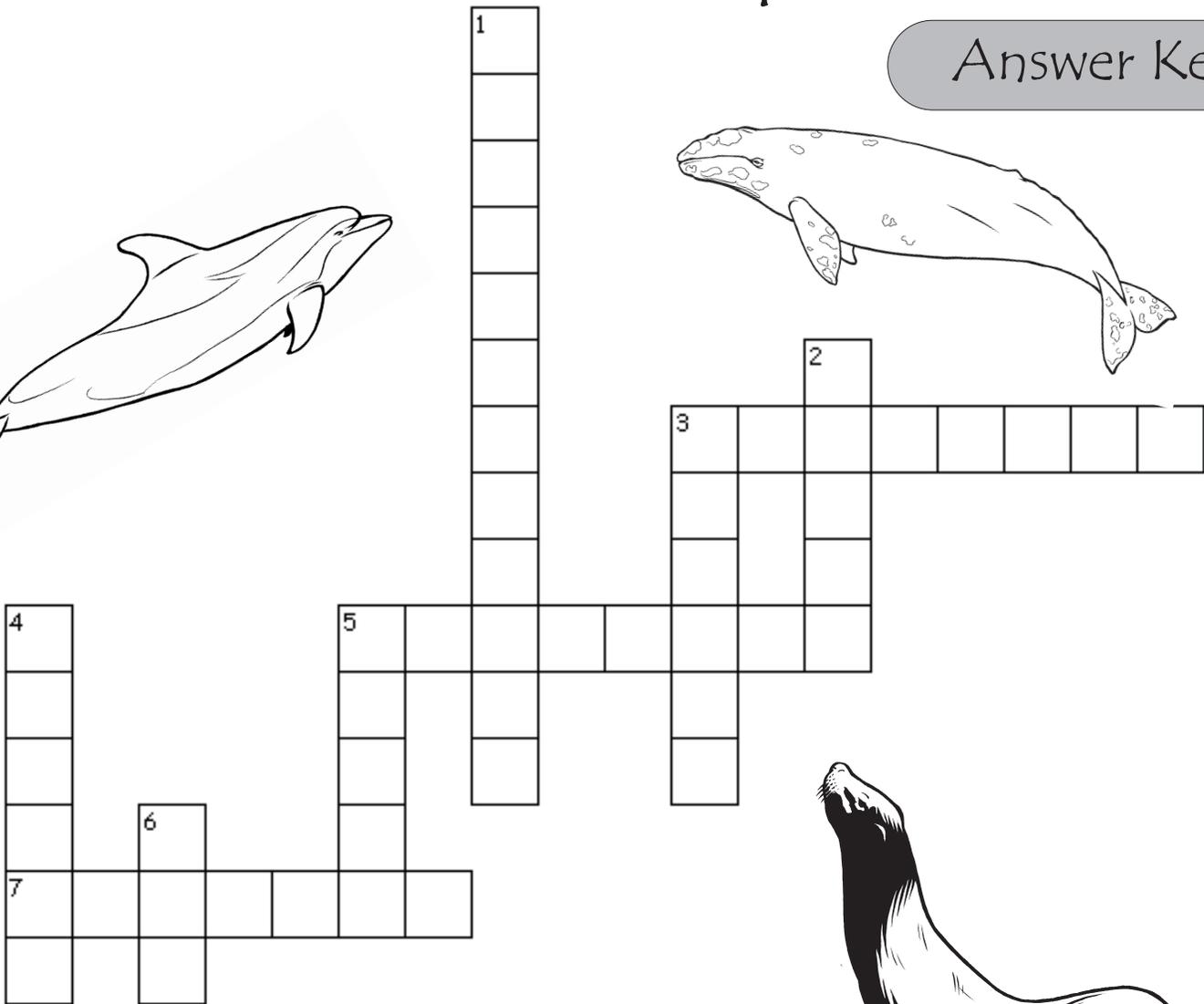
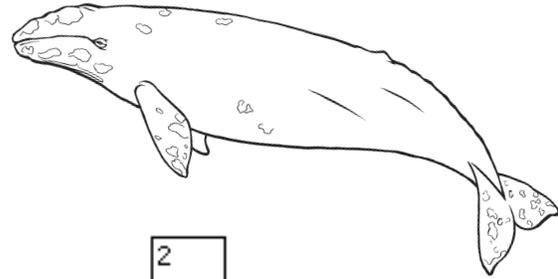
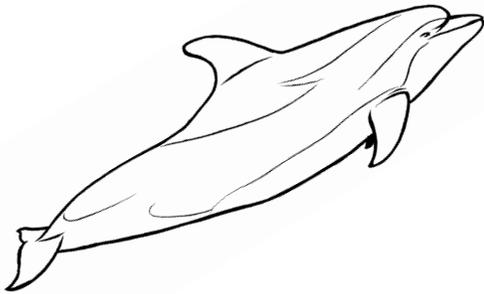
H O Q T W F F P G U V R T E K
S Q G C W H O G X Q E I O Q Y
I C N H R E H W T B O E I B B
F H A G B C L W B O K Y L J N
R L L U N T B U W U S Q E I S
E D T F H T L I W R W U T L B
L L D E N B E I W G A D K A E
G S E L I M X U J I V S T E U
N T U R T L E S L I E D S S S
A W S R N S G O Y B V H Y E L
K E L A V T W K P F O Y Z D V
A K E G U B Y I R I E O K V W
G B T Q O T B S M T J J M D M
Y A R M M E E O V W S E Z V J
F E E T Q L V G G O Y N X N T

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Marine Mammal Adaptations

Answer Key



Across

3. Whales breath through this (BLOWHOLE)

5. Instead of arms and legs, sea lions have _____ (FLIPPERS)

7. Special fat to help keep warm (BLUBBER)

Down

1. Toothed whales use this to find food (ECHOLOCAATION)

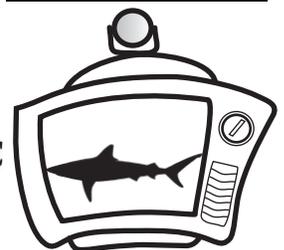
2. Some pinnipeds swallow these to help weigh them down (ROCKS)

3. Some whales have teeth, others have this (BALEEN)

4. Otters have a high _____ to help keep them warm (METABOLISM)

5. The tail of a whale is also known as this (FLUKE)

6. Instead of blubber, sea otters have lots of this (FUR)

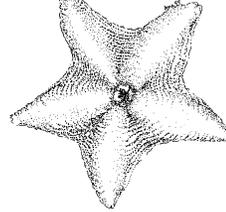


Echinoderm Word Jumble

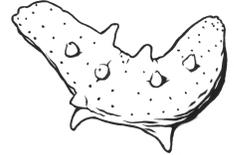
Answer Key

During "Fishial Pursuit" we learned that sea stars use their feet to breathe. Sea stars are in the Phylum Echinodermata and are related to sea urchins, sea cucumbers and more! Unscramble the words below to learn more about this group of animals. Transfer the letter above each number below to find out the name of a sea urchin's mouth.

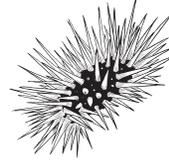
1. Echinoderm means
spiny skin



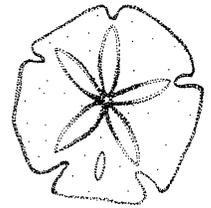
2. This animal is not a vegetable
Sea Cucumber



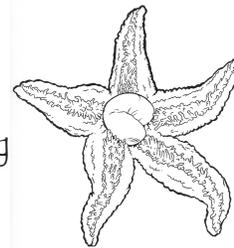
3. Sea stars can re-grow lost arms. This is called
regeneration



4. This animal has a prickly personality
sea urchin

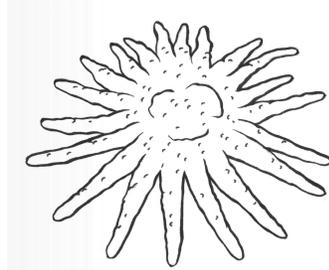


5. Echinoderms use these for walking, breathing and eating
tube feet



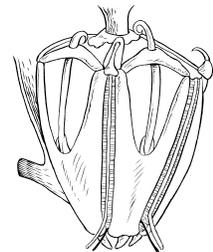
6. This animal might be "valuable".
sand dollar

7. When eating, sea stars spit out their....
stomach



8. Another way to say five-part symmetry is:
Radial symmetry

This animal does not live in the night sky
sea star



This is the name for the five part mouth of a sea urchin
Aristotle's lantern

