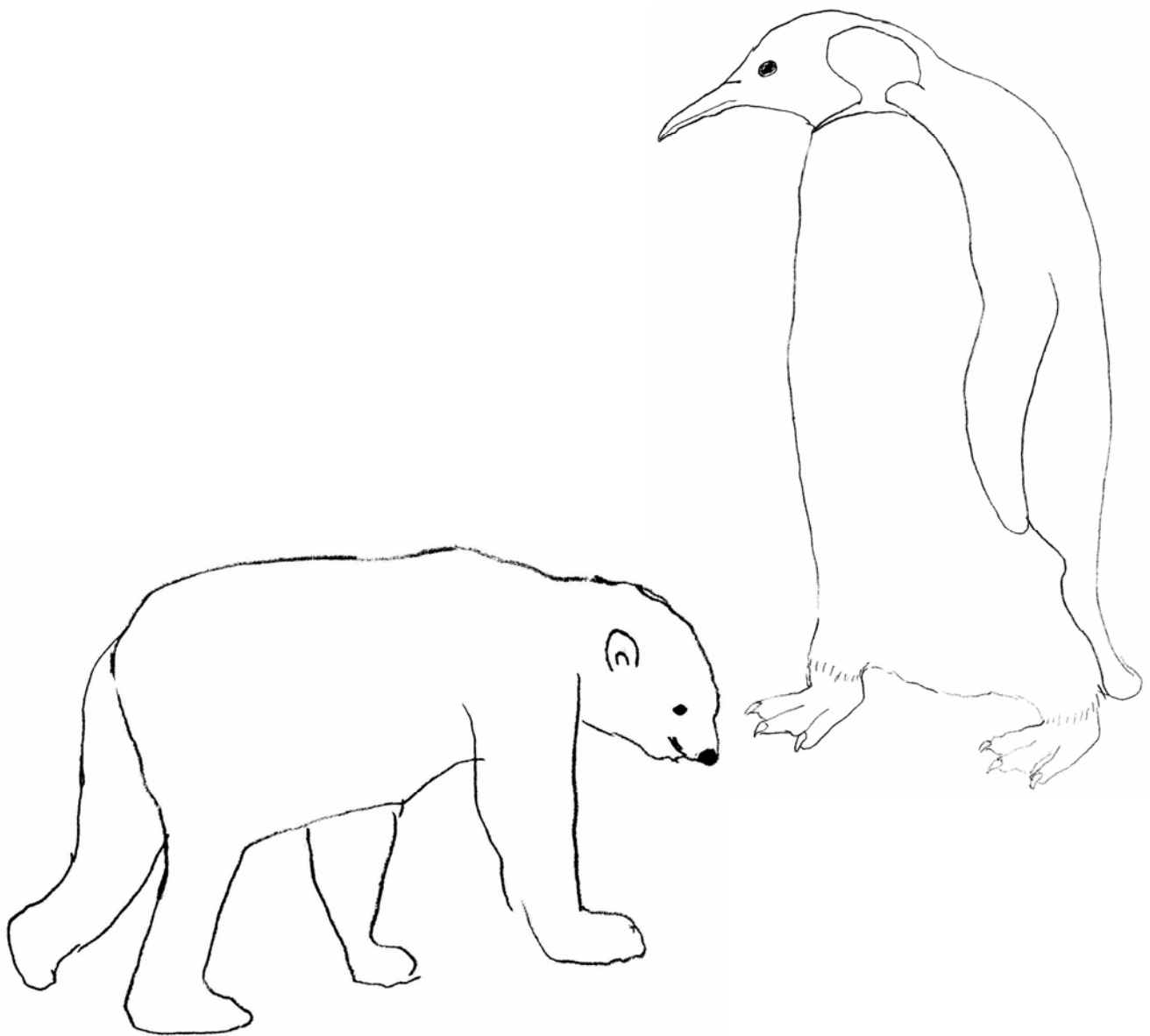


Arctic & Antarctic

Activity Book



Did you know?

The North Pole is in the Arctic and the South Pole is in the Antarctic. You might think that the Arctic and Antarctic are very similar--after all, they are both cold and covered with ice. Both experience about 6 months of darkness a year. While they have many similarities, very different animals live in each region.

Antarctica is the coldest, windiest, iciest place on earth. The average temperature is -55 degrees F, and wind speeds averaging 57 mph!

In comparison, the Arctic is a paradise – the average temperature is a “warm” 3 degrees F, with wind speeds averaging 16 mph.

People live in the Arctic. The Inuit, Inupiat, Yupik, and others make their home at the top of the earth.

The climate of Antarctica is too harsh for humans to have settled there permanently, as they did in the Arctic. Thousands of people visit every year, though.

About 70 % of the world's fresh water is contained in the ice and snow of the Antarctic.

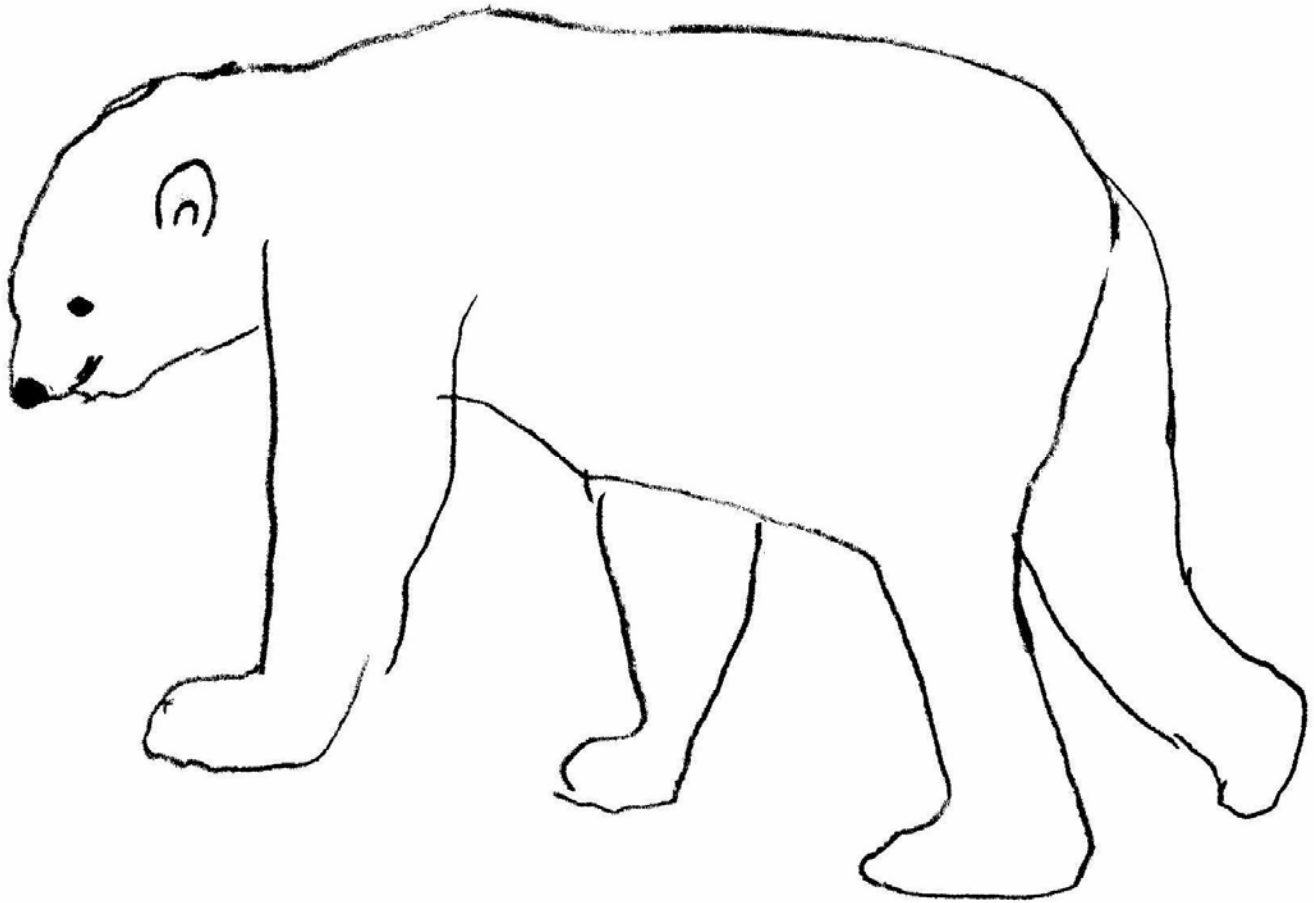
Antarctica is a continent, under all of that ice and snow is land.

The Arctic is not a continent, under the snow and ice is just water, the Arctic Ocean.

What both areas have in common is that the winter ice sheets are getting smaller.

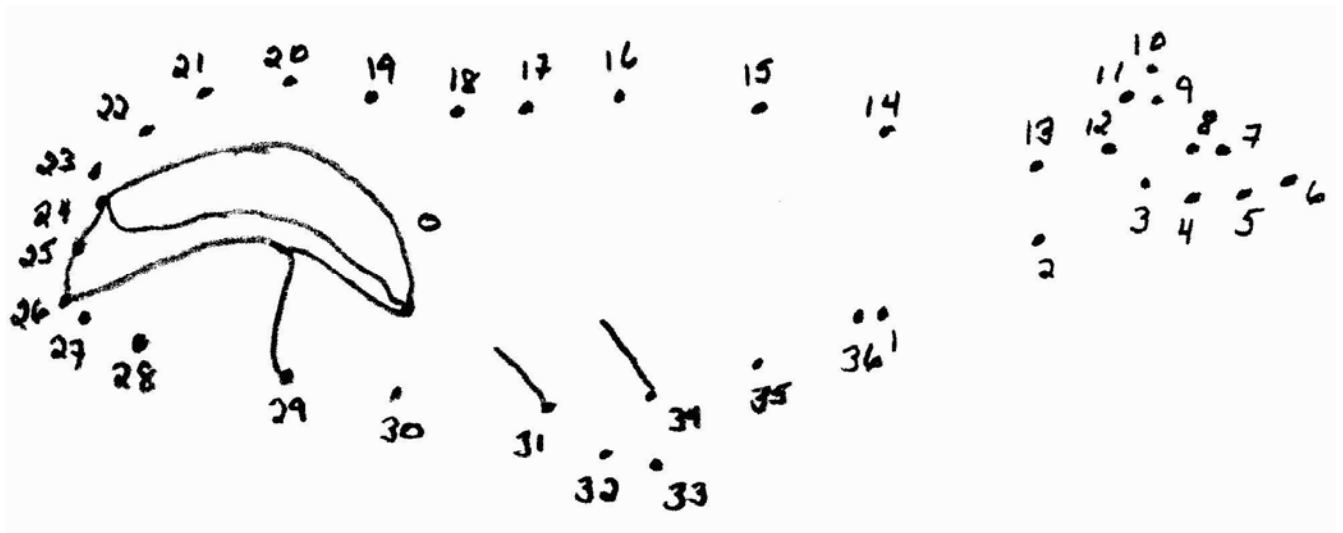
The word ‘arctic’ comes from the Greek Arktilos, or “country of the great bear,” because this is where polar bears live.

Color Me!



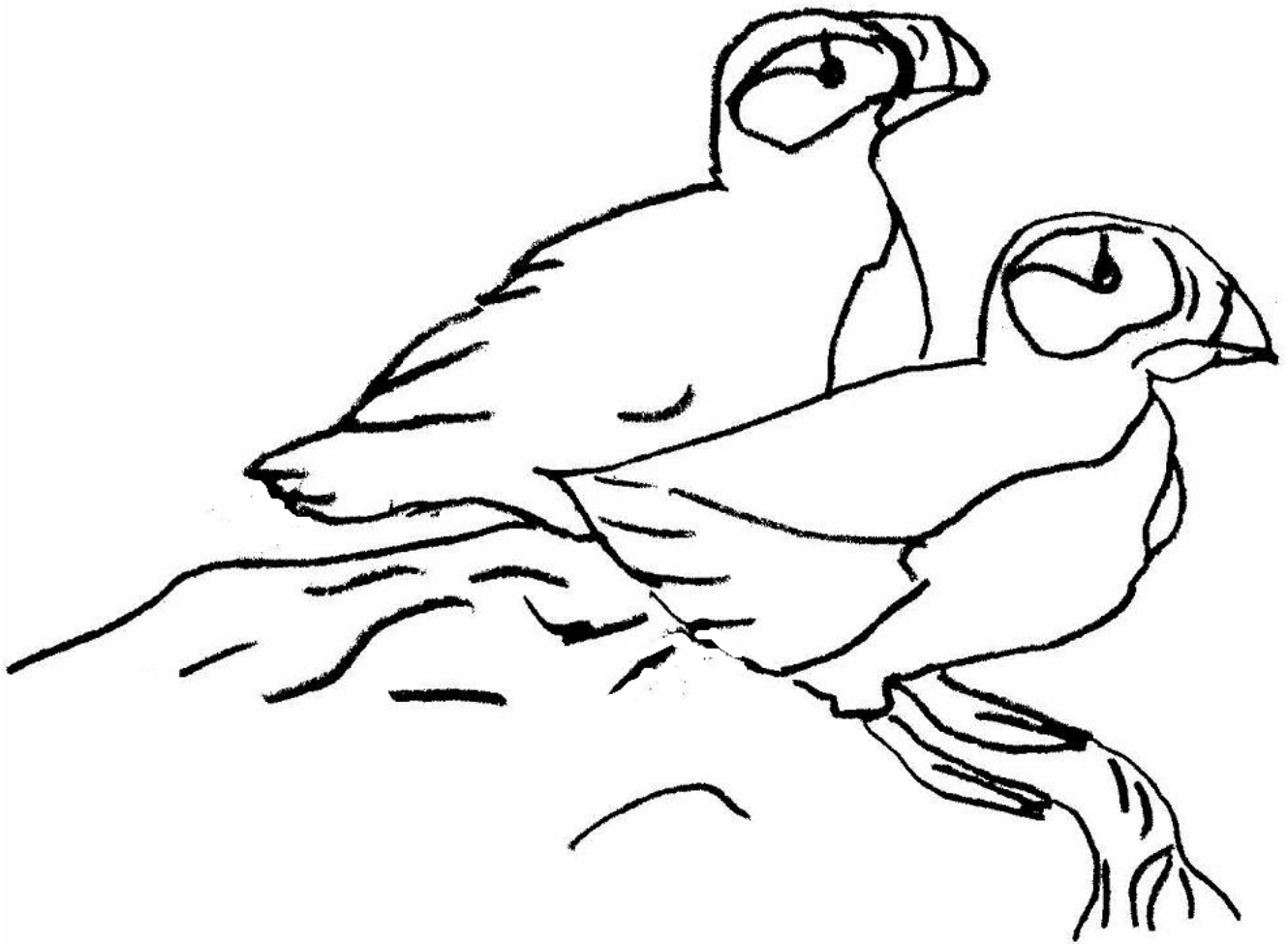
Polar bears are perfectly adapted to survive in the harsh conditions of the Arctic. Two layers of fur and a thick blubber layer provide the bears with such good insulation that they experience almost no heat loss. Polar bears are so well protected that they have more problems with overheating than they do with the cold.

Connect the dots to find a whale that lives in the Arctic:



Bowhead whales received their name from the high, arched upper jaw that somewhat resembles the shape of an archer's bow. Bowheads live at the southern edges of the Arctic ice during winters and move through leads of broken & melting ice during summers. Bowhead whales have been important subsistence (survival) items for native arctic hunters for centuries. The whole animal is used for food, tools, art works, and house construction materials.

Color Us!



The puffins' most striking feature is their large, colorful bill. Early sailors called them 'sea parrots' because of their stout bodies, short wings, and orange or red webbed feet. Often puffins must run along the top of the water a long way before they can manage to get airborne.

Word Search

Who lives on and around the Arctic?

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

Can you find these words?

Polar bear

Puffins

Beluga

Bowhead whale

Caribou

Inupiat

Arctic fox

Harp seal

Lemmings

Orca

King crab

Walrus

Arctic tern

Ptarmigan

Musk Ox

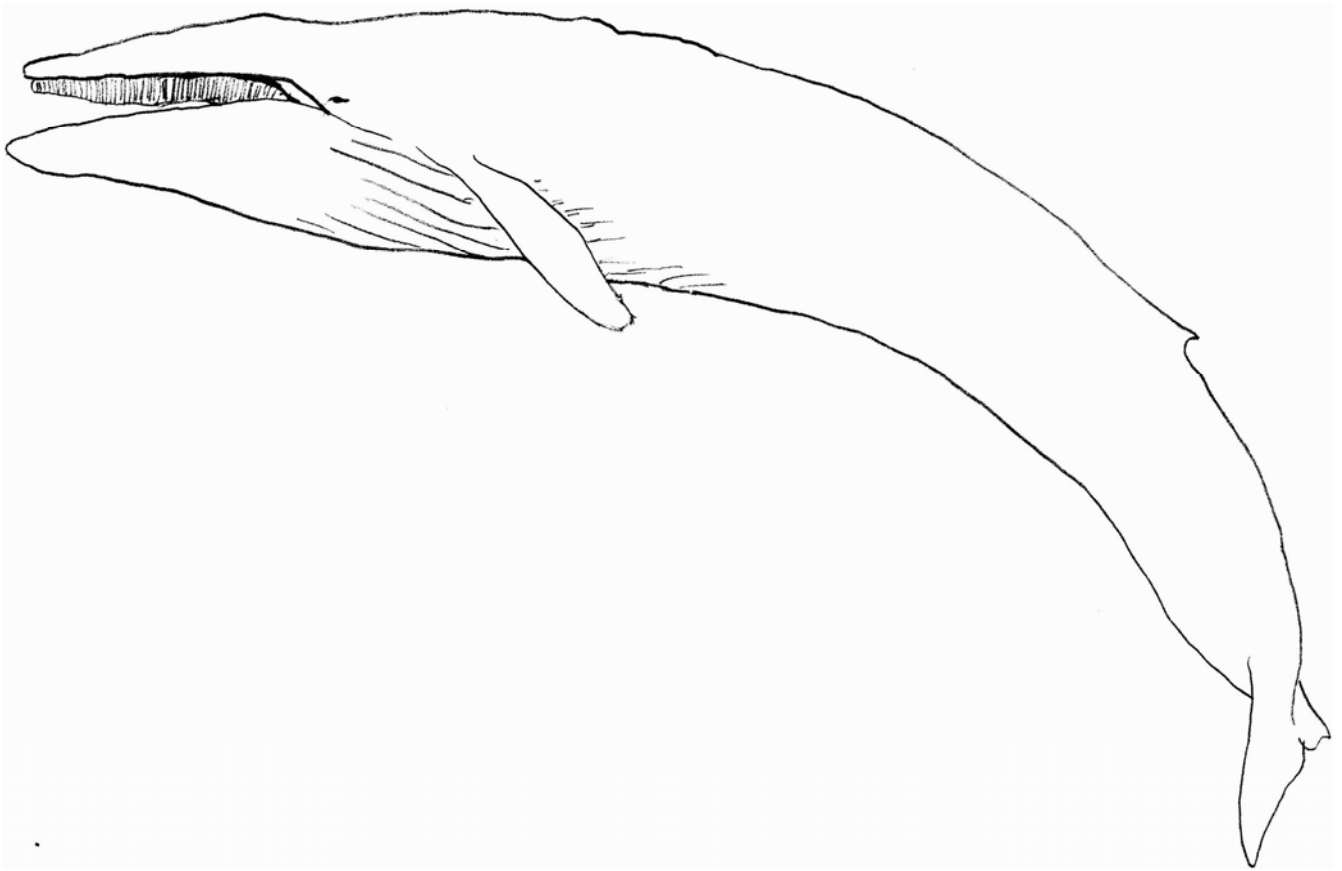
Sculpin

Cod

Brittle star

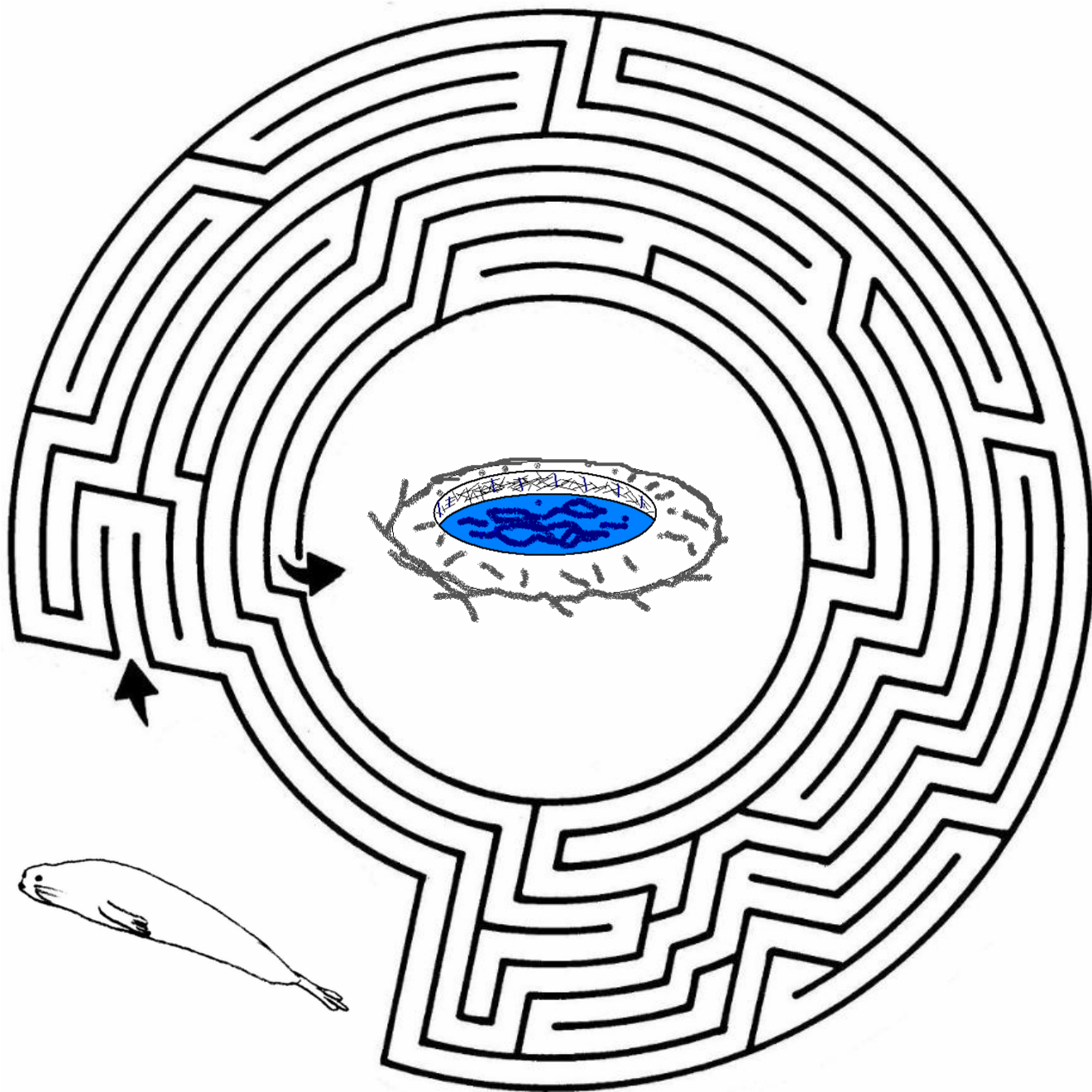
Black fly

Color Me!

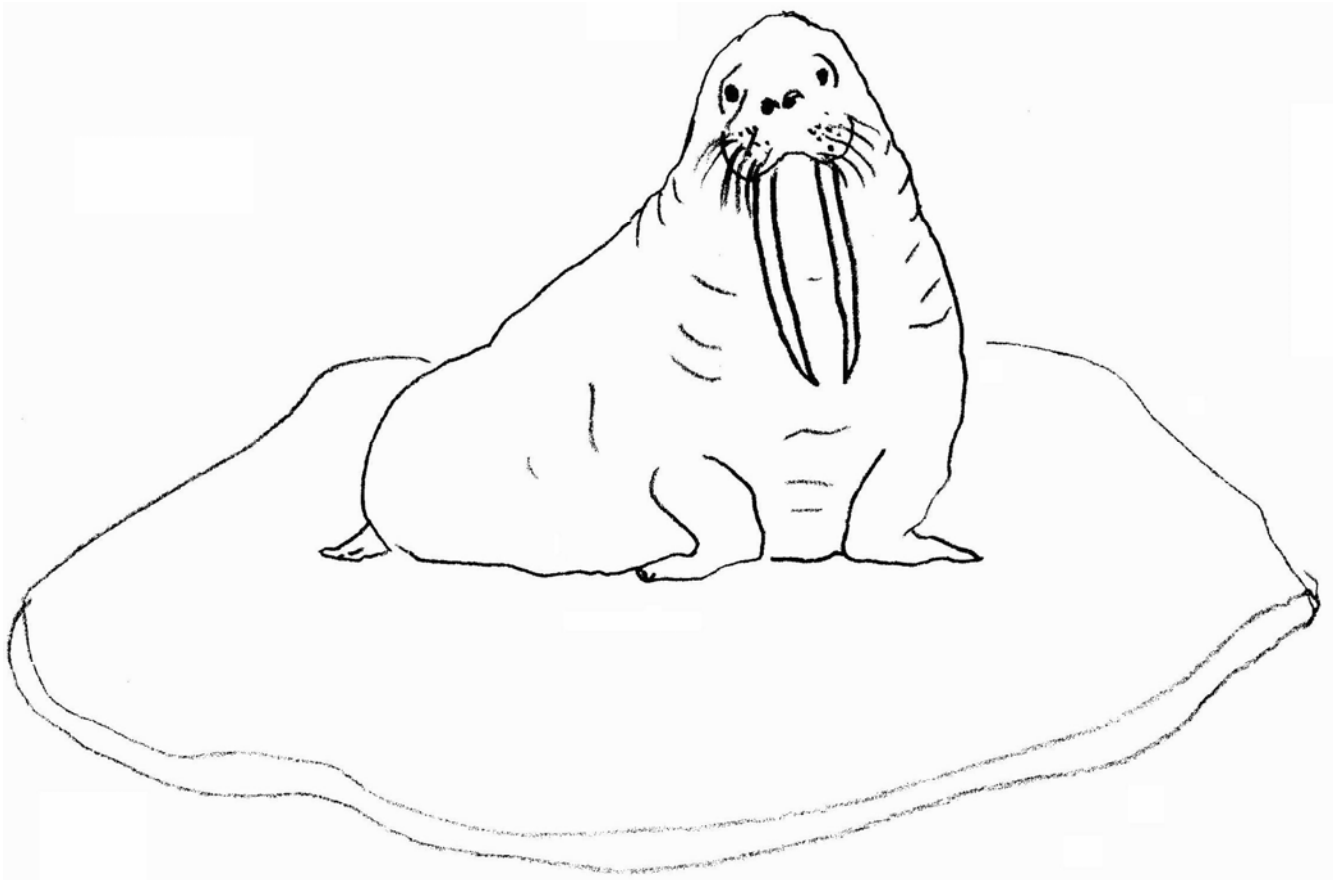


Blue whales are the largest animals ever to live in our planet's history -- even larger than any dinosaur! They can be over 100 feet long and weigh over 200 tons. Blue whales can be found in all oceans. In Antarctica, they feed on krill during the winter, right up to the ice edge. Blue whales are now endangered. In the Southern Hemisphere, whaling operations killed over 360,000 whales in the 20th century. The once huge populations of blue whales in Antarctic waters is now gone, leaving perhaps a few hundred animals scattered around Antarctica.

Seals are mammals, and they have to breathe air to live. Can you help this seal find her breathing hole in the ice sheet?

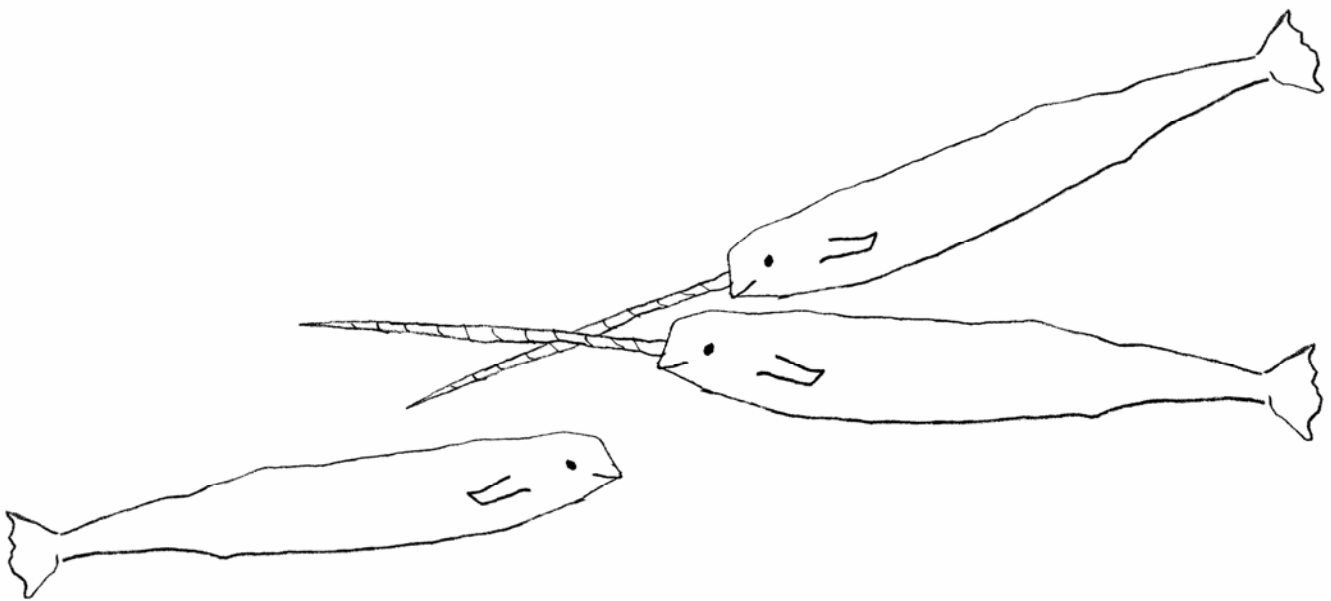


Color Me!



Male walruses have impressive mustaches with as many as 700 hairs packed on their noses. They also have two massive tusks, which are used to grip the ice when climbing out of the water, and to anchor themselves on the ocean bottom while digging for clams.

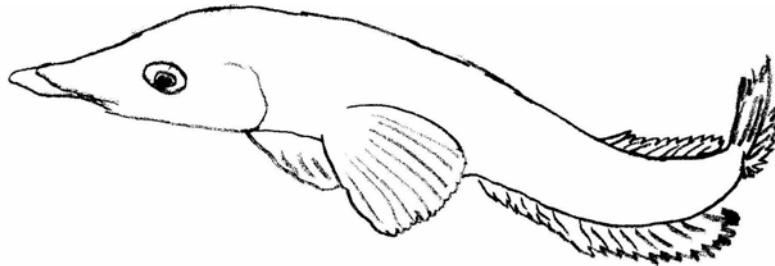
Color Us!



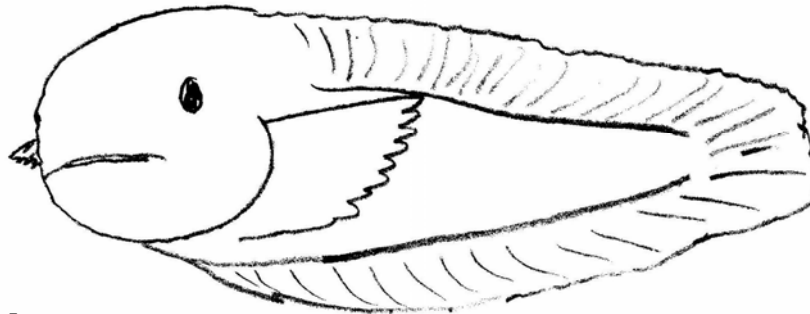
Male Narwhals have a long 'horn' growing out of their upper jaw, which is really a long, spiral tooth! The female Narwhals do not have a 'horn'. Can you guess for what use the males might have for this 'horn'?

Color Us!

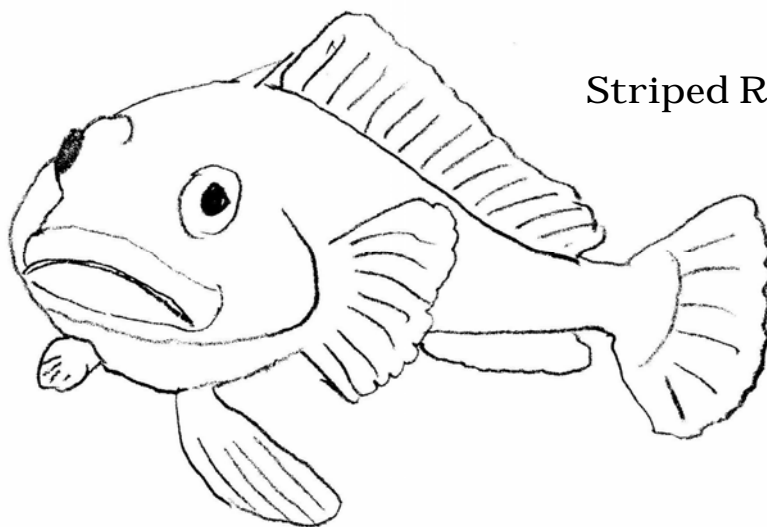
Many bony fishes in both polar seas manufacture antifreeze-like chemicals in their body fluids so they don't freeze.



Antarctic
dragonfish



DeVrie's Paraliparis



Striped Rockcod

Word Search #2

Who lives on and around Antarctica?

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

Can you find these words?

Emperor Penguin
Krill
Humpback Whale
Leopard Seal
Skua
Snow Petrel
Crabeater seal
Minke whale

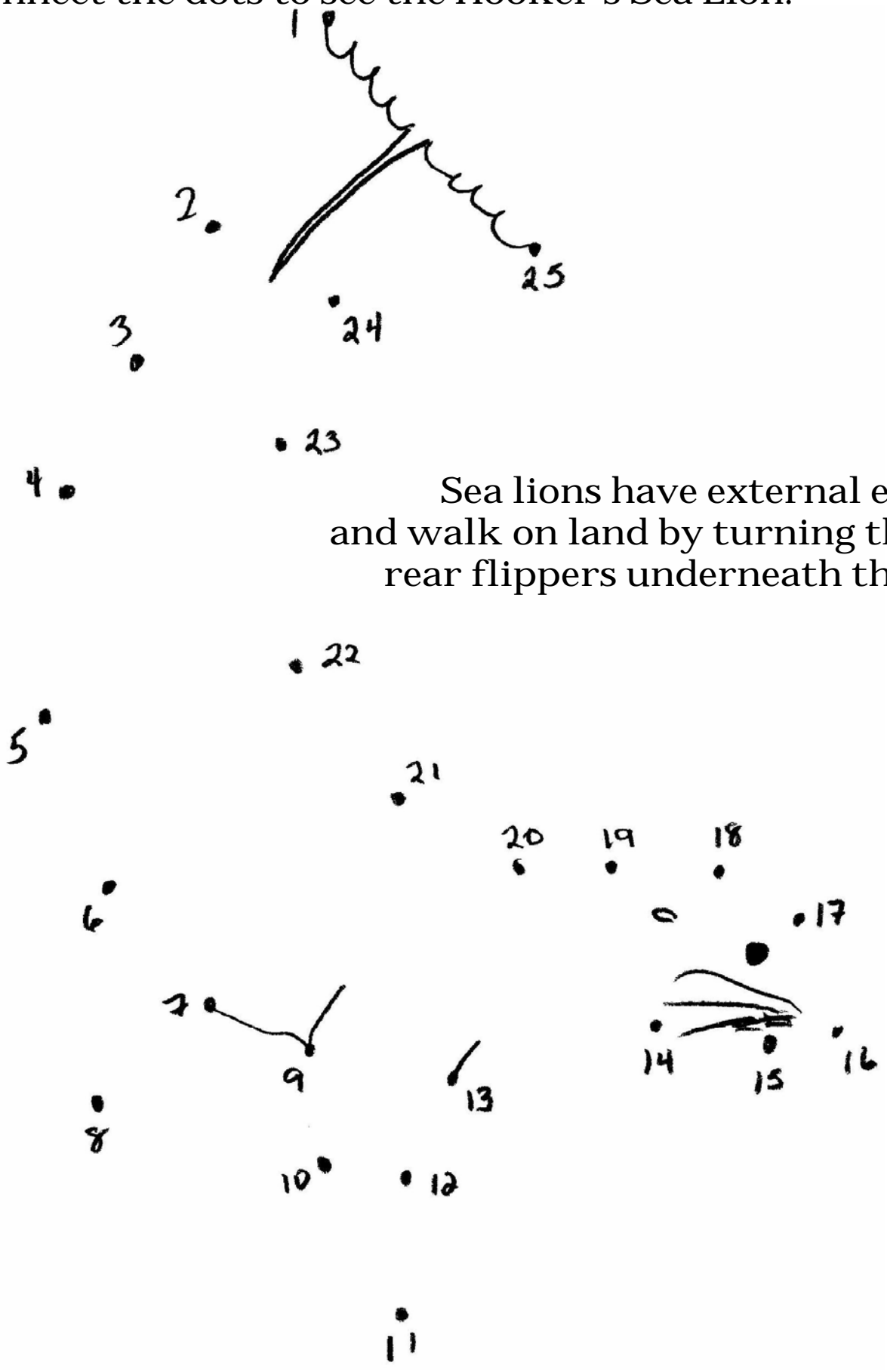
Ross seal
Weddell seal
Adelie penguin
Albatross
King penguin
Elephant seal
Blue whale

Color Us!



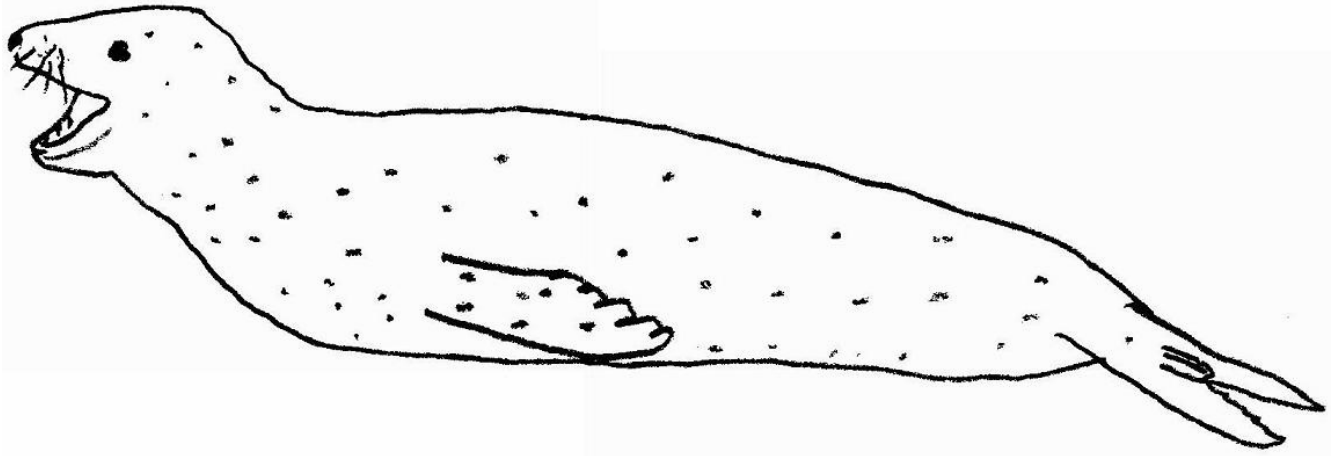
Emperor penguins spend their entire lives on or near the sea ice. Enduring temperatures down to -76 degrees F, the female lays one egg in the dead of winter, which is carried on top of the male's feet while the female goes back to sea to get some food.

Connect the dots to see the Hooker's Sea Lion.

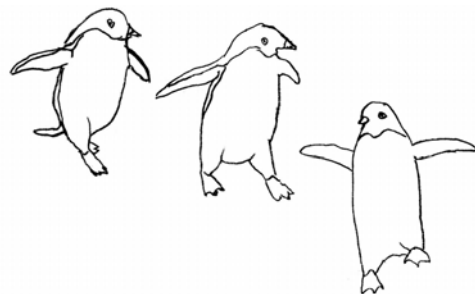


Sea lions have external ears,
and walk on land by turning their
rear flippers underneath them.

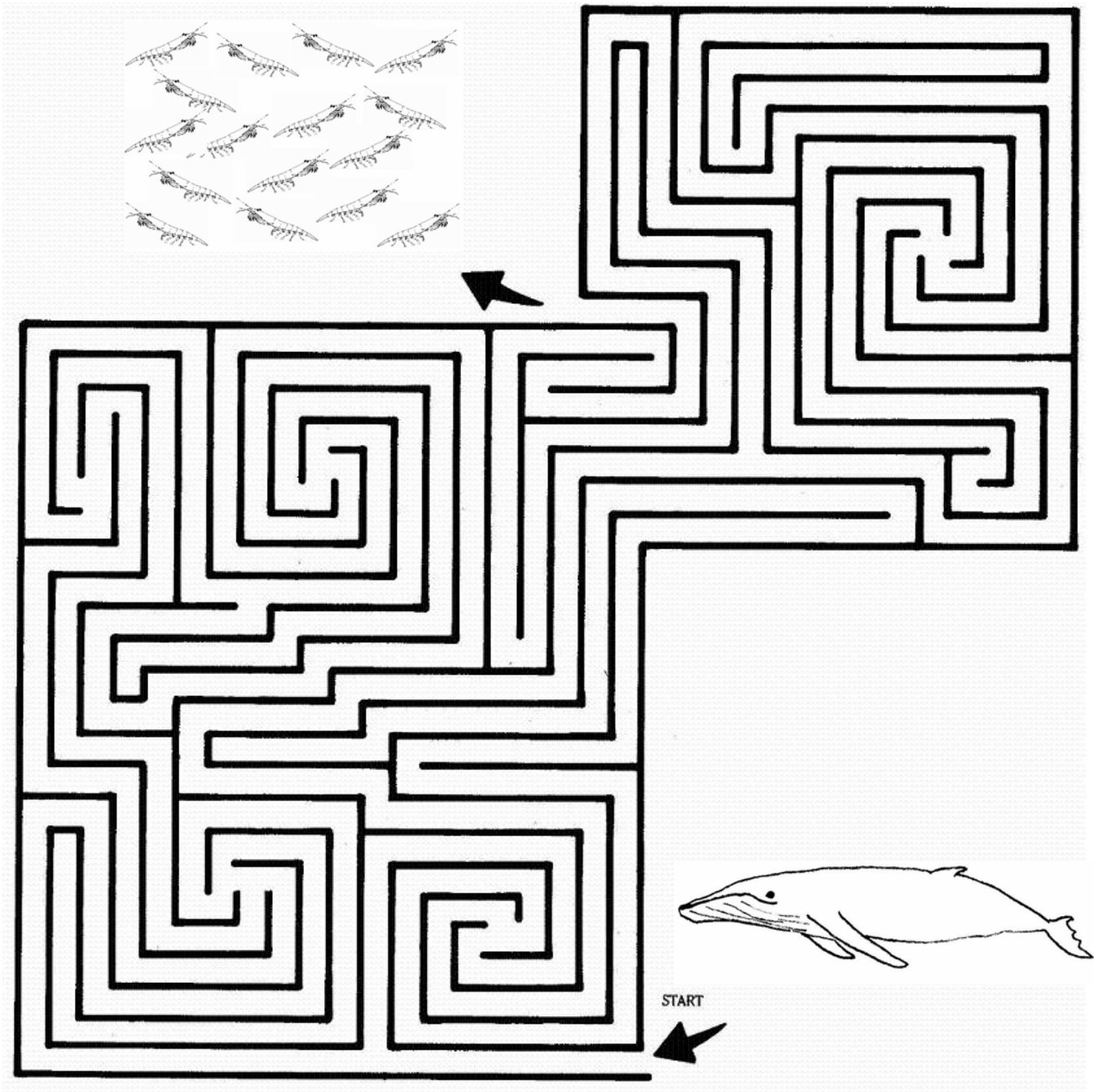
Color Me!



Leopard seals are solitary predators and eat just about everything, from krill to other seals, but particularly appreciate Adélie penguins. They often attack penguins that are walking on broken floating ice by bursting through from underneath – wouldn't that make the penguins nervous?!



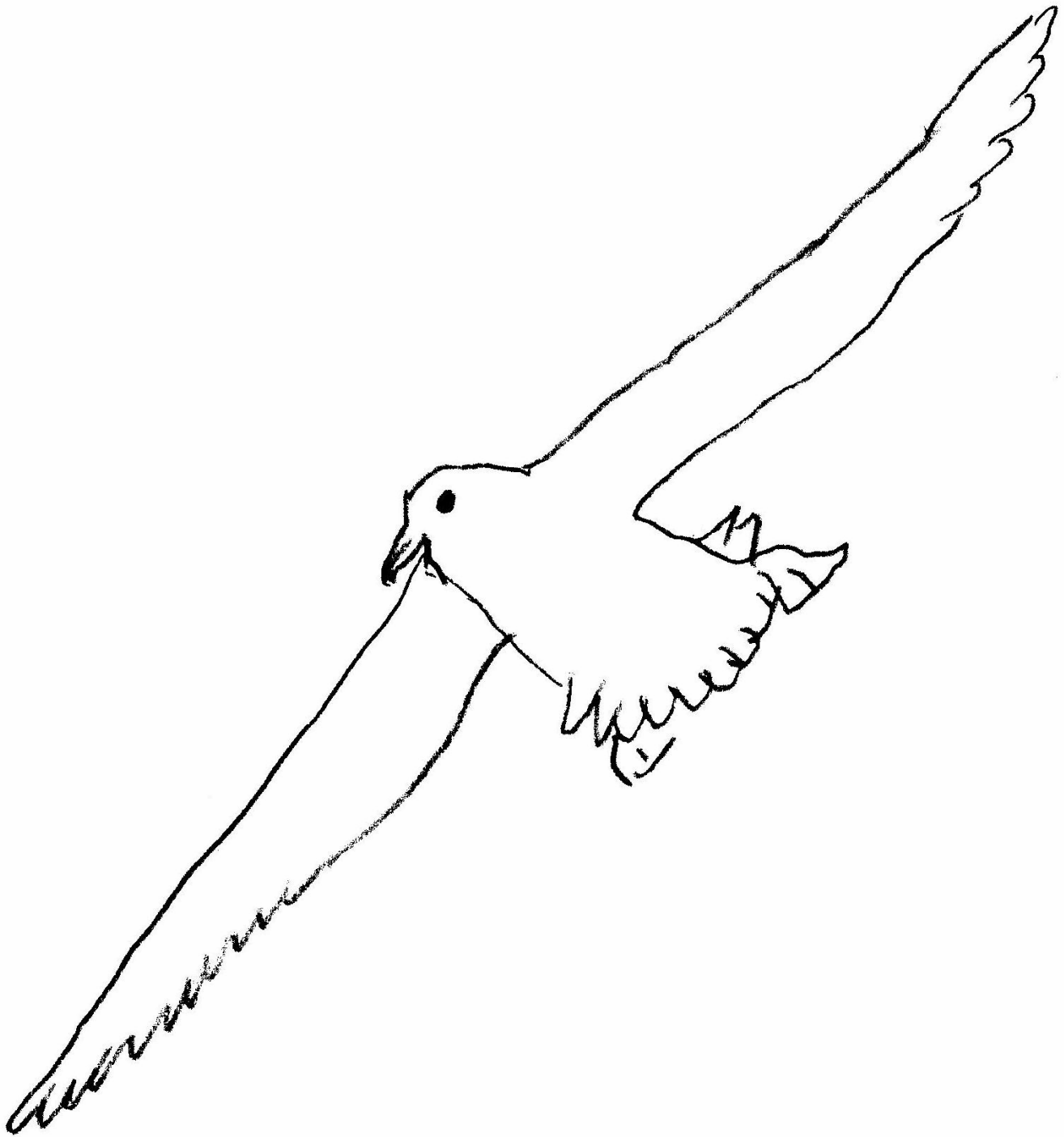
Can you help this humpback whale find his dinner?



Humpback whales feed on krill (small shrimp-like crustaceans) and various kinds of small fish. Each whale can eat up to 1 ½ tons of food a day!

Color Me!

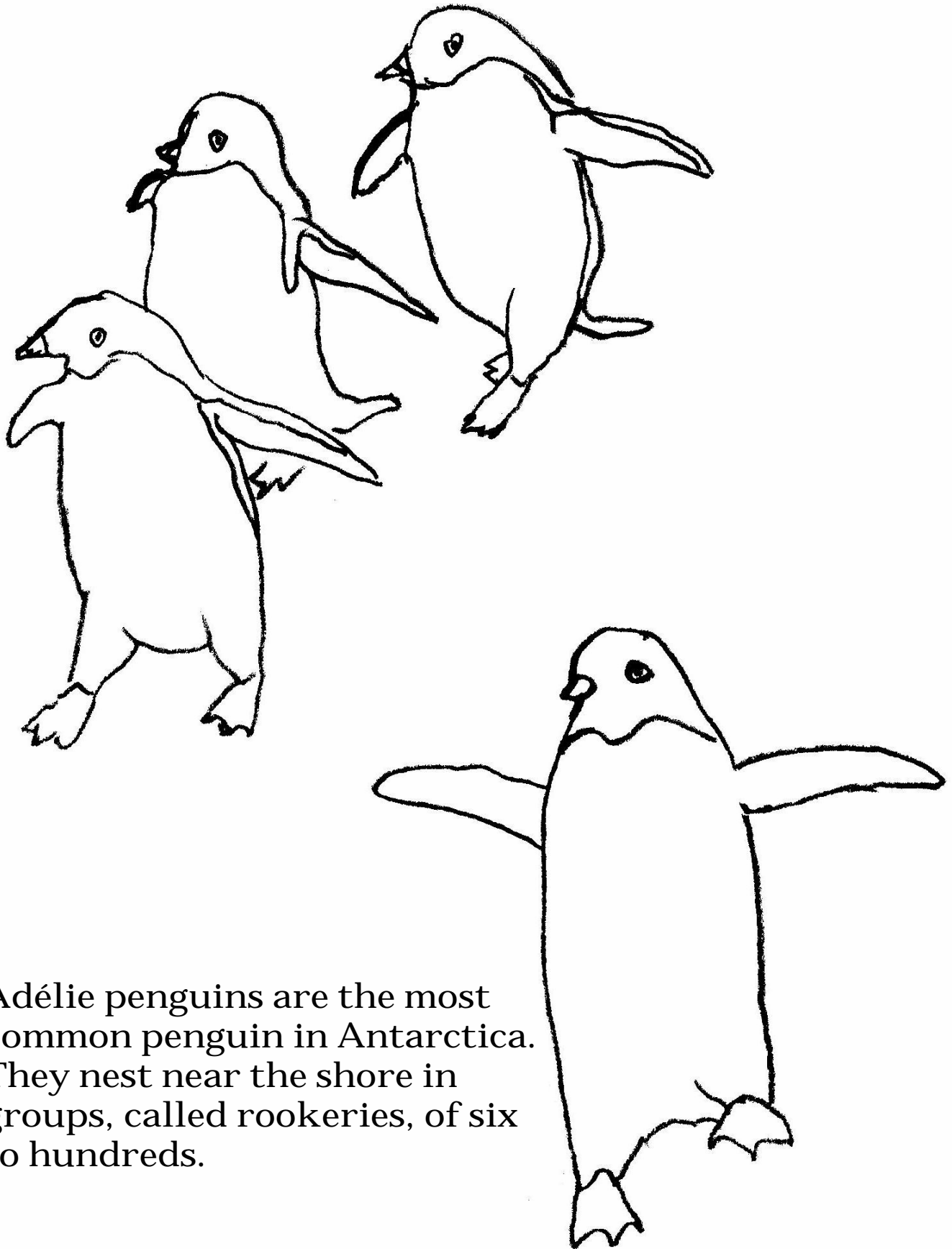
An Albatross may stay at sea for years until it comes ashore to breed.



Everything brought to Antarctica must be removed when the people leave, to keep the station clean for the next group. Can you help the scientists find the following: fork, comb, thermometer, fishing pole, bottle, boot, wrench, and hammer?



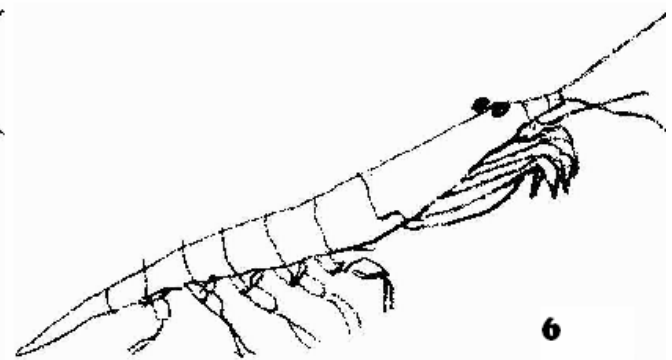
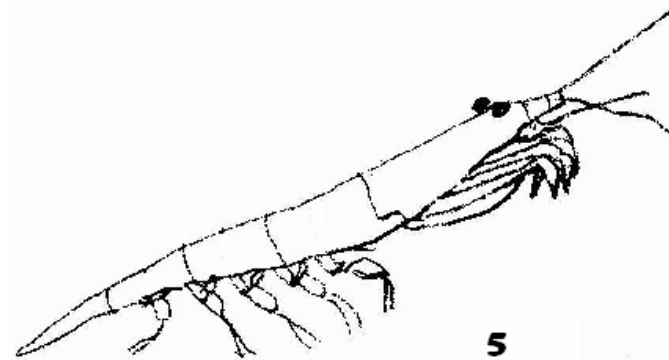
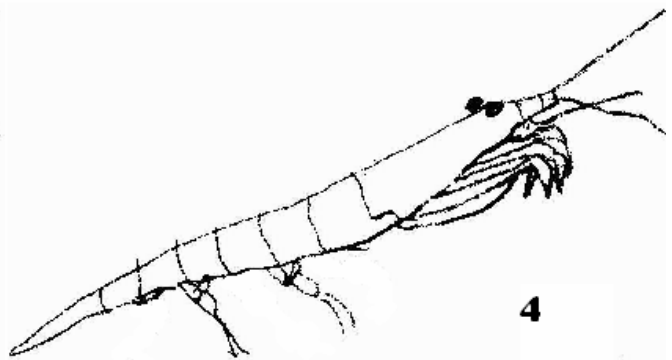
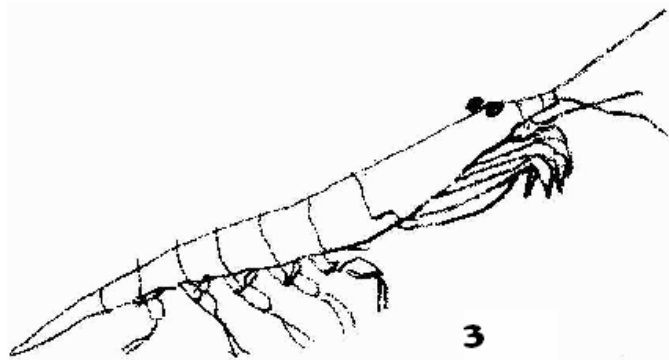
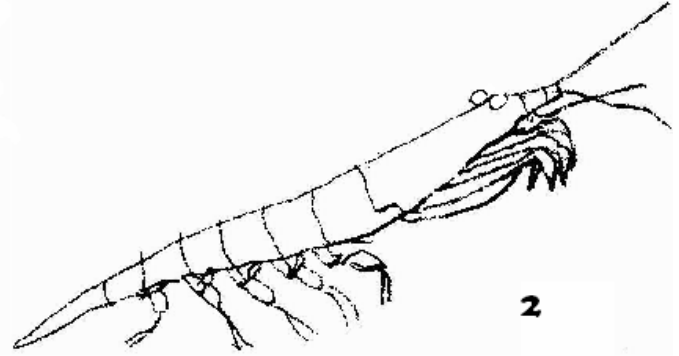
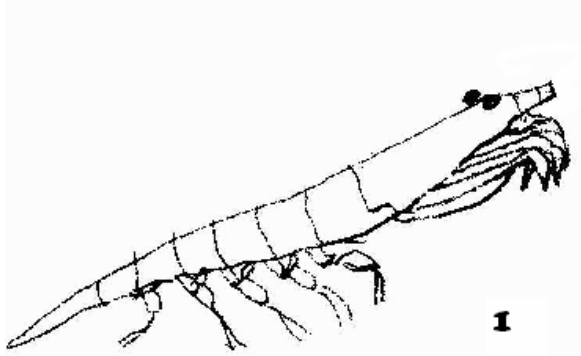
Color Us!



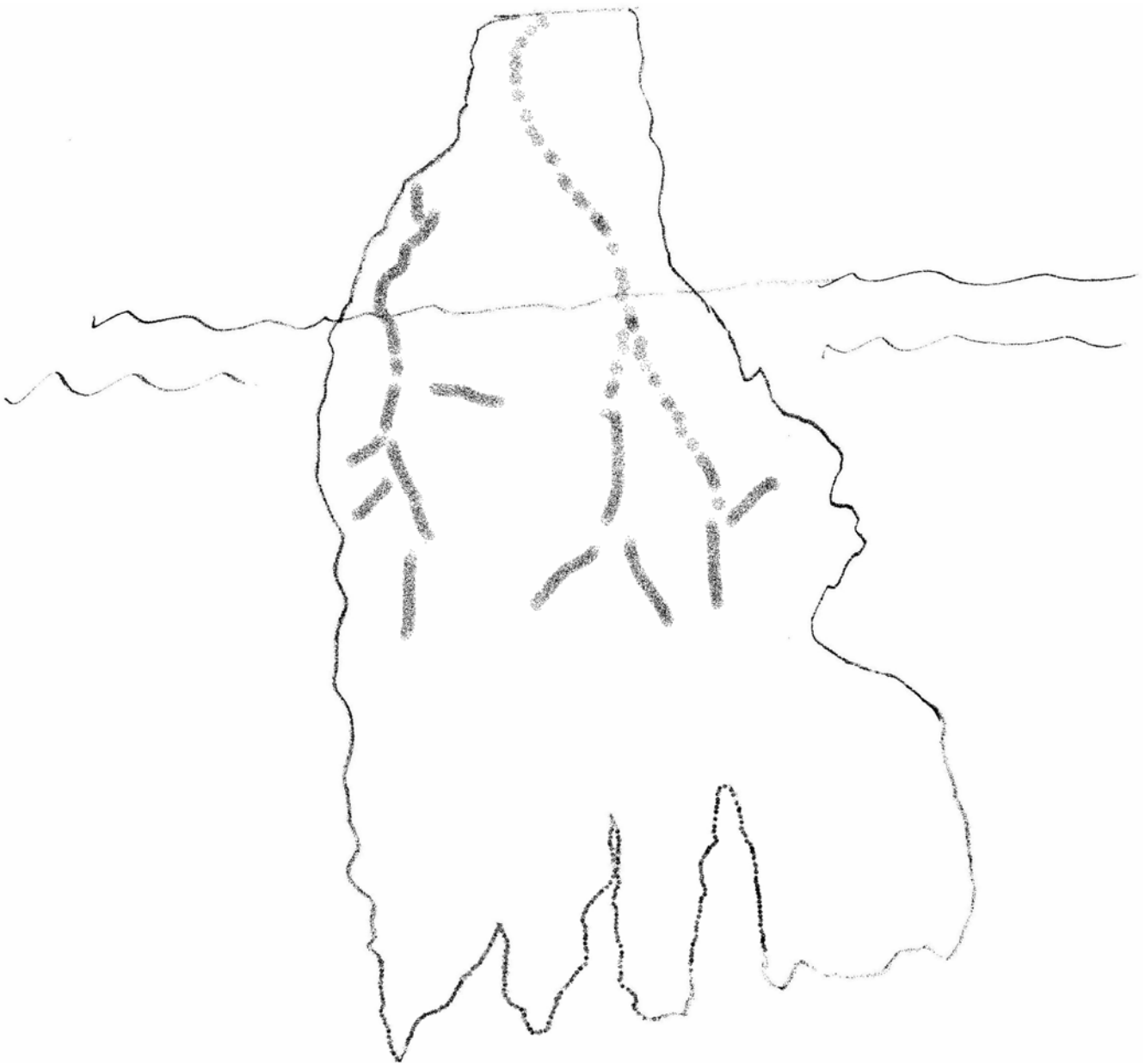
Adélie penguins are the most common penguin in Antarctica. They nest near the shore in groups, called rookeries, of six to hundreds.

Match the krill!

Which two are the same?



Color Me!

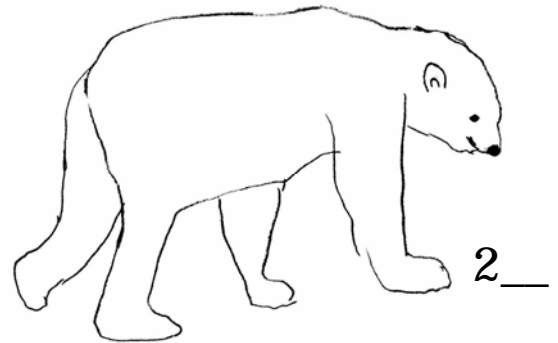
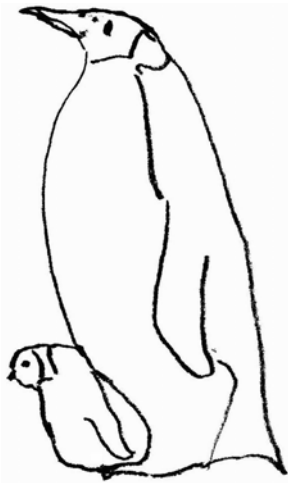


An iceberg is a floating mass of freshwater ice that has broken from a glacier or polar ice sheet (a process called 'calving'). Icebergs vary in size from the size of a large piano, called growlers, to the size of a ten story building. Only $\frac{1}{8}$ th of an iceberg is visible above the water line.

Arctic...or Antarctic?

Which is found where? Label the items below with A for Arctic, N for Antarctic, and B if it can be found in both places.

1_



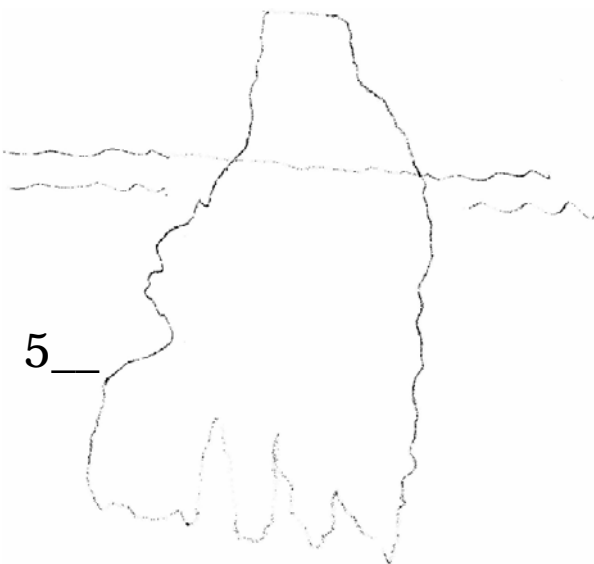
2_

3_



4_

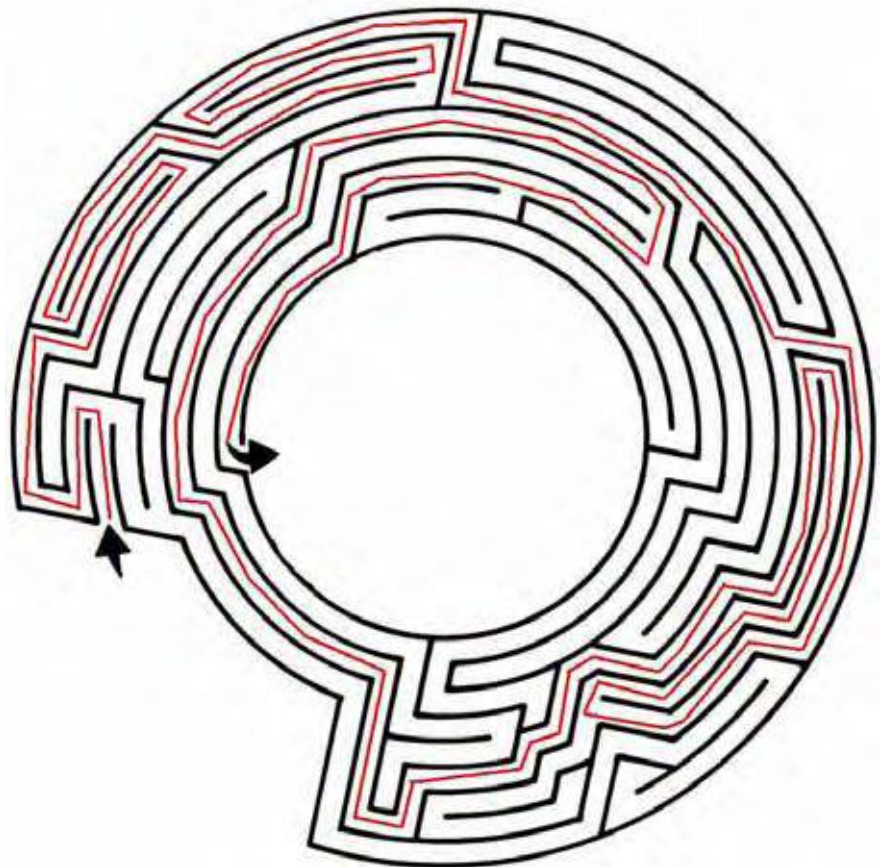
5_



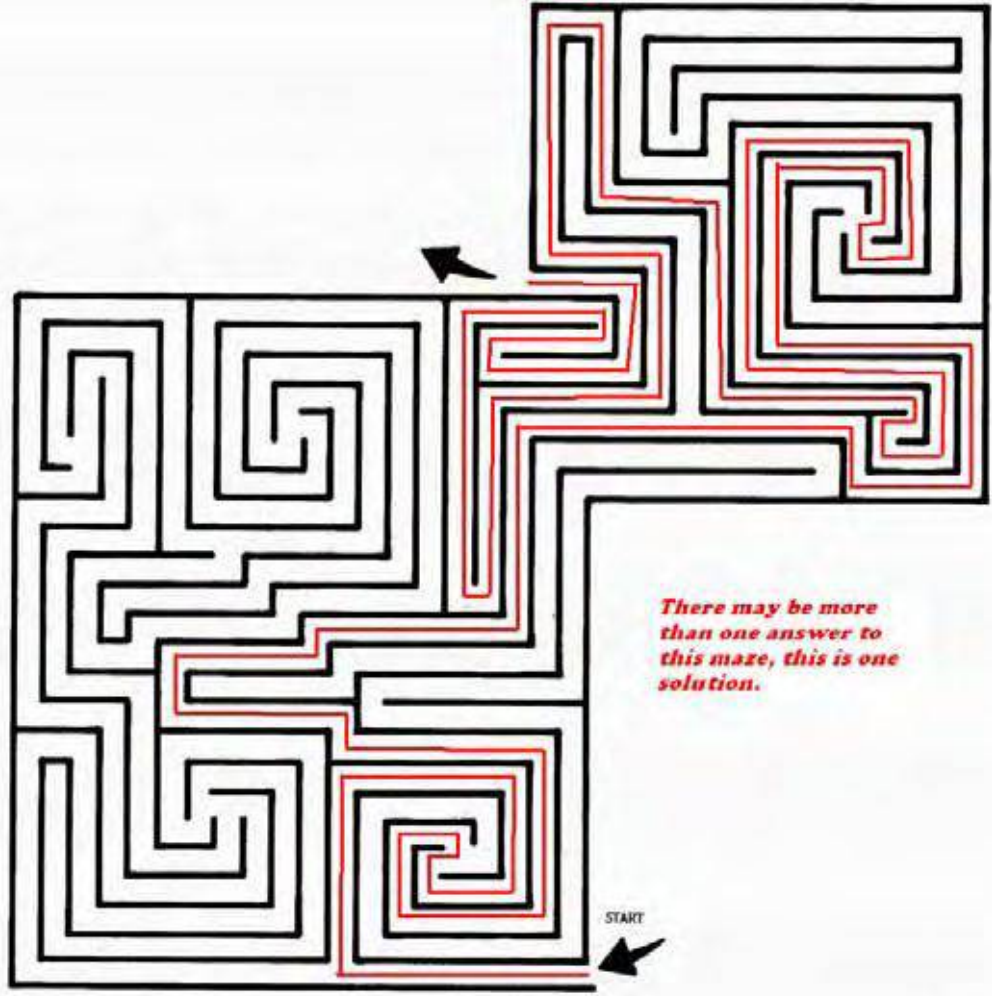
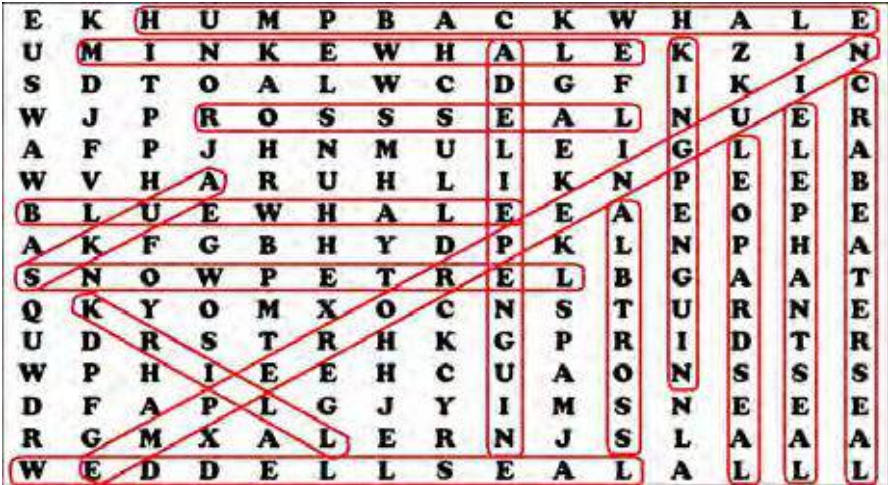
6_

Answers

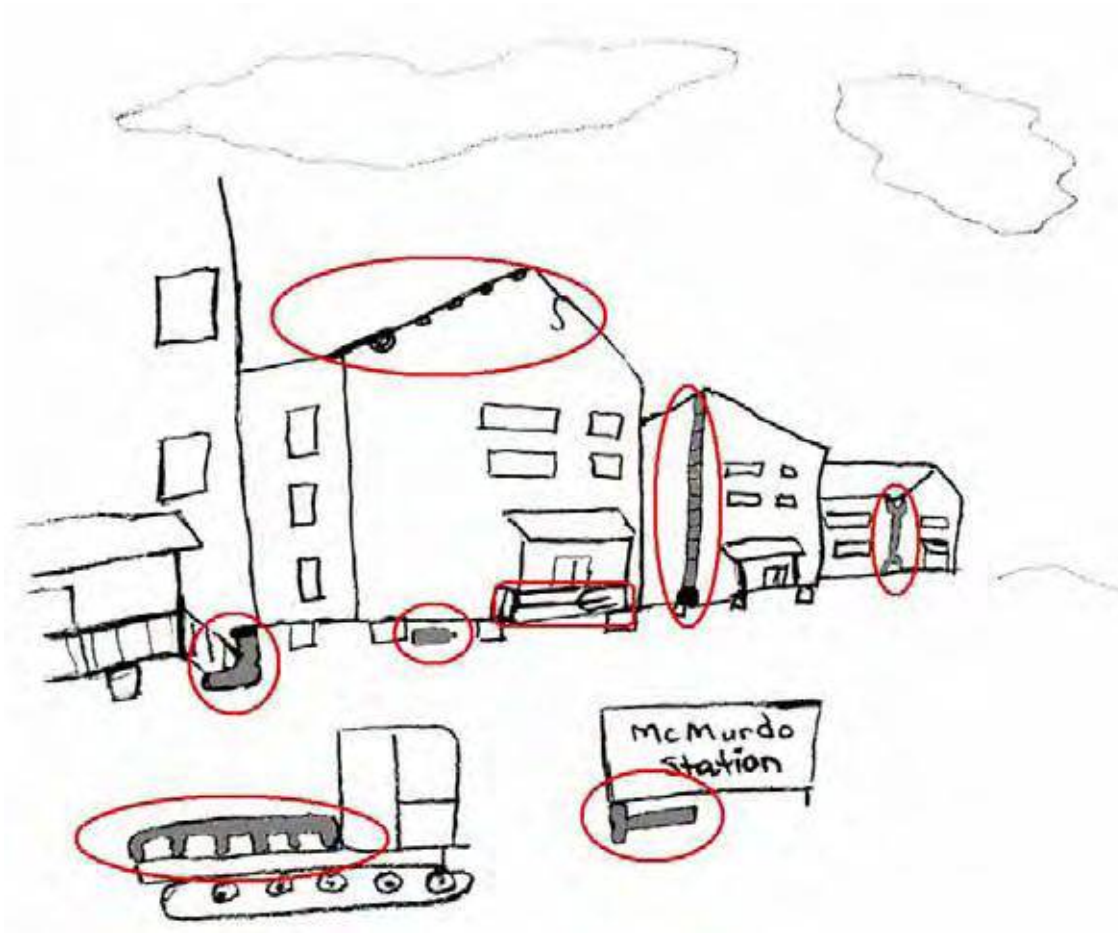
Z	P	T	A	R	M	I	G	A	N	U	N	W	C	O
S	O	U	C	B	F	J	N	P	C	Z	D	H	I	P
A	L	W	F	X	H	K	B	L	A	C	K	F	L	Y
R	A	J	S	F	D	Y	Q	R	R	C	U	K	A	B
C	R	A	E	T	I	N	U	P	I	A	T	I	R	O
T	B	S	A	U	K	N	L	C	B	H	M	N	C	W
I	E	W	A	L	R	U	S	S	O	H	G	G	T	H
C	A	D	F	K	L	Y	C	U	U	D	X	C	I	E
T	R	T	E	R	A	C	U	V	B	U	O	R	C	A
E	E	M	F	G	J	K	L	I	R	O	P	A	F	D
R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



More Answers



Even More Answers



Match the Krill!

Krill 3 and 6 are the same.

Arctic...or Antarctic?

1-N

2-A

3-A

4-B

5-B

6-B

Regional Activity Books series:

1. **Chesapeake Bay Activity Book** – <http://www.coastalscience.noaa.gov/education/cbbook.pdf>
2. **Coastal North Carolina Activity Book** – <http://www.coastalscience.noaa.gov/education/ncbook.pdf>
3. **Salish Sea Activity Book** – <http://www.coastalscience.noaa.gov/education/ssbook.pdf>
4. **Mobile Bay Activity Book** – <http://www.coastalscience.noaa.gov/education/mbbook.pdf>
5. **Why Is Hawaii's Ocean Important? A Keiki Activity Book** – <http://www.coastalscience.noaa.gov/education/hibook.pdf>
6. **Coastal Louisiana Activity Book** – <http://www.coastalscience.noaa.gov/education/labook.pdf>

Copies of this material can be downloaded from:
<http://www.coastalscience.noaa.gov/education/aabook.pdf>

In honor of the International Polar Year of 2007-2008

Produced by:

Dr. Susan Baker, NOAA National Centers for Coastal Ocean Science
Timothy Dorch, NOAA National Centers for Coastal Ocean Science
<http://www.noaa.gov>

2006

