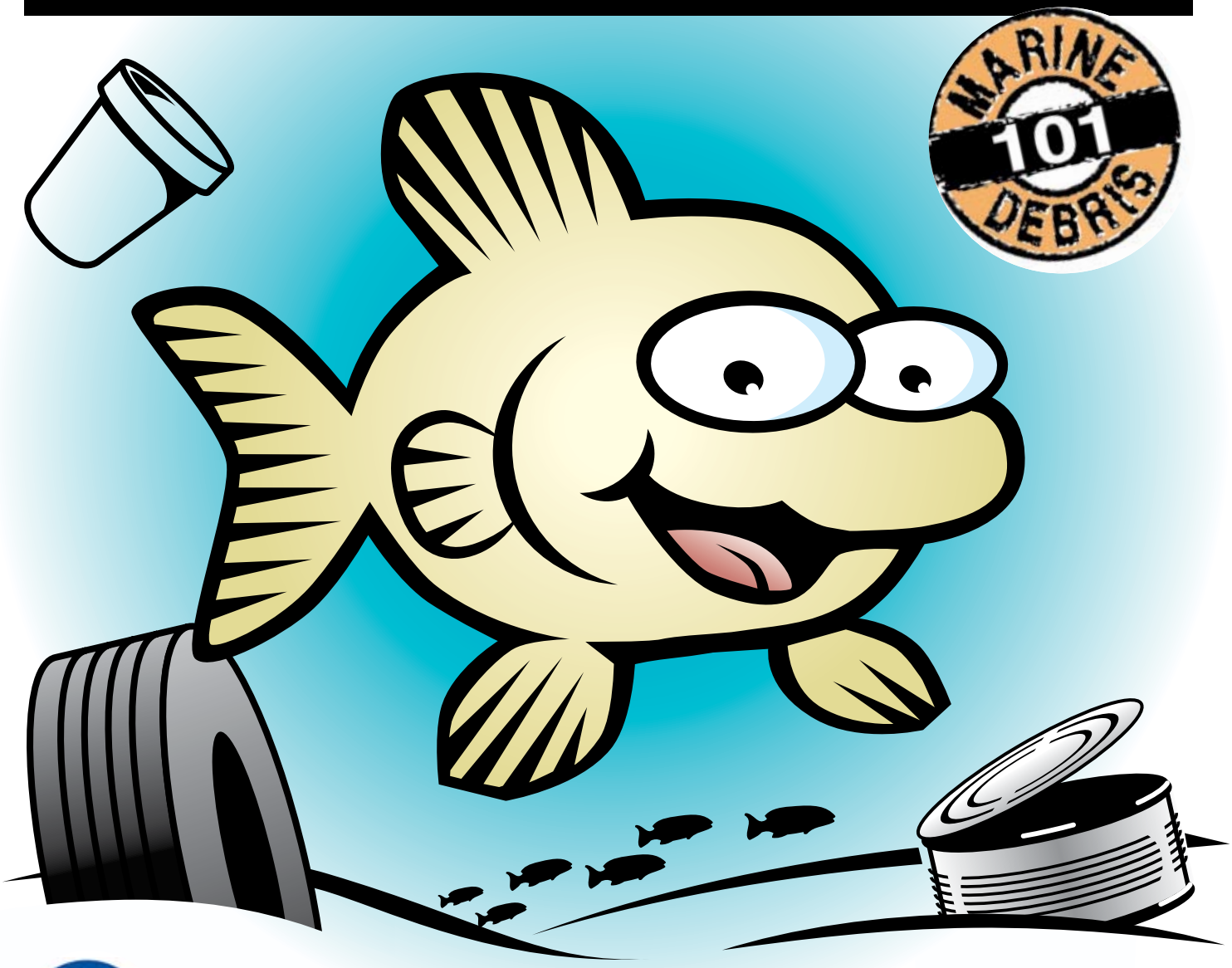
UNDERSTANDING MARINE DEBRIS

GAMES & ACTIVITIES FOR KIDS OF ALL AGES



NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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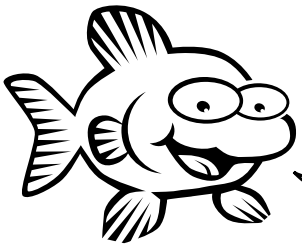
For more great activities, information, and what you can do to prevent marine debris visit
www.marinedebris.noaa.gov

This educational document was produced for the National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program under NOAA contract number AB133F06CN0193 by Sheavly Consultants, Virginia Beach, Virginia.

Tons of Trash!



It was estimated that over a billion pounds of litter has been put into the ocean each year.* This litter is generated by many sources, from boats and oil rigs on the water to picnickers, fishermen, and beachgoers along the shore. Hidden below is a list of objects that have been discarded into our oceans. See if you can find them all!

*1995 U.S. National Research Council study

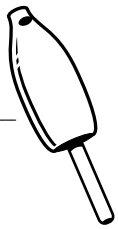
N	B	A	B	I	H	O	S	E	A	T	M	R	G
E	G	U	T	A	C	A	N	C	E	W	E	L	L
K	L	R	C	R	L	A	R	N	R	N	O	U	A
T	O	A	P	K	C	L	G	D	I	A	K	M	S
R	V	D	O	A	E	N	O	A	H	W	T	B	S
A	E	I	D	W	I	T	T	O	A	A	M	E	B
S	H	O	E	H	D	N	G	R	N	L	T	R	O
H	S	W	S	B	O	T	T	L	E	C	A	P	T
B	K	I	P	C	T	S	J	B	U	R	G	Y	T
A	F	U	T	D	I	A	P	E	R	D	O	L	L
G	C	I	G	A	R	E	T	T	E	U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

These hidden words are found horizontally, vertically and diagonally. (Answers on page 21).

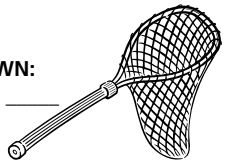
BAIT CONTAINER	CRATE	FISHING NET	LUMBER	SHOE
BALLOON	CUP	GLASS BOTTLE	PAINT BRUSH	SODA CAN
BUCKET	DIAPER	GLOVE	RADIO	STRAW
BUOY	DOLL	HARD HAT	ROPE	TIRE
CIGARETTE	FISHING LINE	HOSE	RUG	TRASH BAG

Types of Marine Debris

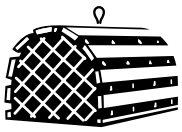
1 DOWN: FLOAT OR _____

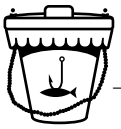


2 DOWN: FISHING _____



4 DOWN: _____ TRAP





6 DOWN: _____ CONTAINER

8 DOWN: _____ LINE

10 DOWN: KNOTTED _____

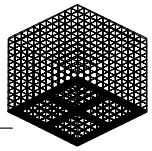
11 ACROSS: CHILDREN'S _____

12 DOWN: FISHING _____

14 DOWN: WOODEN _____

16 DOWN: OIL OR LUBE _____

17 DOWN: CRAB _____

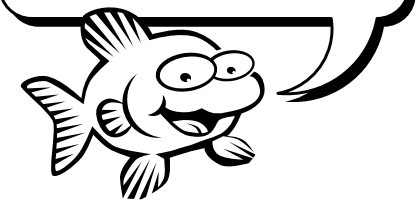


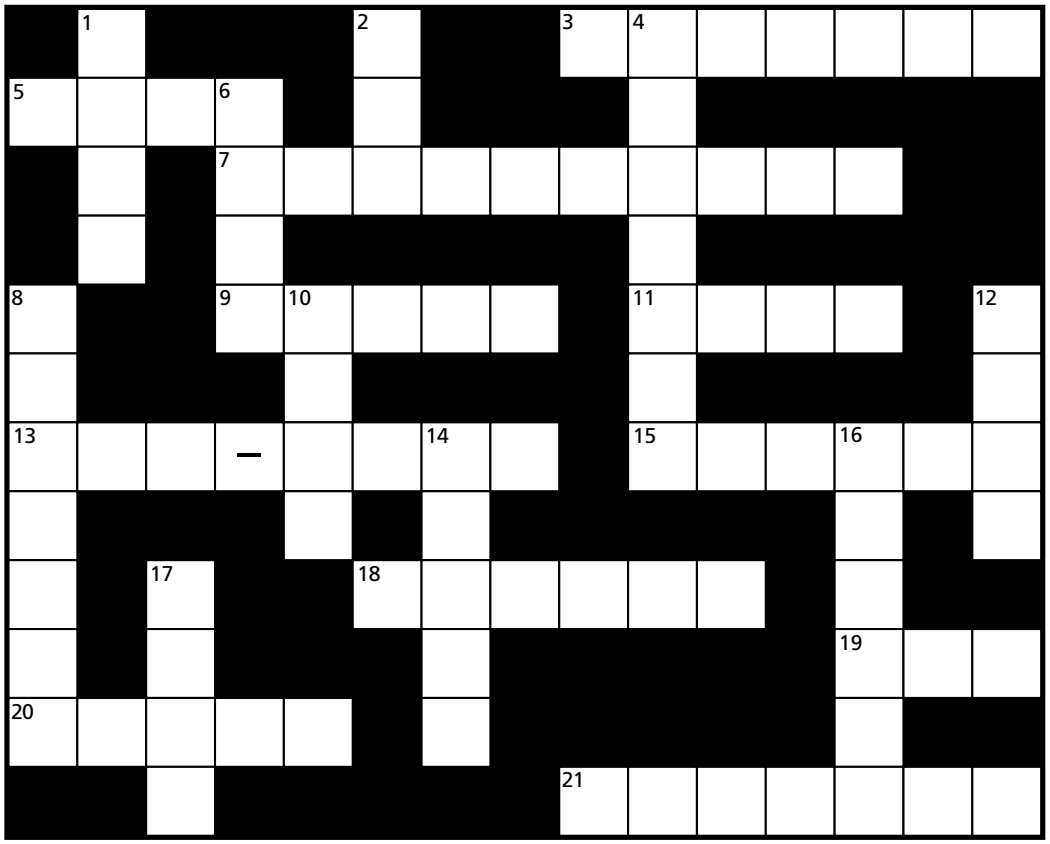
MARINE DEBRIS COMES FROM MANY SOURCES

ACROSS:
These litter items are generated by people on land such as beachgoers, picnickers, and those who improperly dump their trash.

DOWN:
These litter items are generated by people at sea such as boaters, fisherman, and passengers on cargo or cruise ships.

PARENTS CAN HELP!
(Answers on page 21)



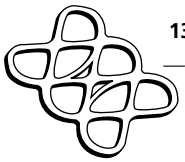


3 ACROSS: _____ BOTTLE

5 ACROSS: LIGHT _____

7 ACROSS: _____ TIRE

9 ACROSS: _____ BAG



13 ACROSS: _____-_____ HOLDER

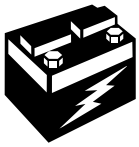
15 ACROSS: _____ GLOVE

18 ACROSS: MILK _____

19 ACROSS: _____ CAN

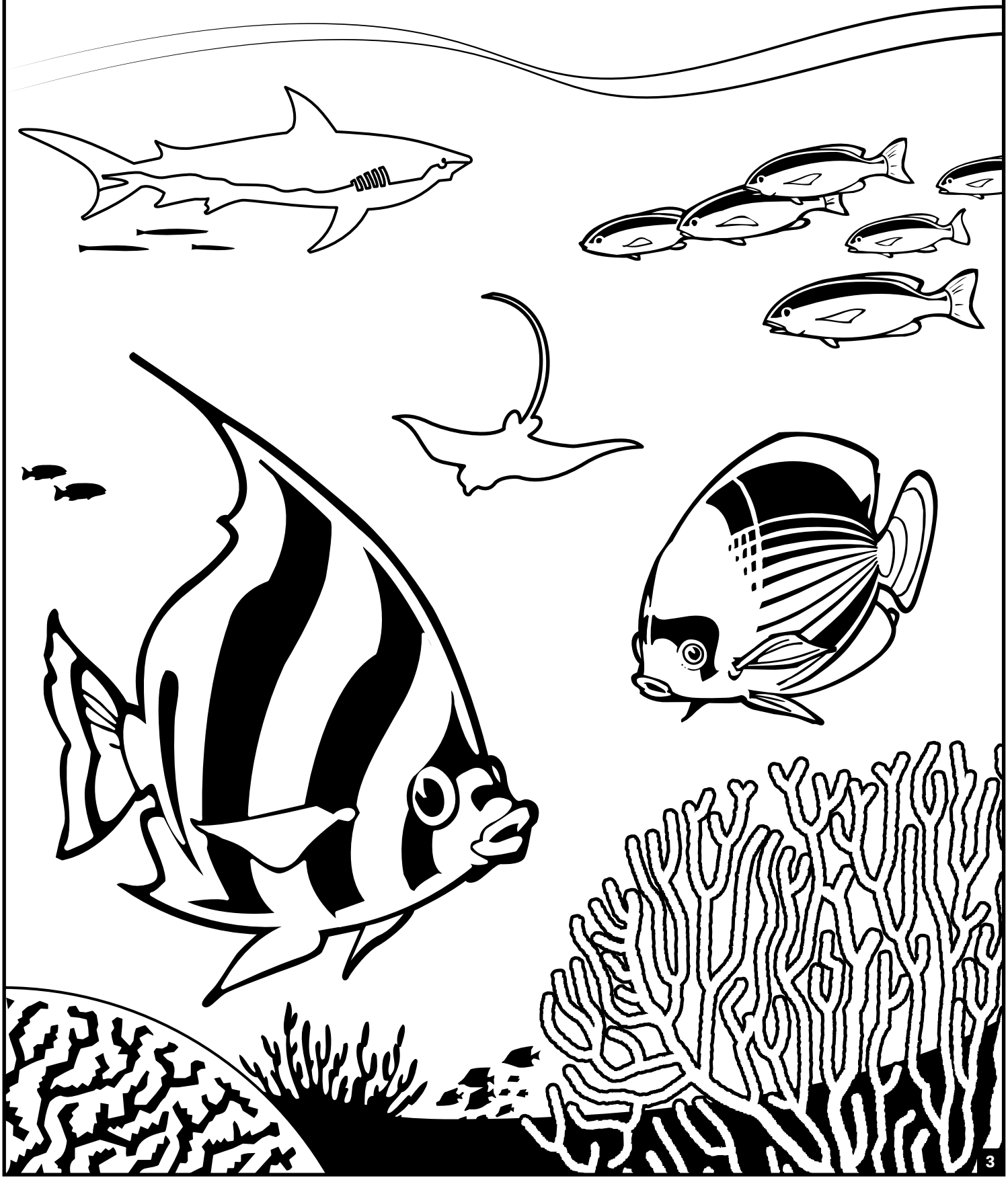
20 ACROSS: _____ BOTTLE

21 ACROSS: CAR _____



For more great activities, information, and what you can do to prevent marine debris visit **www.marinedebris.noaa.gov**

Healthy Coral Reef



The Source of the Problem

PARENTS CAN HELP!

There are nine pictures below. Circle the pictures which you believe could be sources of marine debris or ocean trash. When you have finished, write down what these pictures have in common. Answers on page 21.

A CRUISE SHIP

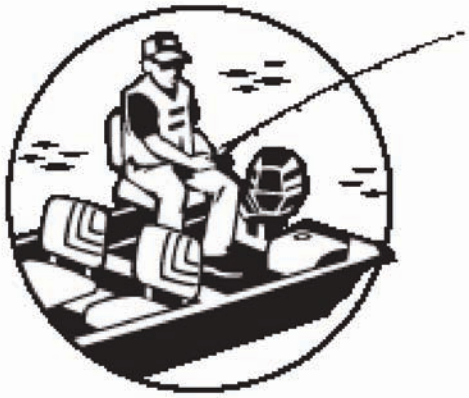
A SHARK

PICNICKERS

A FISH

A MAN WASHING HIS CAR

DOLPHINS

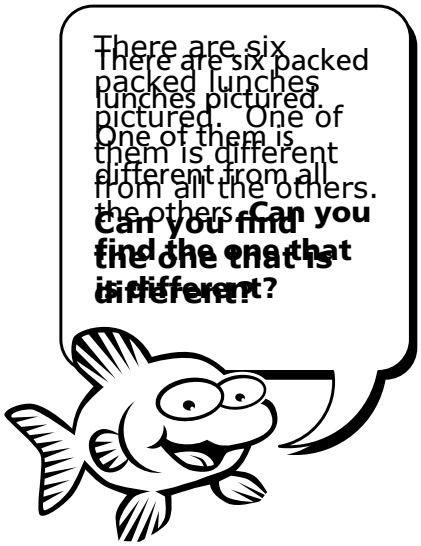


A FISHERMAN

SEA GULLS

A BEACHGOER

Litterless Lunches

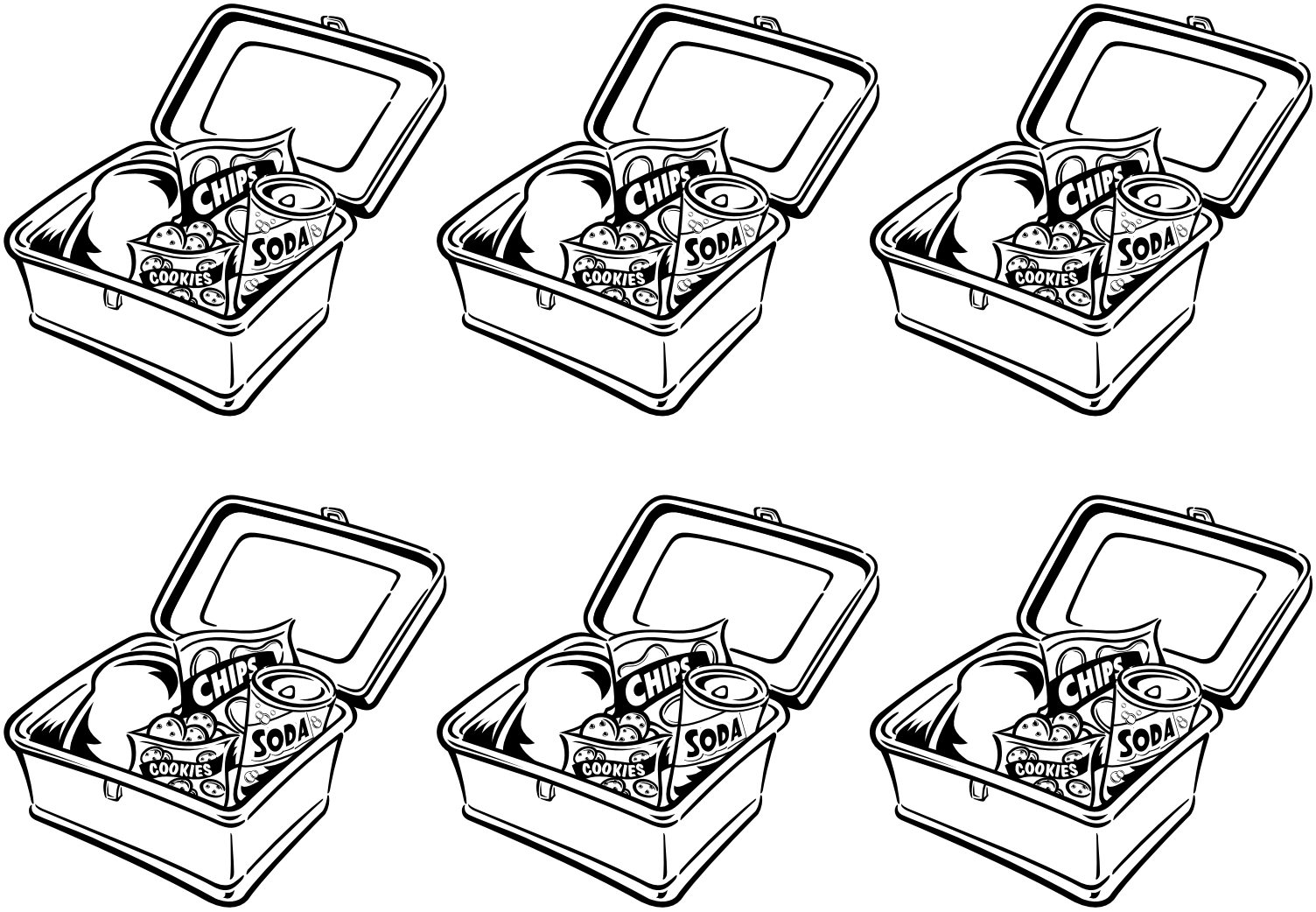


HOW YOUR PACKED LUNCH CAN HELP MAKE LESS TRASH

Many kids carry a packed lunch to school. Food packaging can create a lot of trash every year. Here are some ways to reduce the amount of trash generated by a packed lunch.

- **Reduce the amount of food packaging needed.** When planning your packed lunches, instead of buying 12 individual bags of cookies, you can buy one larger bag of cookies and divide it into serving sized portions in reusable containers.
- **Reusable plastic containers** can store cookies, chips and just about everything else you find in a packed lunch. These containers can be brought home, washed and used again.
- **Always recycle** the aluminum cans, glass bottles, plastic bottles and plastic containers found in your packed lunch.

(Answer is on page 21)



(Answer is on page 21)

Go Fish!

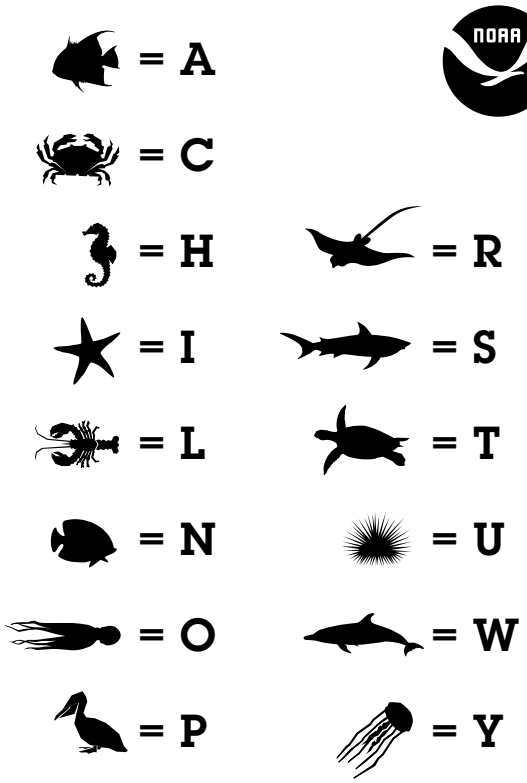
Learn to Be a Drain Brain!

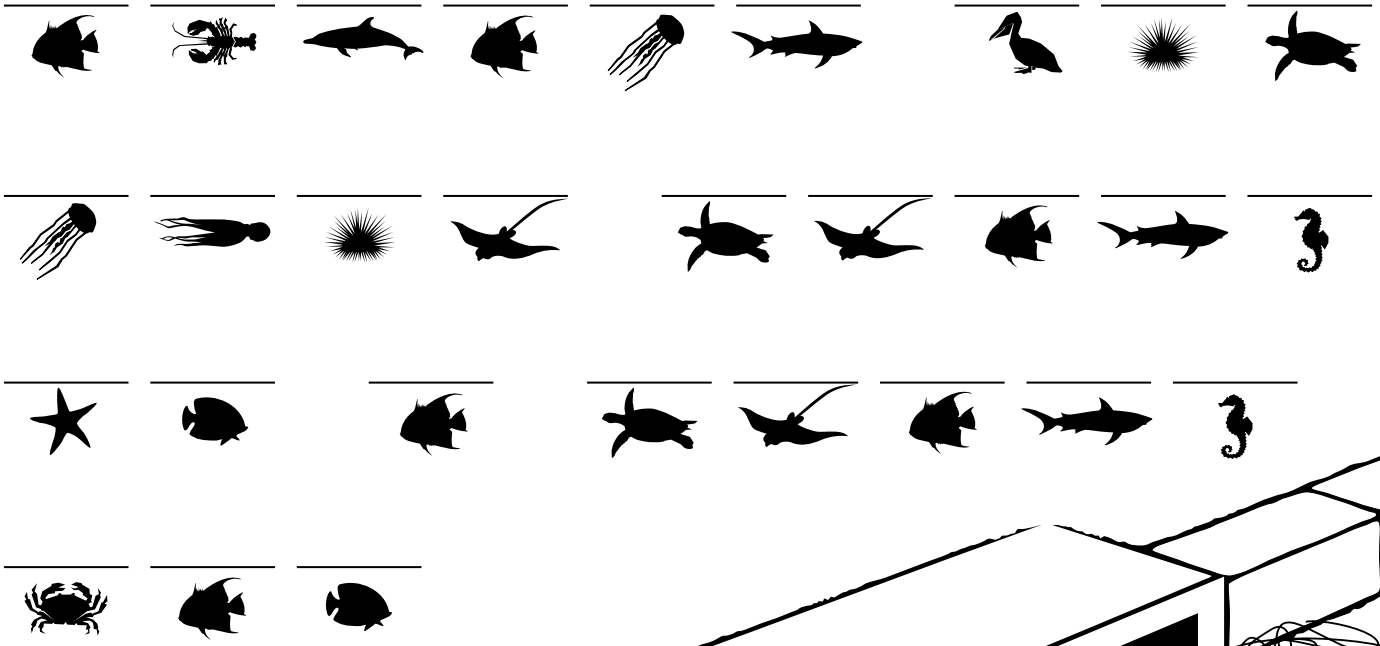
Unlock the Secret Message and Discover How You Can Become a Drain Brain!

Have you ever wondered what those holes are at the edge of the sidewalk? They're called **storm drains** and they carry rain water off the street and into streams and rivers.

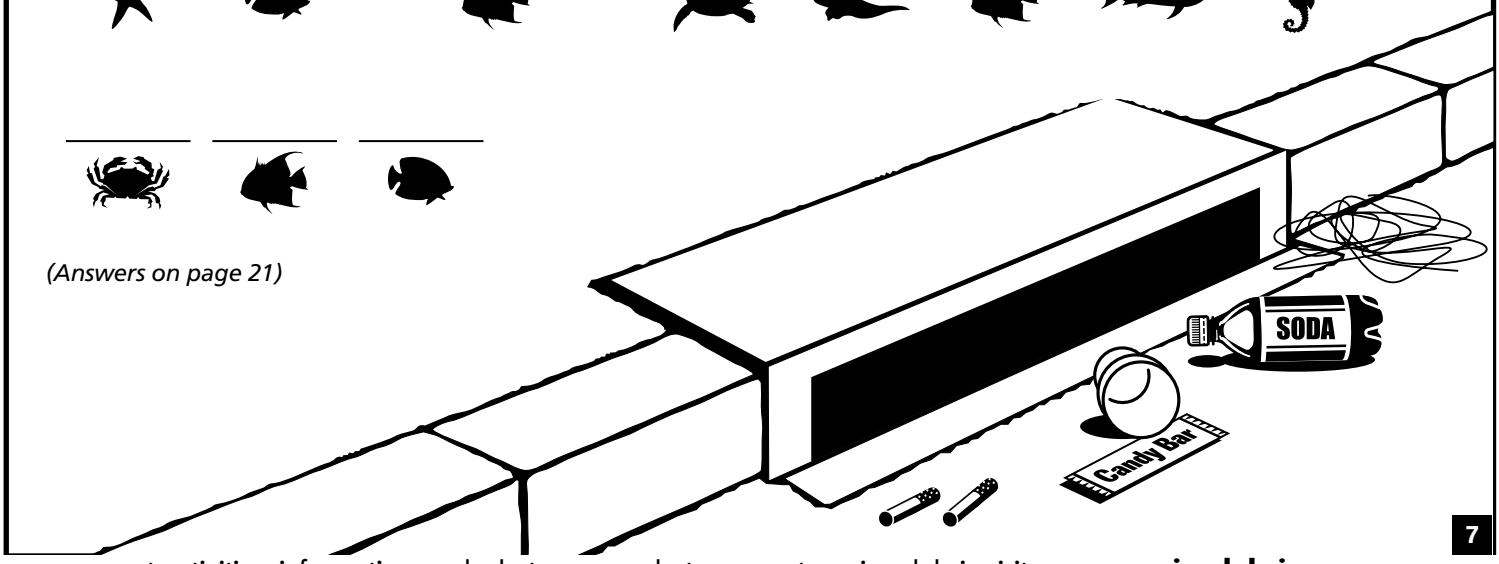
Soda bottles, paper cups, candy wrappers, cigarette butts and all of the trash in the street gets carried into storm drains with the rain water until it finally reaches the ocean and becomes debris.

Unlock the secret message by using the chart below to replace the shapes with the letters they match up with.

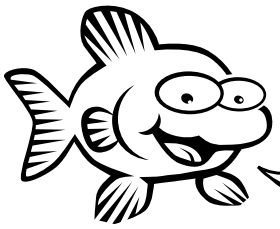




(Answers on page 21)



Beat the Clock!



Find a friend and see which one of you can list the most number of new words created by using letters found in the words MARINE DEBRIS. Set a timer for 10 minutes. The person with the most number of words WINS! See rule about using double letters.

MARINE DEBRIS contains two **"R"s,** two **"E"s**, and two **"I"s.** It is acceptable for your new words to contain **these** double letters.

Example: **N E E D**

Example: **B A R N**

1.)

2.)

3.)

4.)

5.)

6.)

7.)

8.)

9.)

10.)

11.)

12.)

13.)

14.)

15.)

16.)

17.)

18.)

19.)

20.)

21.)

22.)

23.)

24.)

25.)

26.)

27.)

28.)

29.)

30.)

31.)

32.)

33.)

34.)

35.)

36.)

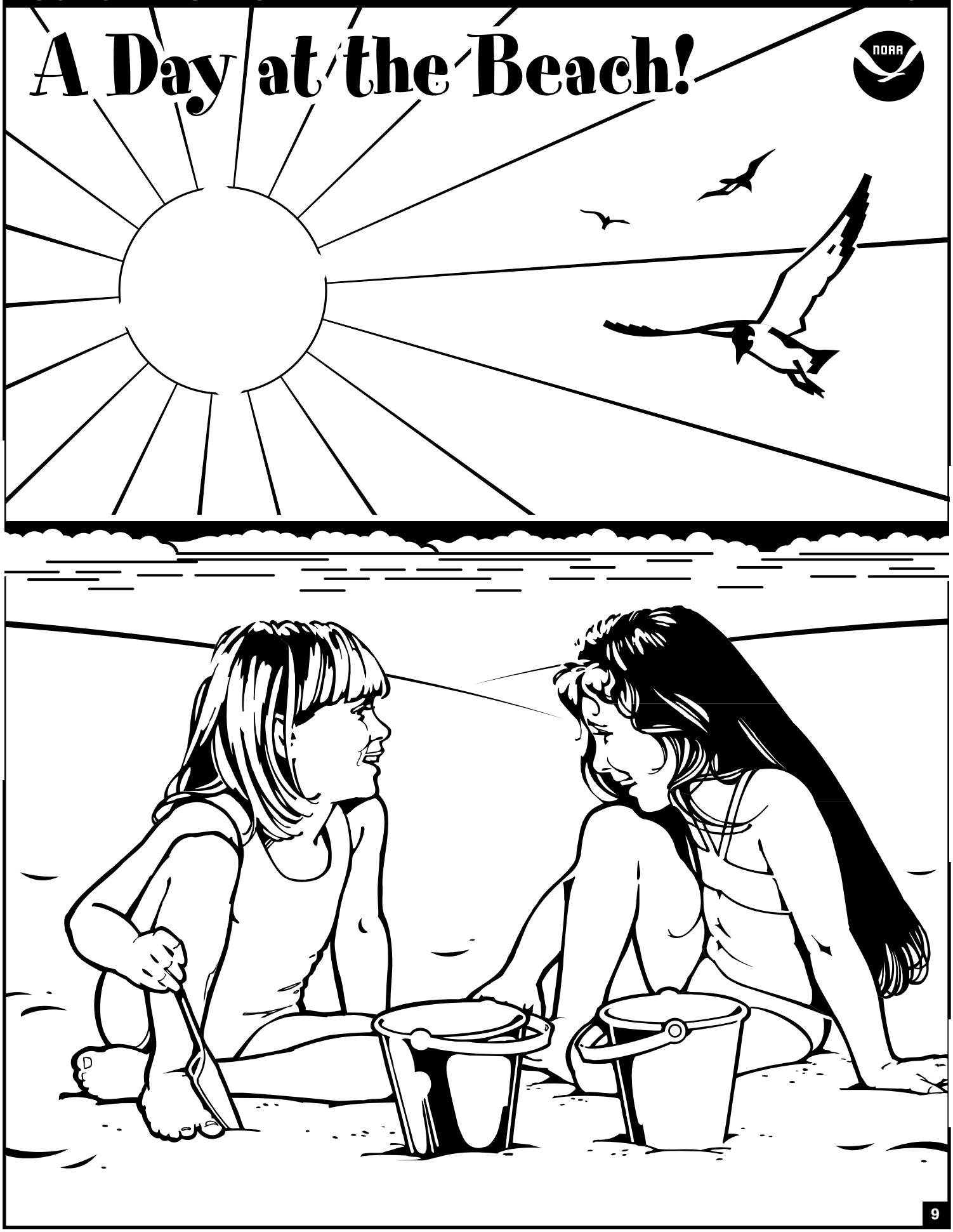
37.)

38.)

39.)

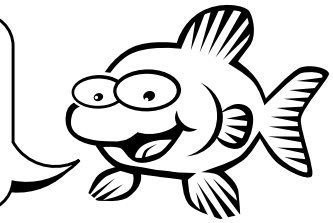
40.)

A Day at the Beach!

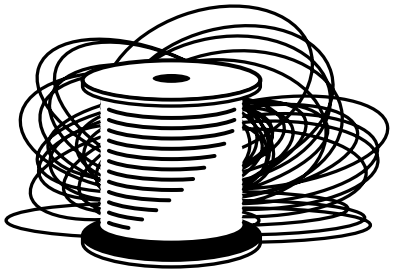


How Long Will it Take?

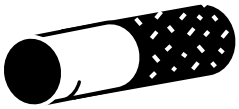
It takes just a moment for an item to be carelessly discarded or blown by wind into the ocean, bur it can take many, many years for that item to completely decompose. Test your knowledge about decomposition times. Draw a line between each item (left) and its estimated decomposition time (right). Decomposition times may be used more than once.



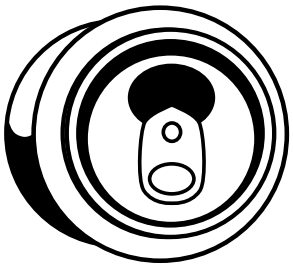
How much time will it take for these items to decompose in the ocean?



Fishing Line

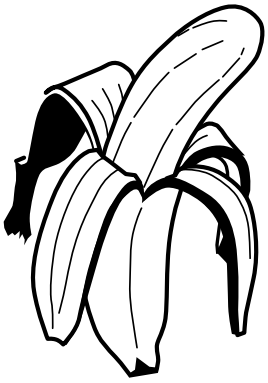


Cigarette Filter



Aluminum Can

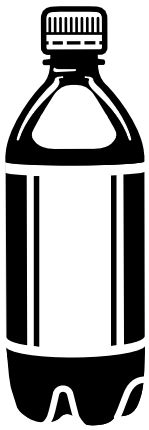
Glass Bottle



Banana Peel

Milk Carton

Styrofoam Cup



Plastic Beverage Bottle

UNDETERMINED

MANY years

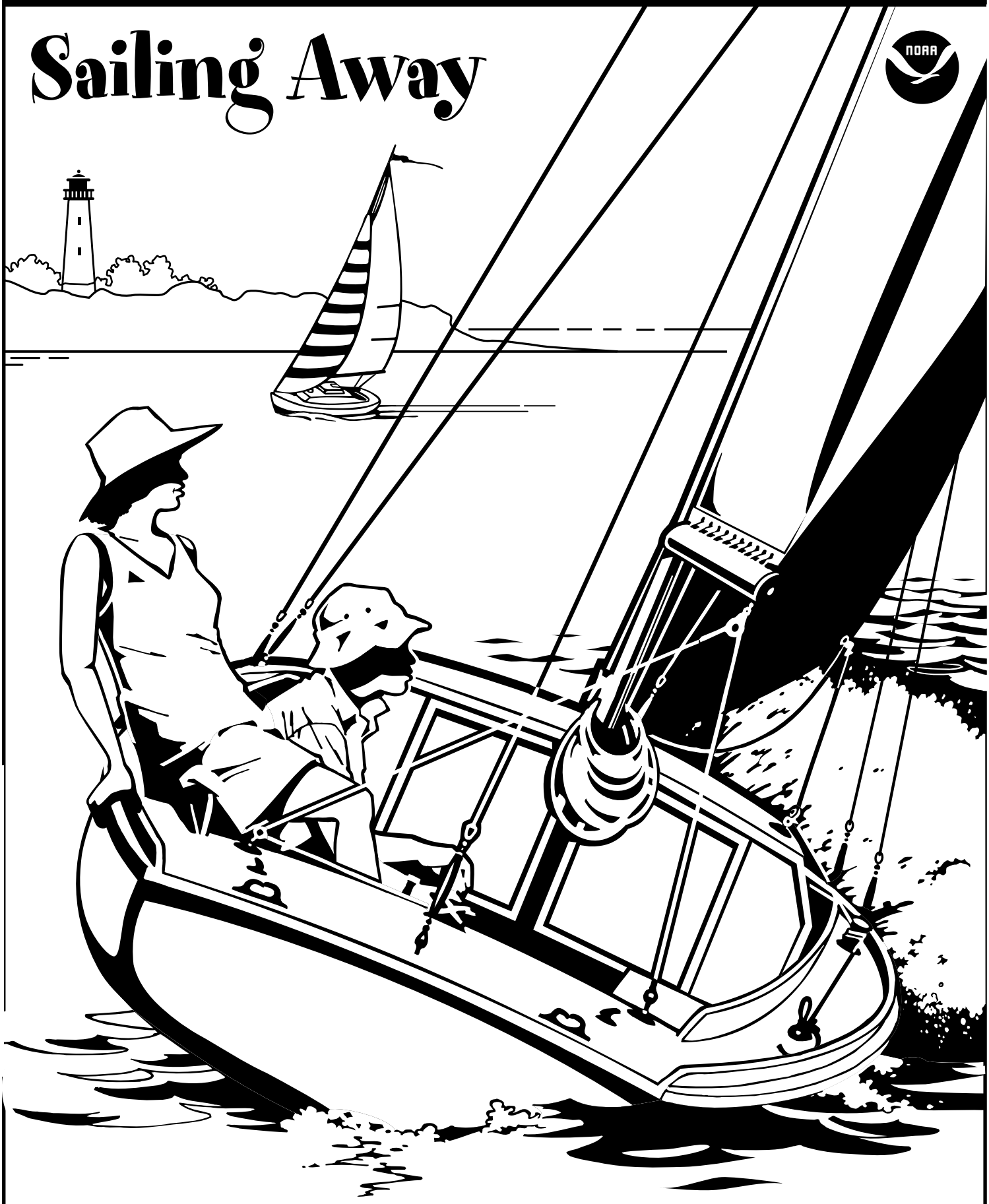
A few years

A few months

A few weeks

Answers are on page 21.

Sailing Away



Marine Match-Up

What do you think happens when an animal comes across litter in its natural habitat?

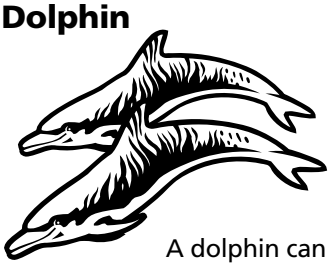
A sea turtle can choke on a plastic sandwich bag that it mistakes for food. A curious sea lion can get entangled in discarded commercial fishing nets.

Play the MARINE MATCH-UP game to learn more about how litter harms marine animals.

HOW TO PLAY (FOR TWO PLAYERS)

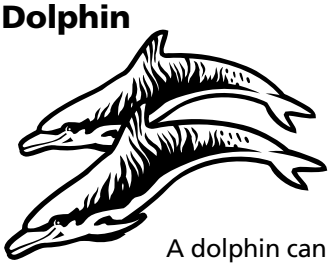
1.) Cut out the squares and place them face down.
2.) Player 1 turns over two squares.
3.) If a match is revealed, the player gets to keep the two squares. For example, if the player reveals two Dolphins, he gets to keep the two squares. However, if the player reveals two animals which DO NOT match, then both squares are turned face down again and Player 2 takes a turn.
4.) When all the squares are gone, the player with the most number of squares wins.

Dolphin



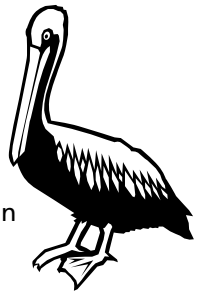
A dolphin can get tangled in fishing gear

Dolphin



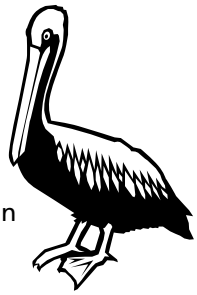
A dolphin can get tangled in fishing gear

Pelican



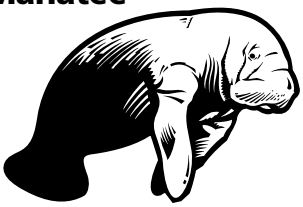
A pelican can get its neck stuck in a six-pack holder

Pelican



A pelican can get its neck stuck in a six-pack holder

Manatee



A manatee can get tangled in discarded fishing line

Manatee

A manatee can get tangled in discarded fishing line

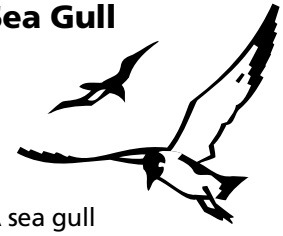
Raccoon

A raccoon can cut its paws on broken glass

Raccoon

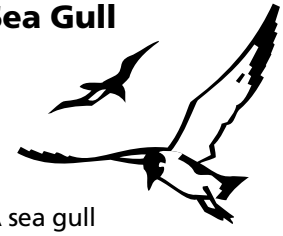
A raccoon can cut its paws on broken glass

Sea Gull



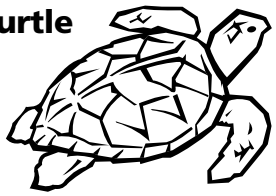
A sea gull can become entangled in discarded fishing line

Sea Gull



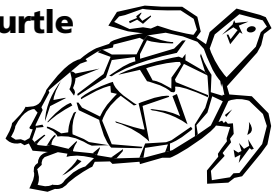
A sea gull can become entangled in discarded fishing line

Sea Turtle



A sea turtle can choke on a plastic bag

Sea Turtle



A sea turtle can choke on a plastic bag

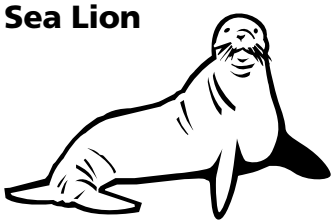
Beaver

A beaver can get its head stuck in a tin can

Beaver

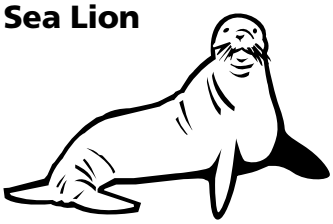
A beaver can get its head stuck in a tin can

Sea Lion



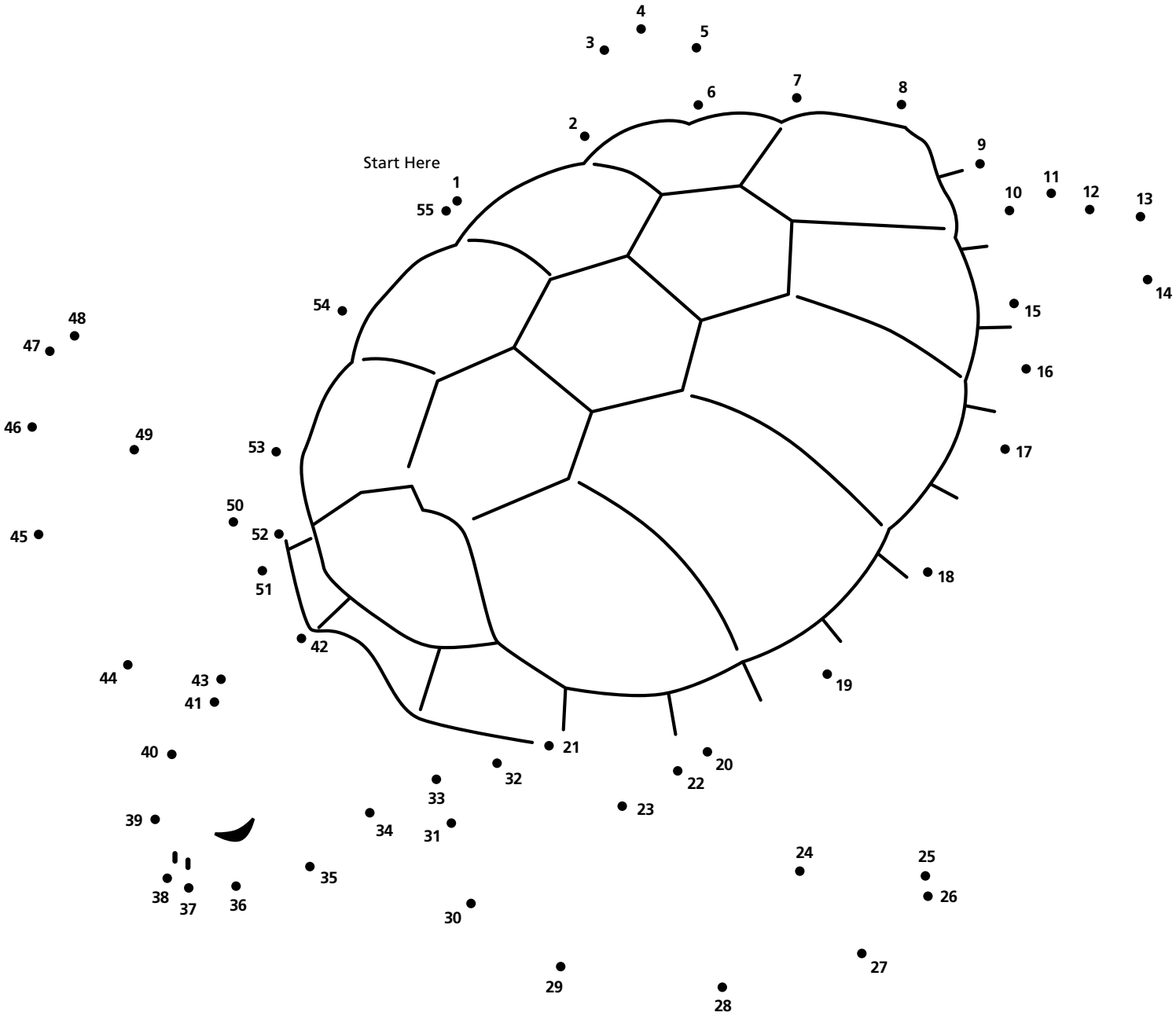
A sea lion can become entangled in ropes and nets

Sea Lion



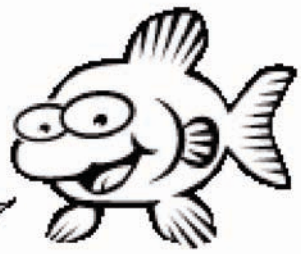
A sea lion can become entangled in ropes and nets

A Sea Turtle's Story



How Can Litter Be Deadly to a Sea Turtle?

Sometimes sea turtles mistake litter in the water as food. Plastic bags look like jellyfish, sea turtles' favorite food. If swallowed, debris can block digestion or remain in the turtle's stomach, causing the turtle to feel "full" and eat less than it needs to survive. Plastic or plastic foam in a turtle's stomach can cause excess buoyancy, decreasing the animal's ability to dive deeper for prey.



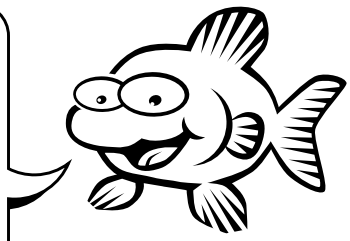
Connect the Dots—Don't Let Your Trash End Up in the Ocean!

No Excuses

Have you ever littered and thought you had a good reason for it?

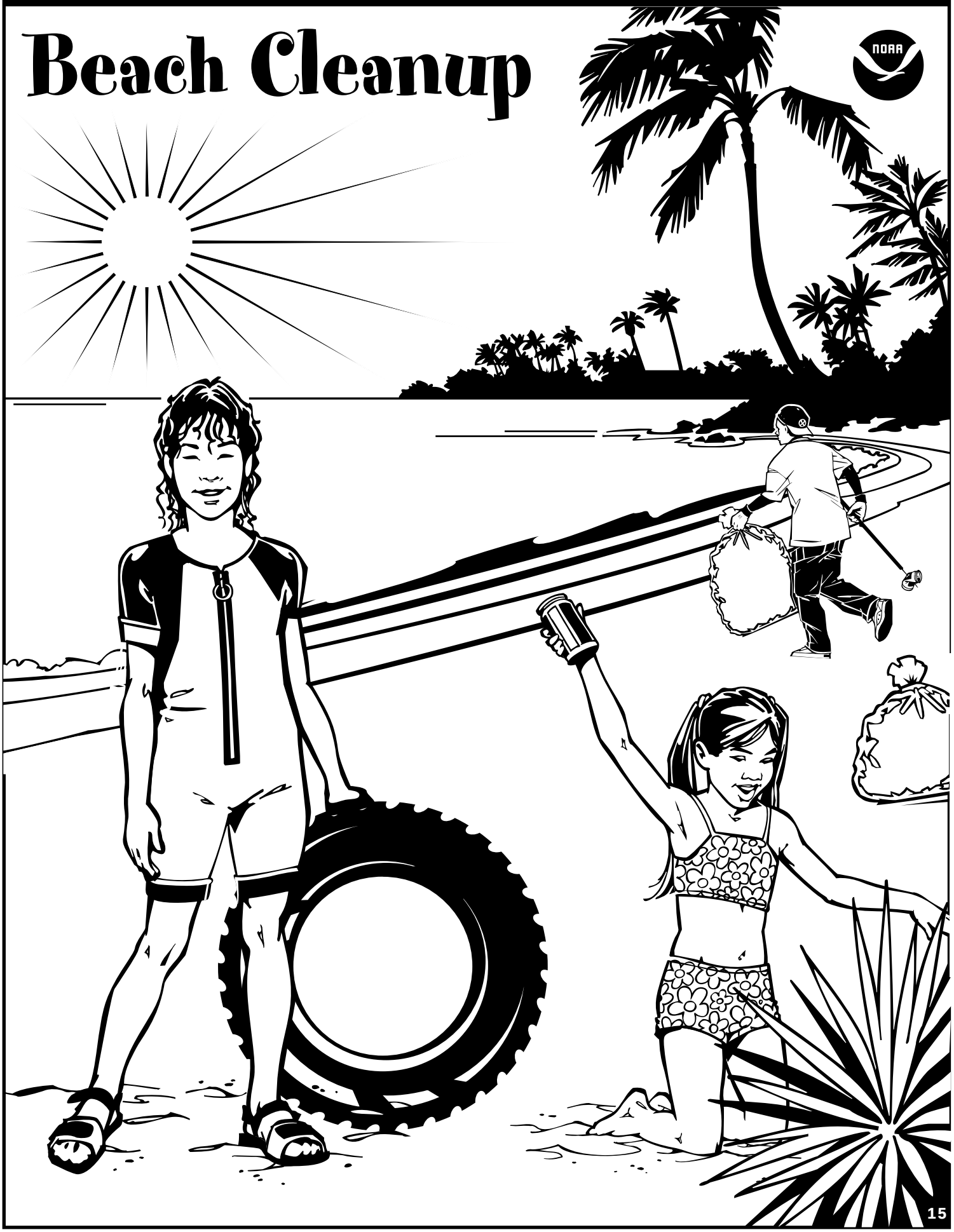
When people litter, they sometimes think that they have a good reason for it. But, there is NEVER a good excuse for littering. Take a look at the list of reasons people use for littering. Put a checkmark next to the excuses you have heard people use when they litter.

If your friends or family use these excuses, remind them that there are no good excuses for littering and ask them to throw their trash away in a trash can.

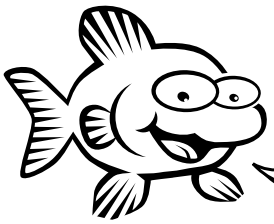


- [ ] There's already trash there.
- [ ] Why shouldn't I?
- [ ] I don't want to mess up my back pack.
- [ ] It's too hard to find a trash can.
- [ ] Mom would get upset if she knew I ate a snack before dinner.
- [ ] Everyone else does it!
- [ ] Someone else will pick it up for me.
- [ ] It's JUST a candy wrapper.
- [ ] It's too heavy to carry.
- [ ] Nobody told me not to.
- [ ] The trash can was too yucky to touch.
- [ ] Animals will eat the apple core.
- [ ] It's so tiny, it won't matter.
- [ ] Bees were around the trash can.
- [ ] I saw an adult do it.
- [ ] I don't care about the beach.
- [ ] There wasn't a sign telling me not to litter.
- [ ] It fell out of my pocket.

Beach Cleanup



How Can I Help?



Beach or coastal cleanups can be found in many communities. During these cleanups, kids and adults work together to collect the trash that has been thrown into their waterways. Cleanups make the environment a cleaner, safer place for people and animals.

Unscramble the words below to reveal how you can help! Answers on page 21.

I F D N T U O F I

E H R T E S I A

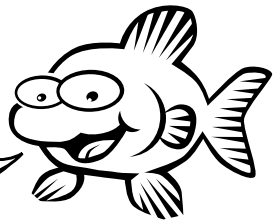
L T A C S O A L A P U C E N

N I O Y R U

T C I M Y O M N U

Cleaning Up the Beach

This is a game that can be played with two people, but we recommend playing it with a group. The READER asks each person (in turn) to call out a word until the blanks are filled in. Then the READER reads the entire silly story to the group.



Last year, we had a very successful beach cleanup in our community.

_____ helped out along with _____ ,
FEMALE CELEBRITY MALE PLAYER

_____ , and _____ .
FEMALE PLAYER MALE CELEBRITY

I got the _____ job of picking up all of the _____
ADJECTIVE NOUN PLURAL

and I found _____ of them. _____ had a
NUMBER MALE PLAYER

_____ job himself. He wore gloves so that he wouldn't
ADJECTIVE

get any _____ on his _____ . We all yelled
TYPE OF GARBAGE CLOTHING

_____ when _____ found a
EXCLAMATION! FEMALE PLAYER

_____ stuck in the sand. But the most _____
NOUN ADJECTIVE

piece of garbage we found was a _____ . By the end of the day,
NOUN

we had found _____ _____ , _____ _____ , and _____
NUMBER NOUN PLURAL NUMBER NOUN PLURAL NUMBER

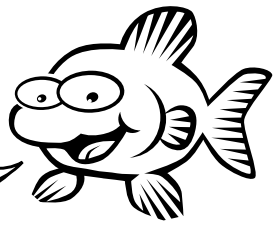
_____ . The beach was a much cleaner, safer place to play!
NOUN PLURAL

Diver Cleanup

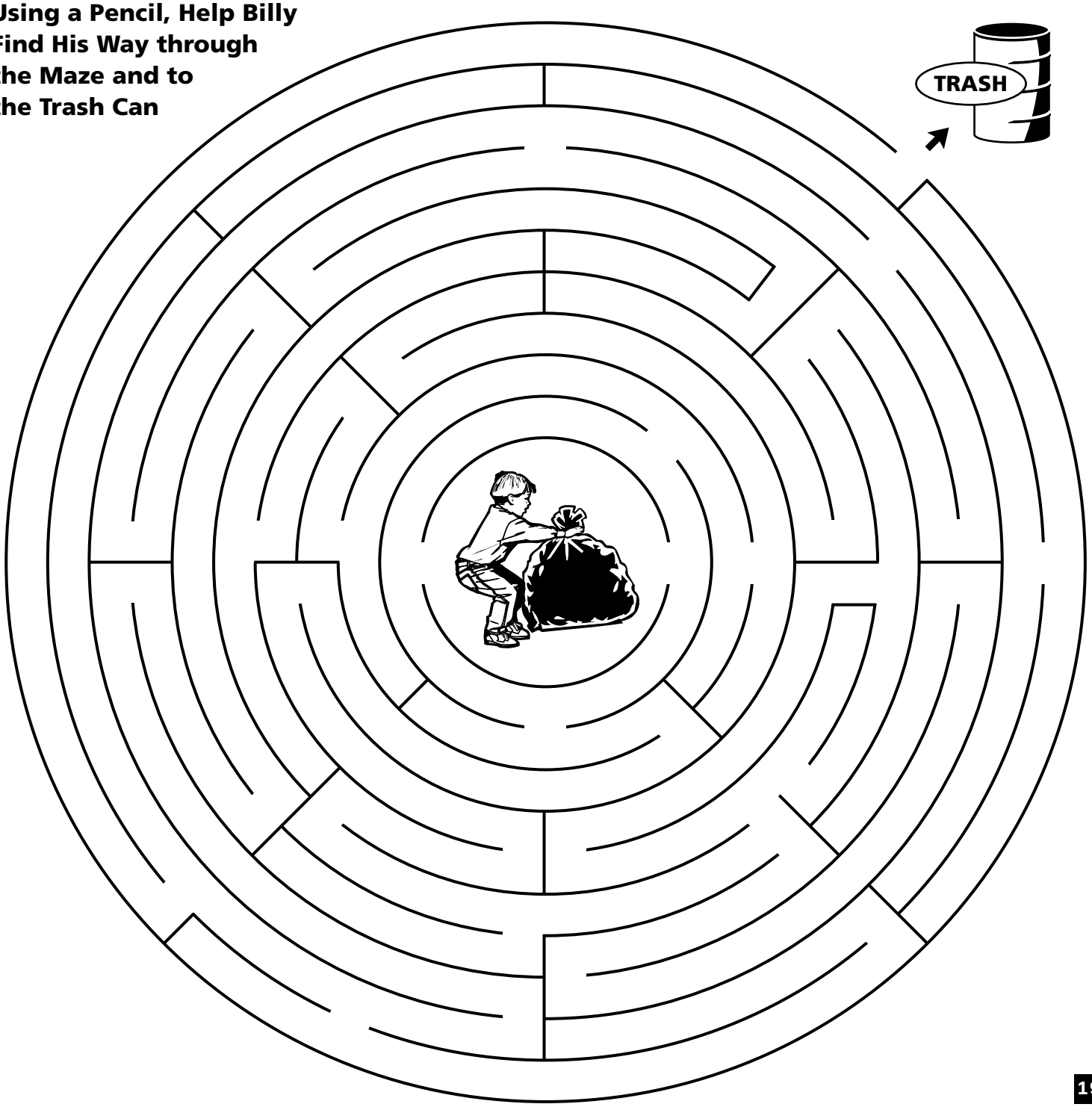
Only a trained and experienced diver should attempt removing marine debris underwater.

Getting to the Trash Can

Sometimes it takes a couple more steps to get to a trash can where you can properly discard your trash. But these extra steps will make you a good steward of the environment. Always put your trash in a trash can and always look for recycling bins for your glass, plastics, cardboard, metals, and newspaper.

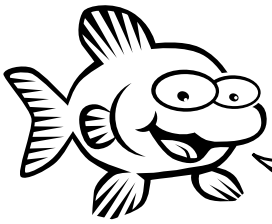


Using a Pencil, Help Billy Find His Way through the Maze and to the Trash Can



The Three Rs of Good Stewardship

A good steward protects and promotes a clean, safe environment through their own actions—making our planet a place where future generations of both humans and animals will thrive.



Hidden in the phrase below are the **three most important words** to remember if you want to be a good steward of your environment. Link the missing letters in the phrase (in order) to spell out these three words. Answers on page 21.

Pu□chasing and r□using □isposable prod□□ts
1. 2. 3. 4. 5.

lik□ plastic containe□s, groc□ry bags, foam c□ps
6. 7. 8. 9.

and gla□s jars reduces th□ amount of t□ash we
10. 11. 12.

gen□rate thereby redu□ing the man□ pieces of
13. 14. 15.

litter that □an possib□y becom□ marine debris!
16. 17. 18.

_____ 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6.

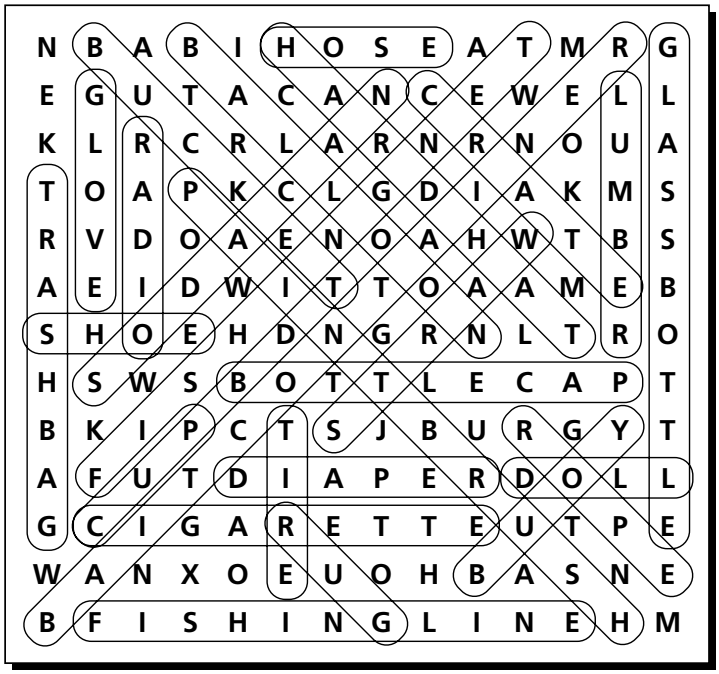
_____ 7. _____ 8. _____ 9. _____ 10. _____ 11.

_____ 12. _____ 13. _____ 14. _____ 15. _____ 16. _____ 17. _____ 18.

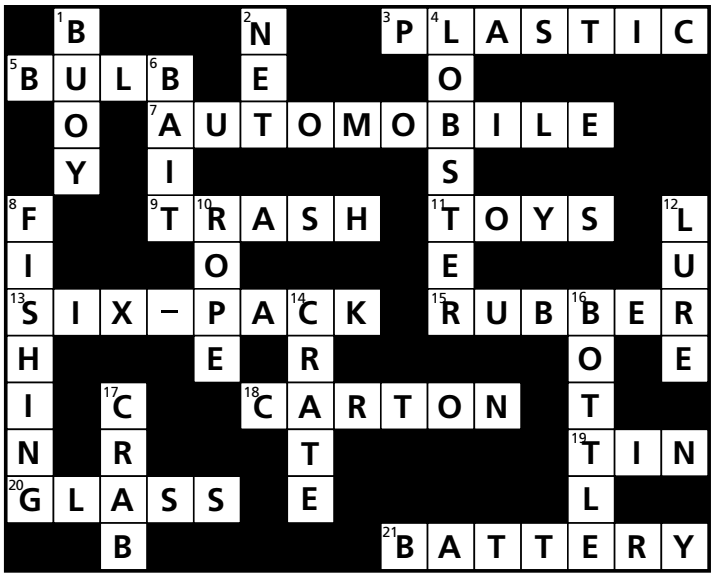
ANSWER KEY

(Where applicable)

Word Find (Page 1).



Picture Crossword (Page 2).



Identifying the Problem (Page 4).

Wherever you find people, you find a potential source of marine debris. A cruise ship, picnickers, a man washing his car, a fisherman and a beachgoer are ALL potential sources of marine debris.

Which One is Different? (Page 5).

The lunchbox which is different is found in the center of the bottom row of lunchboxes.

Secret Code (Page 7).

ALWAYS PUT YOUR TRASH IN A TRASH CAN.

Word Challenge (Page 8).

Here is a sampling of 40 words we found:

(I, a, in, is, as, me, red, bed, are, rid, arm, ear, bin, see, sin, bee, rim, rib, rind, dine, seem, bind, read, bare, darn, rain, main, need, bead, bear, rare, mine, dear, sire, beer, drain, bread, breed, inside, sardine, etc...

Marine Debris Match Up (Page 10).

Glass bottle = UNDETERMINED
Fishing line = MANY years
Plastic beverage bottle = MANY years
Aluminum can = MANY years
Styrofoam cup = MANY years
Cigarette filter = A few years
Milk carton = A few months
Banana peel = A few weeks

Unscramble the Phrase (Page 16).

FIND OUT IF THERE IS A BEACH CLEANUP IN YOUR COMMUNITY.

Debris Detective (Page 20).

REDUCE REUSE RECYCLE

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION