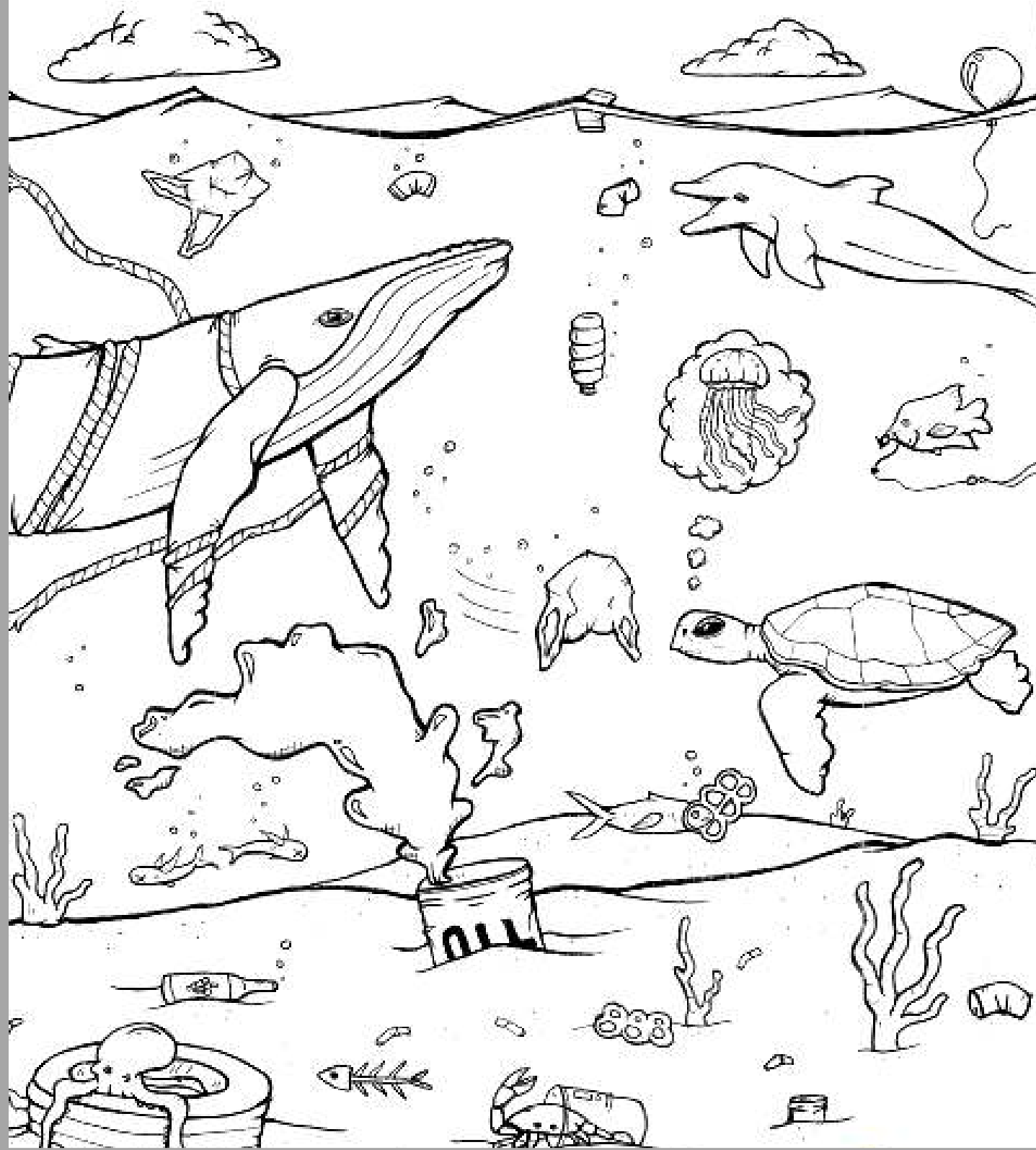




SAN DIEGO
COASTKEEPER

Marine Debris Activity Book



What is marine debris?

When we throw trash away, it doesn't disappear. Most of our trash gets buried in a landfill. Sometimes trash accidentally gets to other places like the ocean. When trash gets into the water, we call it **marine debris**.

How does trash get into the water? Sometimes it blows out of trash cans or garbage trucks. People might **litter** at the beach, park, at school, or in their neighborhood. Once trash is on the ground, the wind and rain move it around into storm drains or rivers that empty into the ocean.

Marine debris causes problems for ocean animals. Some animals eat it because they think it is food. This can make them very sick or even die. Other animals get **entangled**, or stuck, in pieces of trash. Getting wrapped in trash makes it harder for animals to swim, fly, and eat. Debris makes the water unsafe for people to swim in, too.

Marine debris comes from people. That means it's our job to keep the water clean. Everyone creates trash that might become marine debris. If we all do our part, we can make a big change for the ocean!



Trash soup?

A **garbage patch** is a place where trash collects in the ocean. Some of the trash floats, some sinks to the bottom, and some stays in between. You can think of a garbage patch more like a trash “soup” than an “island” because not all the trash floats. The most famous garbage patch is the Great Pacific Garbage Patch, which is in between California and Hawaii. The trash in the picture was found floating there.

HOW DOES TRASH GET TO THE OCEAN?



1 People litter in neighborhoods

2 Trash gets washed into storm drain



3 Litter travels through storm drains



4 Storm drains discharge to ocean



Plastic problems

Lots of things we use are made out of plastic. Many people throw their toothbrush away when they need a new one. This trash can get in the ocean.

These toothbrushes were found after washing up on a beach in Hawaii.

QUESTION: Is marine debris big or small?

ANSWER: It depends! When most people think of litter, they imagine things like water bottles, food containers, and straws. Some pieces of trash are so small they can only be seen with a microscope. Some trash is much bigger, like car tires. Boats can even become marine debris if people leave them behind in the water. Now that's some big trash!

MICROPLASTICS



Microplastics are pieces of plastic smaller than 5 millimeters (the size of a sesame seed or grain of rice). Look at a ruler. Does 5 millimeters look very big? Can you imagine trash that size?

Some microplastics are the same shape, size, or color as an animal's favorite food. Animals often get confused and eat them. Imagine you were an ocean animal. Do you think it would be easy or hard to tell the difference between microplastics and food? Why?



No to Nurdles!

Nurdles are tiny pieces of plastic that are made into larger plastic items. They look a lot like fish eggs (a tasty snack for many ocean animals), so animals get confused and eat them.

Reusable or Single-Use?

A **single-use** item is something you use once and throw away. A plastic fork is a good example. Once you're finished eating, you probably throw it out. The single-use items in our lives make a lot of trash.

The best way to stop marine debris is to make less trash. If we make less trash, then less will get into the ocean by accident. **Reusable** items can help us make less trash. They are made to be used many times. Instead of using a plastic fork every day for lunch, could you bring a fork from home? Think about how much less trash you would make! That could save a lot of animals!

DIRECTIONS: Circle single-use items in red. Circle reusable items in green.





This is an albatross, a type of bird related to seagulls. This albatross is looking at a toothbrush that washed up on the beach. What might it be thinking? Complete its thoughts by writing in the thought bubble!

THE 3 Rs

This symbol is found on the side of recycling bins. There are 3 arrows. Each of the arrows means something different. We call them **the 3 Rs**.



REDUCE= Make less trash

REUSE= Use things more than once

RECYCLE= Create new things out of old ones

Recycling is good, but it's even better to reduce and reuse. Scientists say these are the best ways to stop trash from going to the water.

Reduce, Reuse, Recycle!

Once you have **reduced** your trash and **reused** things more than once, it's time to **recycle**. Talk with your family about how to recycle different things around the house. Some things need to go to a special place to get recycled, like batteries or plastic shopping bags.



Sort the Debris

Oh no! People have left litter all over the beach! We need your help to clean it up. But where should it go— in the trash or the recycling?

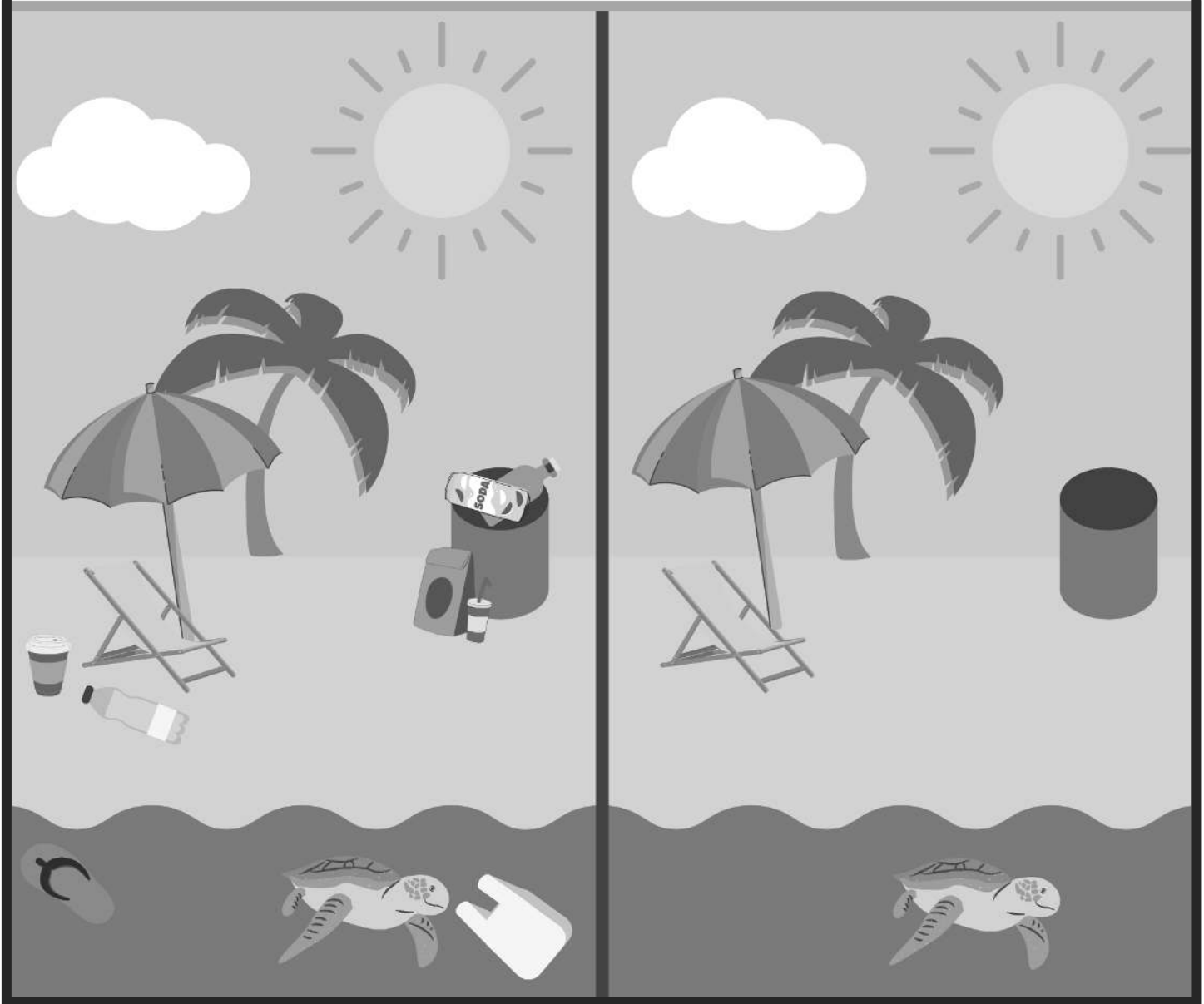
DIRECTIONS: Sort the litter into the trash and recycling bins. To sort, draw a line from the litter to the right bin.

TIP: Not sure what is trash and what is recyclable? Use the chart on the previous page to help you!



SPOT THE DIFFERENCE

Can you find the ways the beaches are different? Draw a circle around each difference.



How does the beach on the left look? _____

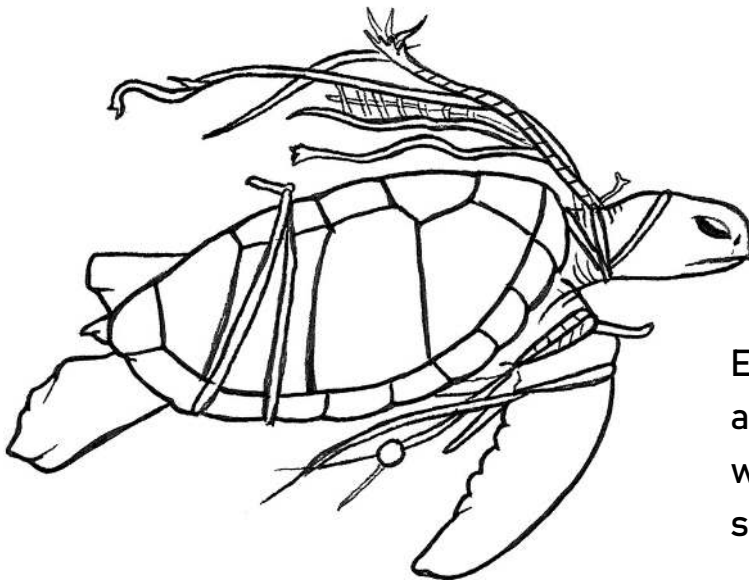
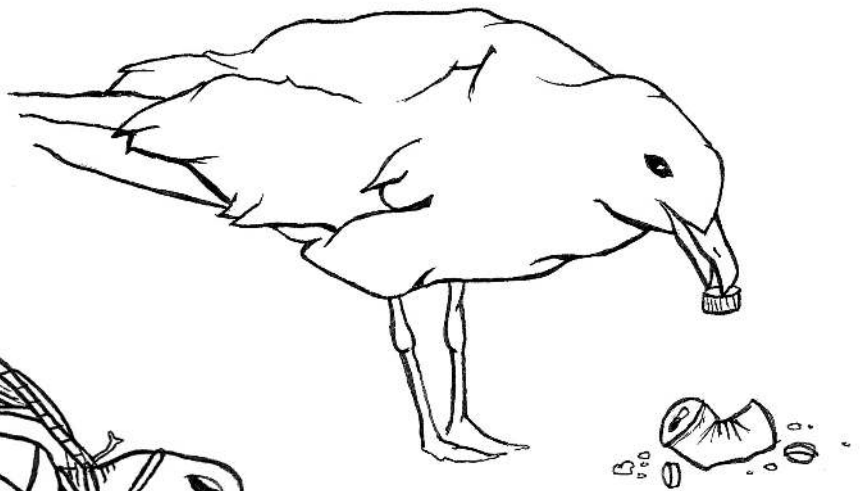
What could people do to care for the beach? _____

Coloring Pages

THINK LIKE A SCIENTIST: How does cleaning up the beach help animals?



Ingestion happens when animals eat marine debris. They get confused and think the debris is food. It can make them very sick.

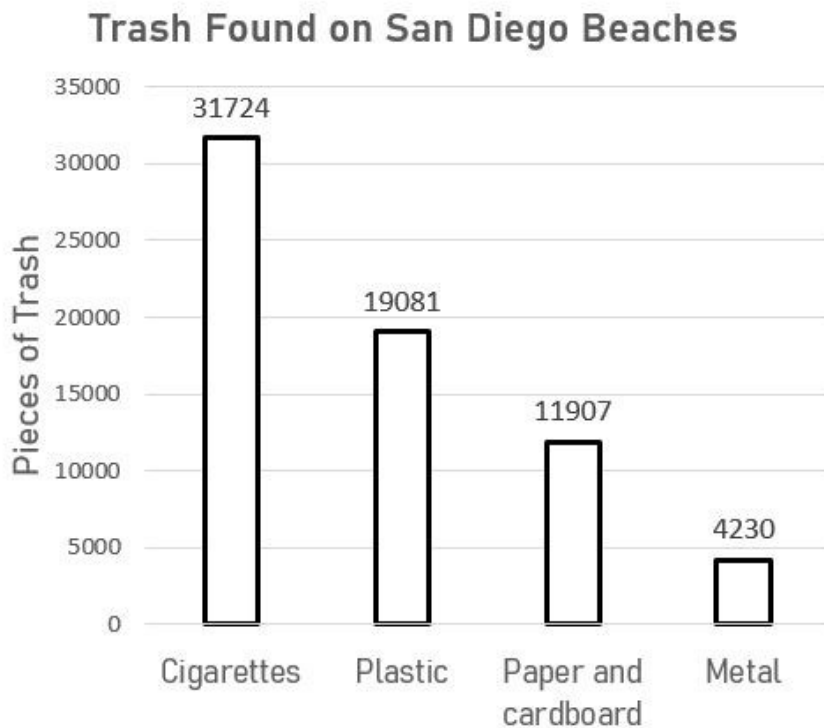


Entanglement is dangerous for animals. They can get stuck in trash, which makes it harder for them to swim, fly, or catch food.

Trash Collectors

San Diego Coastkeeper organizes beach cleanups. At these cleanups, volunteers pick up litter and write down what they find. The graph below shows *how much* trash was collected and *what kinds* of trash were collected. The graph has information for a few, not all, of the beaches in San Diego.

DIRECTIONS: Color in the graph, using a different color for each bar. Then, use the graph to answer the questions.



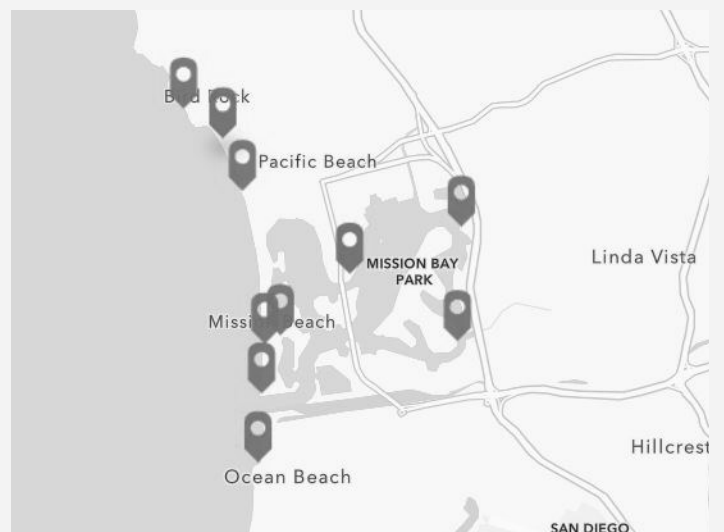
What is the **biggest** category of trash?

What is the **smallest** category of trash?

How many cigarettes were found?

Keeping beaches clean

San Diego Coastkeeper organizes beach cleanups all over San Diego. The bar graph shows data from cleanups in places like Pacific Beach, Mission Bay, and Ocean Beach. Have you been to any of these beaches before?



TAKING ACTION

There are many ways to help. Choose 3 things to try and circle them.

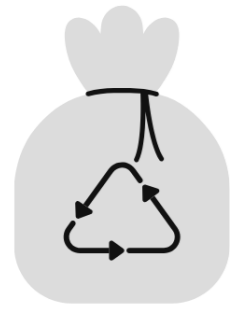
- Reuse something I normally throw out
- Clean up my neighborhood for 15 minutes a week
- Bring a reusable bag to the store
- Pick up trash at the beach or park
- Start using a new reusable item
- Tell 3 people about what I learned

Marine Debris Word Search

E	E	T	M	A	R	I	N	E	R	L	I	G	B
C	G	N	C	B	A	A	E	N	E	A	I	L	C
G	A	E	L	E	P	L	A	S	T	I	C	I	L
P	P	L	E	C	R	N	R	E	C	Y	C	L	E
H	E	T	A	L	P	N	C	C	E	B	I	C	A
C	T	R	N	T	S	A	R	E	T	T	I	L	C
A	S	U	U	T	R	E	G	A	B	R	A	G	N
E	S	T	G	E	L	E	E	E	L	E	A	E	D
B	N	E	I	B	O	C	E	A	N	E	E	G	A
U	R	D	E	B	R	I	S	A	E	R	G	I	T
T	Y	I	N	R	O	T	A	C	A	I	E	A	A
T	R	A	S	H	C	L	C	E	S	E	N	E	E
B	N	A	L	G	P	E	L	G	N	A	T	N	E
I	R	T	E	N	T	I	Y	E	T	C	H	N	A

MARINE
TURTLE
GARBAGE
DEBRIS
LITTER
ENTANGLE
TRASH
PLASTIC
CLEAN
BEACH
RECYCLE
OCEAN

TRY IT: 5 MINUTE CLEANUP



YOU WILL NEED:



Gloves



Timer



**Bag or
bucket**



**An adult
to help**

HOW TO CLEAN UP:



Gather supplies.

Ask a family member to walk with you.



Decide where you will clean.

Ideas: Parking lot, sidewalk, neighborhood, or park



Clean for 5 minutes.

Be careful of sharp things!



Throw out all trash.



Think about what you found.

Was it big or small?



Tell someone about what you found.

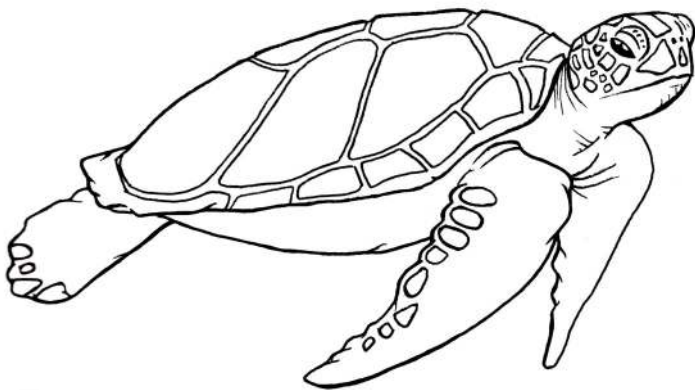
PLEDGE FOR CLEAN WATER

Now that you have learned about marine debris, you can take action to make a difference. Sign the pledge below, then color in the badge below. Thank you for keeping our water clean!

I promise to help keep our water clean. I will keep the ocean free of trash by:

- Picking up litter in my neighborhood, beaches, and parks.
- Making less trash.
- Never littering.
- Keeping my home, school, and community clean.
- Reusing and recycling before throwing something away.
- Sharing what I know with others.

Signed,



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COASTKEEPER