

# SURFRIDER FOUNDATION

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PACIFIC RIM, BC

YES PROGRAM

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WHO ARE WE ?

# OVERVIEW

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Class 1:

Introducing the Plastic Problem

Class 2:

Beach Clean

Class 3:

Trash to Treasure

Class 4:



CLASS 1

INTRODUCING THE  
PLASTIC PROBLEM

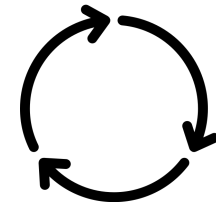
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# FUNCTIONS OF THE ECOSYSTEM



It regulates the essential ecological processes, supports life systems and renders stability.



It is also responsible for the cycling of nutrients between biotic and abiotic components.



It maintains a balance among the various trophic levels in the ecosystem.

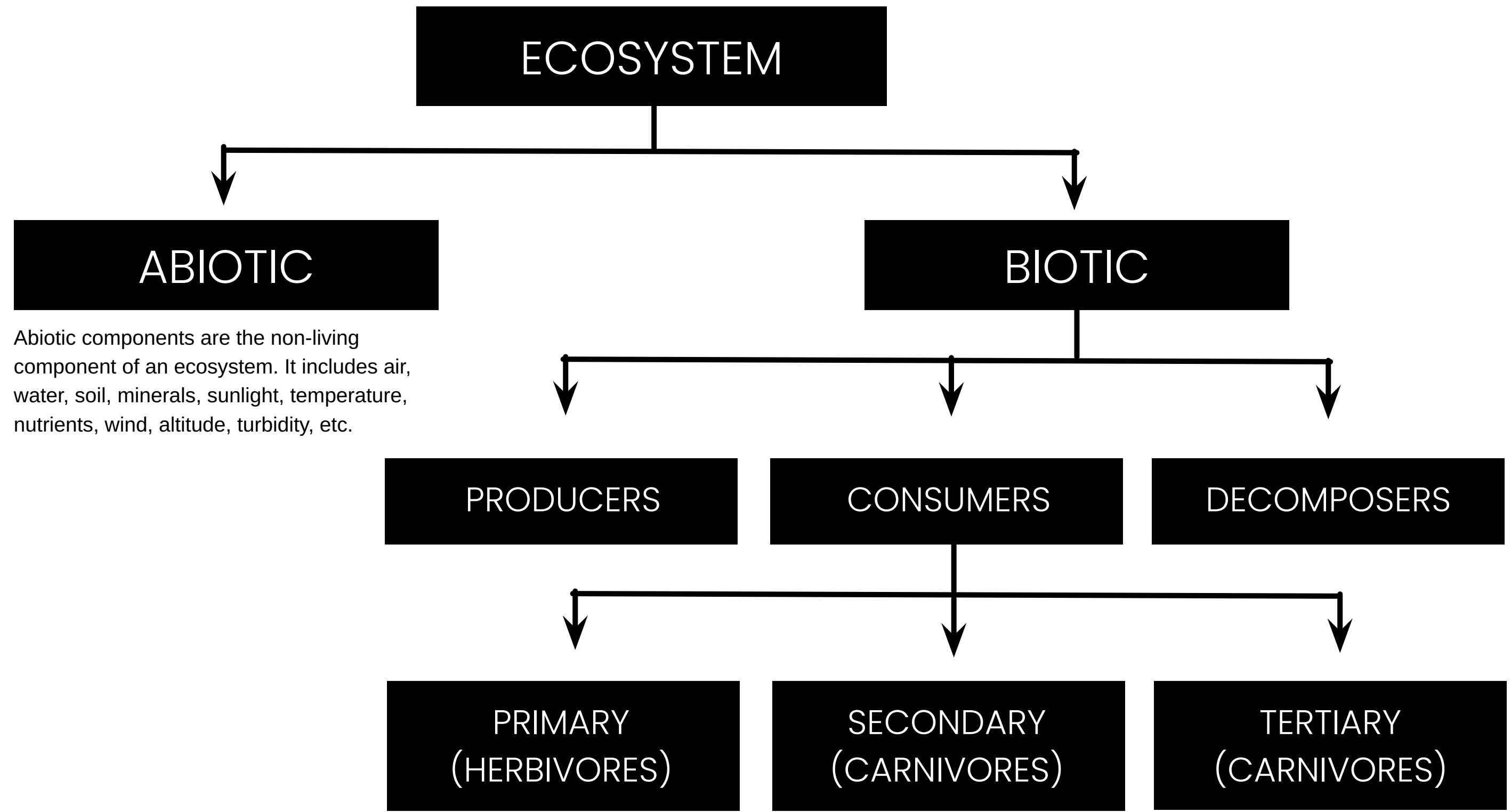


It cycles the minerals through the biosphere.



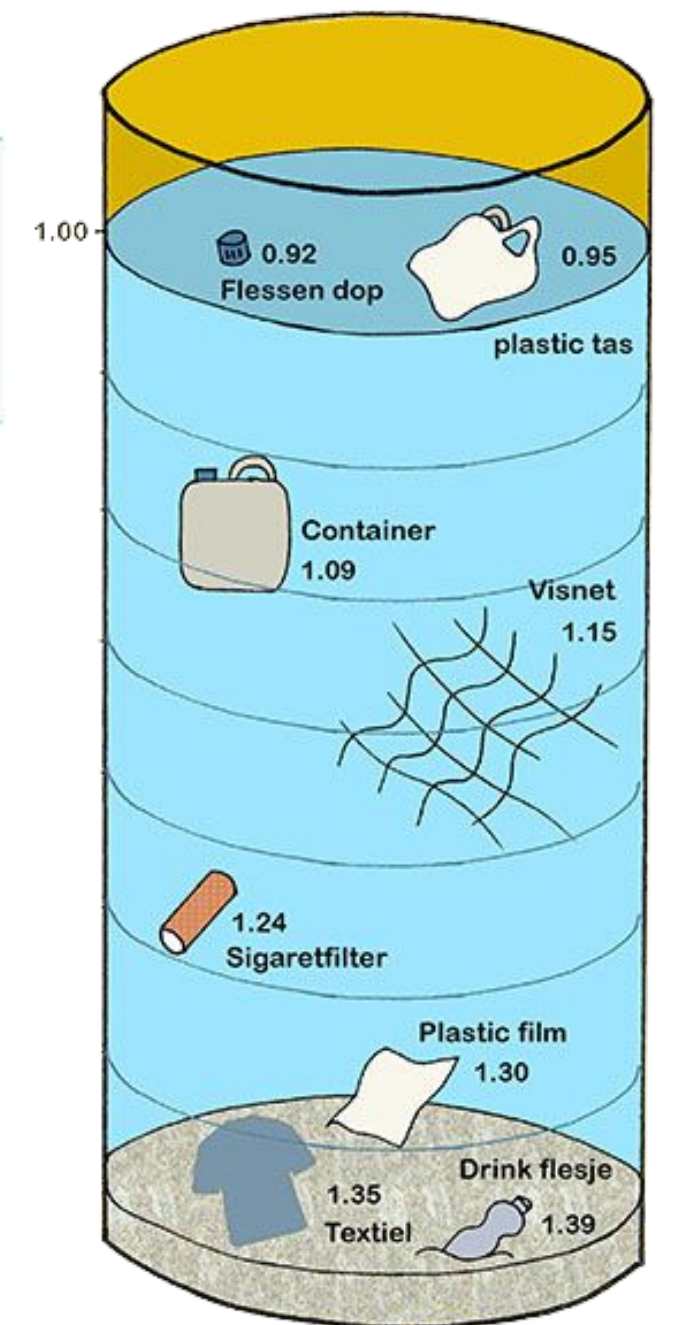
The abiotic components help in the synthesis of organic components.





# PLASTICS IN THE WATER COLUMN

	PLASTIC ITEM	RE-CYCLING #	PREDICTION: DO YOU THINK THIS PLASTIC SINKS OR FLOATS?	RESULTS: DID IT SINK OR FLOAT	MARINE ANIMALS THAT MIGHT EAT IT
<b>1</b>					



Are there similarities between the resin codes and the buoyancy?

# BIOACCUMULATION

- 1) Pollutants are absorbed by microplastics, and mix with plankton.
- 2) This toxic soup is ingested by filter feeders.
- 3) These pollutants bioaccumulate and biomagnify up the food chain

## TOXICITY LEVELS

TRANSIENT  
ORCA



STELLER SEA LION



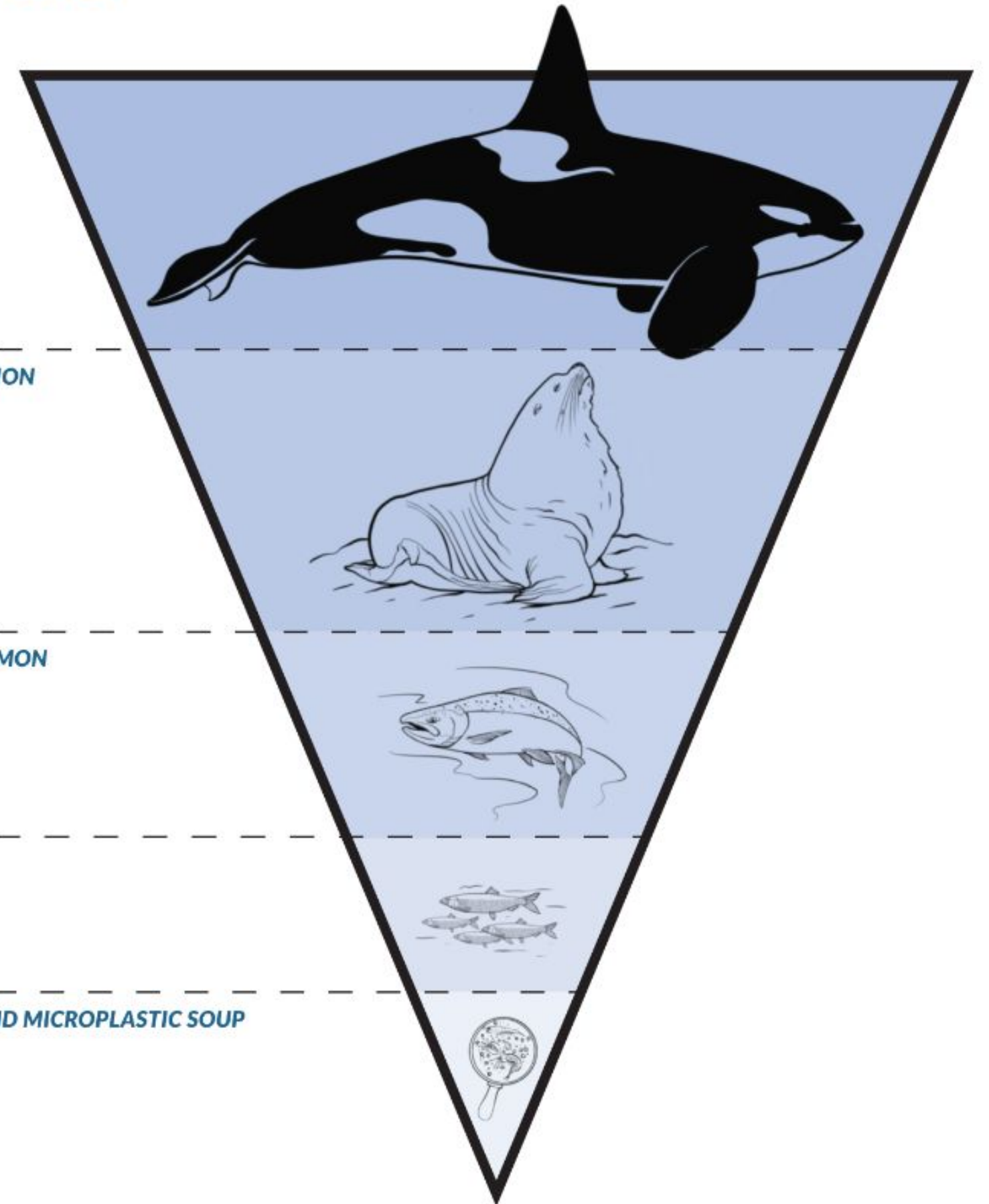
CHINOOK SALMON



HERRING



PLANKTON AND MICROPLASTIC SOUP





# BEACH CLEAN DAY

Gyres



USING WHAT YOU HAVE LEARNED ABOUT WIND, OCEAN GYRES AND CURRENTS IMPACT ON MARINE DEBRIS, HYPOTHESIZE WHAT KIND OF DEBRIS YOU MIGHT FIND AT YOUR LOCAL BEACHES AND WHERE IT MAY HAVE COME FROM

# WRITE A LETTER

Write a letter to a business or someone important in your community with an idea you have for a way to reduce our plastic use in the community.

• **Your Name and Address** → Owen Smith  
321 Cherry Lane  
Westville, FL 11221

• **Today's Date** → June 5, 2025

• **Greeting** → Dear Levi,

• **Letter Body**

- Reason Statement** → Thank you for the birthday gift, I received it in the mail yesterday. It was so nice of you to think of me from so far away. A coffee lover basket is the perfect gift for me!
- Details** → I can't wait to try out all 12 flavors included in the basket. This morning, I tried out the Columbian roast and it was delicious. The gift set came with two funny mugs, so I hope that means you'll visit soon and enjoy a cup with me.
- Closing Statement** → Thanks again for being such a thoughtful friend. I'm so lucky to have people like you in my life. In addition to coffee, good friends are what fuel me in life.

• **Closing** → Love,

• **Your Signature** → Owen



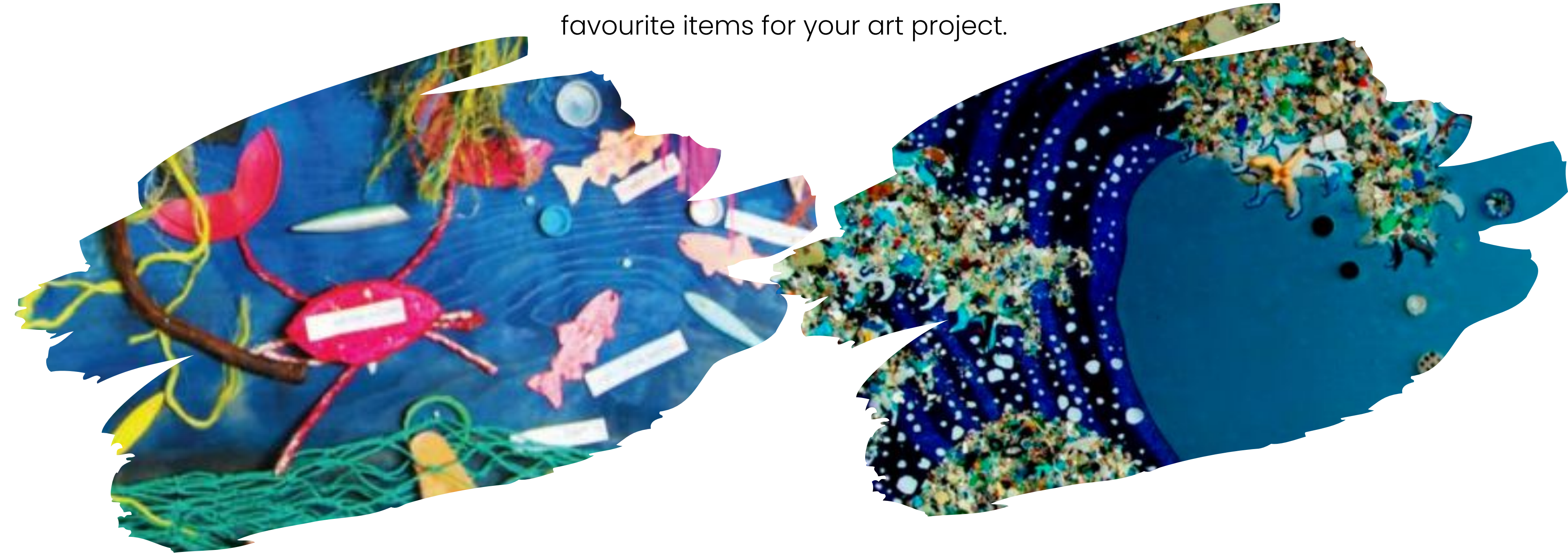
# AFTER THE BEACH CLEAN

- What were the top 5 trash trends?
- Did you find items that you use in your day to day life?

# TRASH TO TREASURE

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Sort the debris, weigh it, and record it. Choose some of your favourite items for your art project.



We will be making an art piece that tells a story out of the debris we collected.



# MAKE A POSTER

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to inform students in your school!



# NOW IT'S YOUR TURN!

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THINK OF A SOLUTION WITHIN YOUR SCHOOL  
What can you create, invent or start up to solve  
the plastic problem at your own school?



# UNDERSTANDING CONTEXT

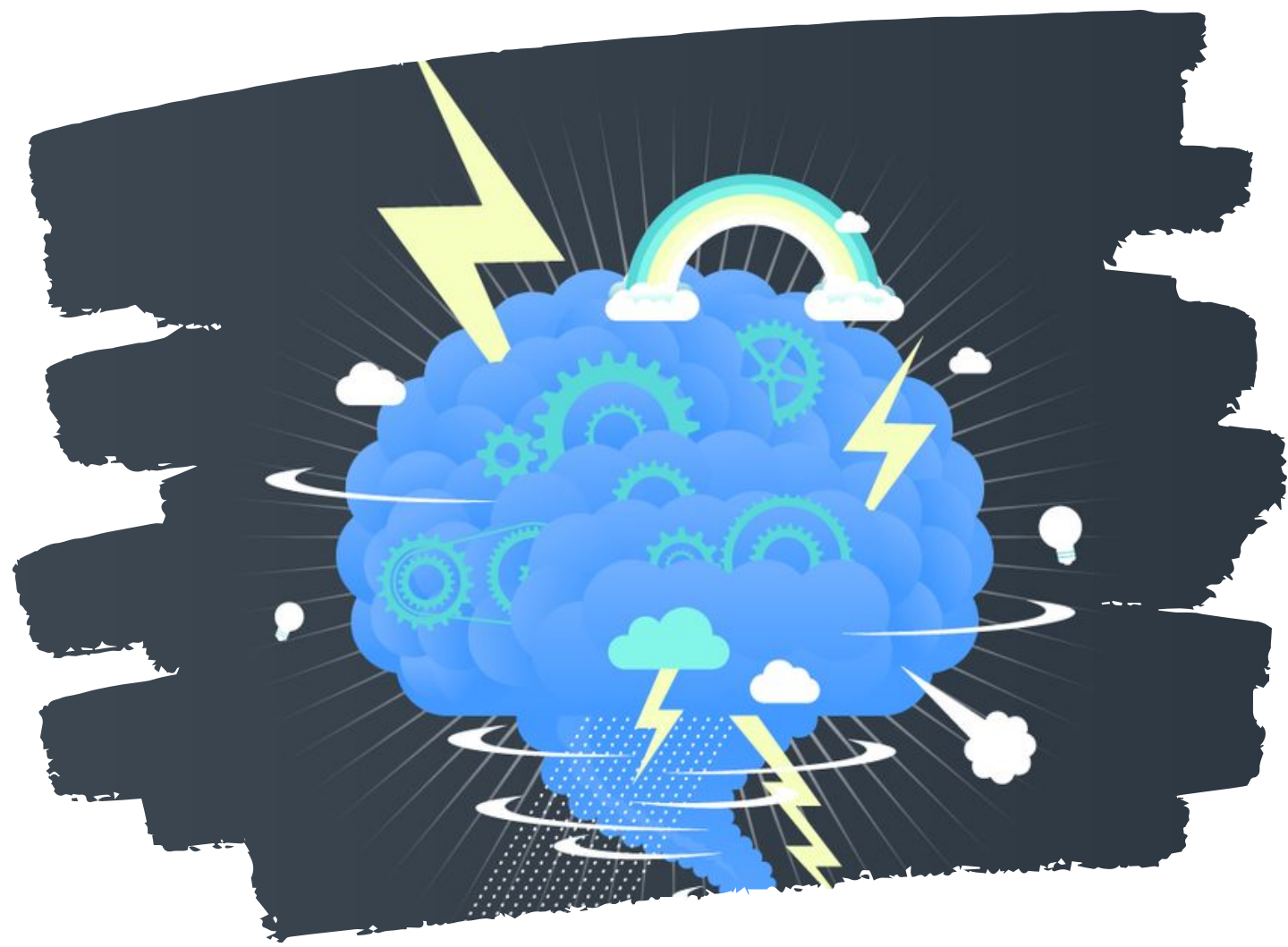
What are we trying to do?



## DEFINING

What is the main objective?



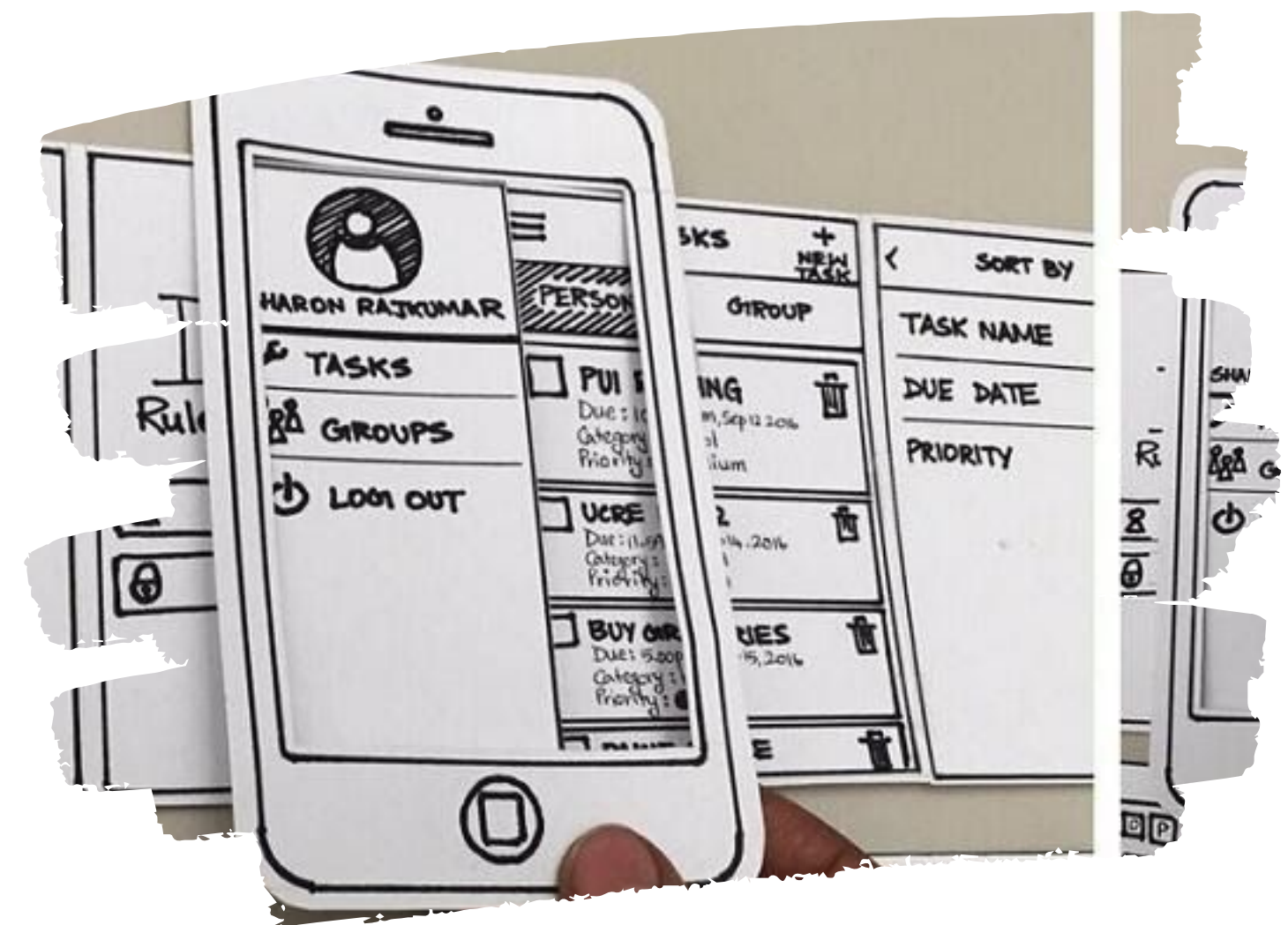


# IDEATING

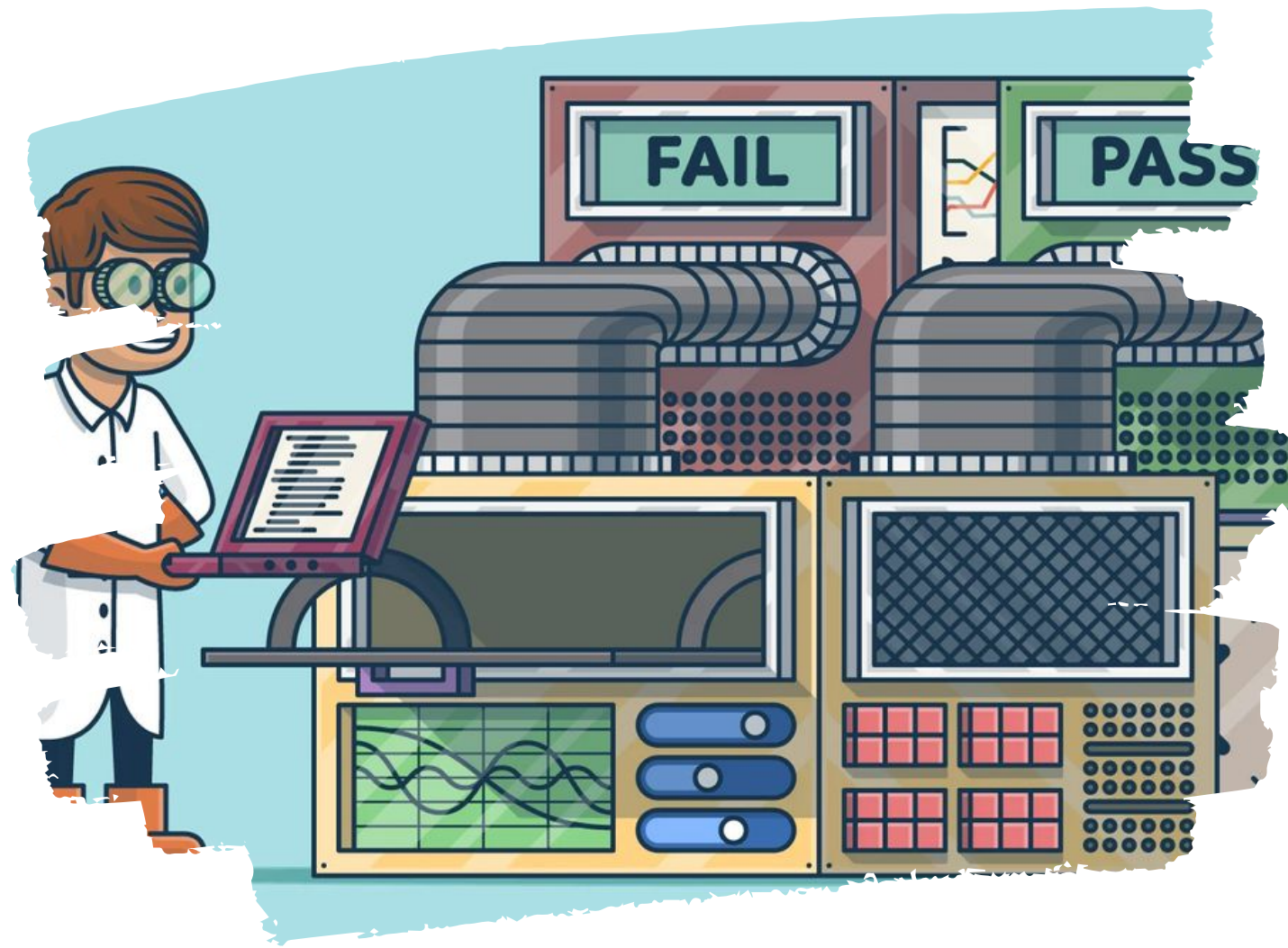
Brainstorm some ideas!

# PROTOTYPING

Come up with a first version of your idea!







## MAKING

Construct the final product, incorporating planned changes

## TESTING

Test it and make changes. Ask your friends for feedback!





# SHARING

Share what your idea and plan is!

Is it going to help the school?





THANK YOU!