The Trouble with Trash

_____'s

Science Notebook

Day 1:

The Trouble with Trash

Question of the day:

What is the problem at Crystal Cove State Park?

Crystal Cove has a problem with

_____

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

_____

on the beach.

What do you wonder?

Write three things that you wonder about the problem with trash at Crystal Cove.

1.

2.

3.

Draw a picture of someone helping Steve with the problem that Crystal Cove is facing. Then, write a sentence describing your drawing.

I think someone like

can help Steve by

Let's learn about you!

Read the questions below. Then, circle the answer that describes you best!

1. I like to learn about the ocean.

2. My family thinks of me as someone who can help protect the ocean.

3. I am interested in new ways to protect ocean animals.

4. I would help clean up green areas in my neighborhood.

5. I am good at science.

6. I can do something to help protect ocean animals.

7. My family thinks of me as someone who is good at science.

Day 2:
Exploring Crystal Cove

What do you notice?

Write three things that you notice as you explore Crystal Cove.

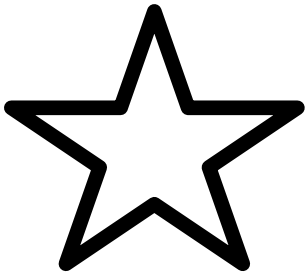
1.

2.

3.

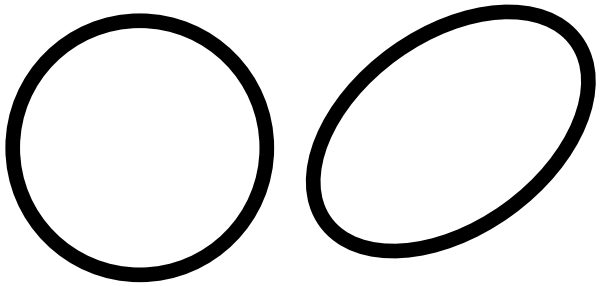
Tidepool Field Guide

Identify the following tidepool animals by matching them to their shapes!

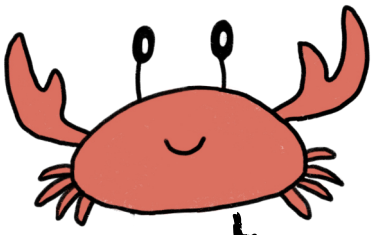


star

sea star



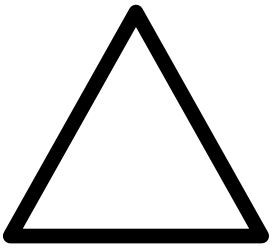
circle or oval



crab

mussel

sea anemone



triangle

turban snail

What is trash?

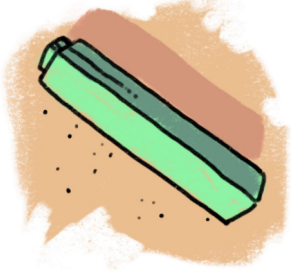
Look at the objects below and circle whether you think they are trash or natural objects.

1. Driftwood

trash

natural item

2. Plastic cap



trash

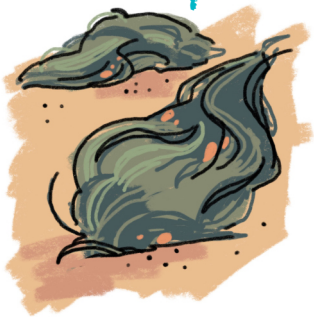
natural item

3. Plastic cap

trash

natural item

4. Kelp



trash

natural item

5. Lobster

trash

natural item

6. Bottle cap

trash

natural item

7. Cardboard

trash

natural item

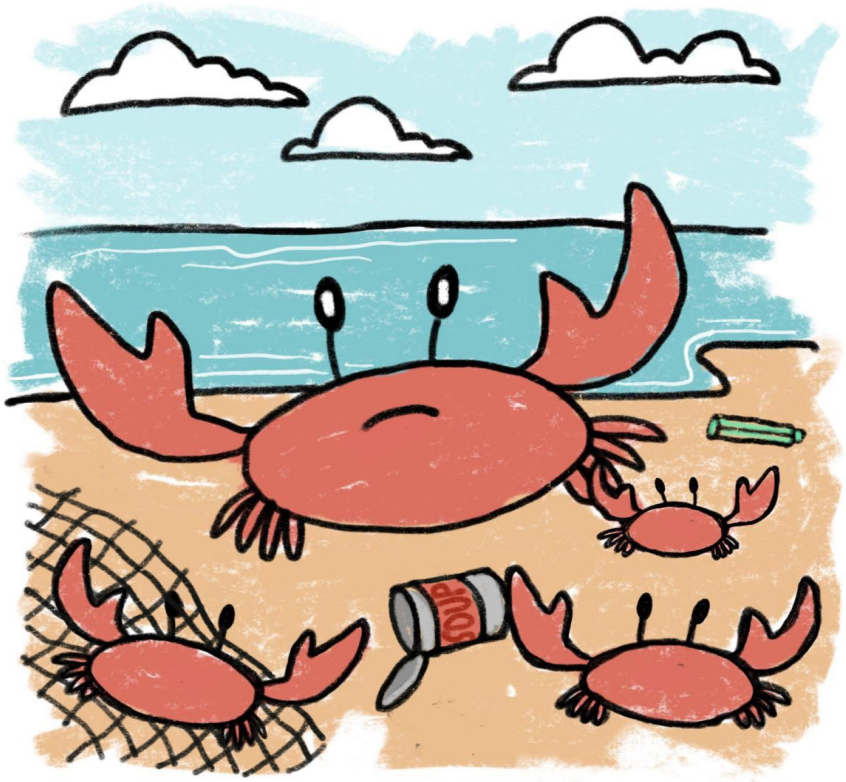
Where do you think trash on the beach comes from?

I think trash on the beach comes from...

Day 3:
Community Interviews

Question of the day:

Why do we care about the problem with trash at Crystal Cove?



I care about the problem with trash at Crystal Cove because...

Day 4:
Exploring Why We Care

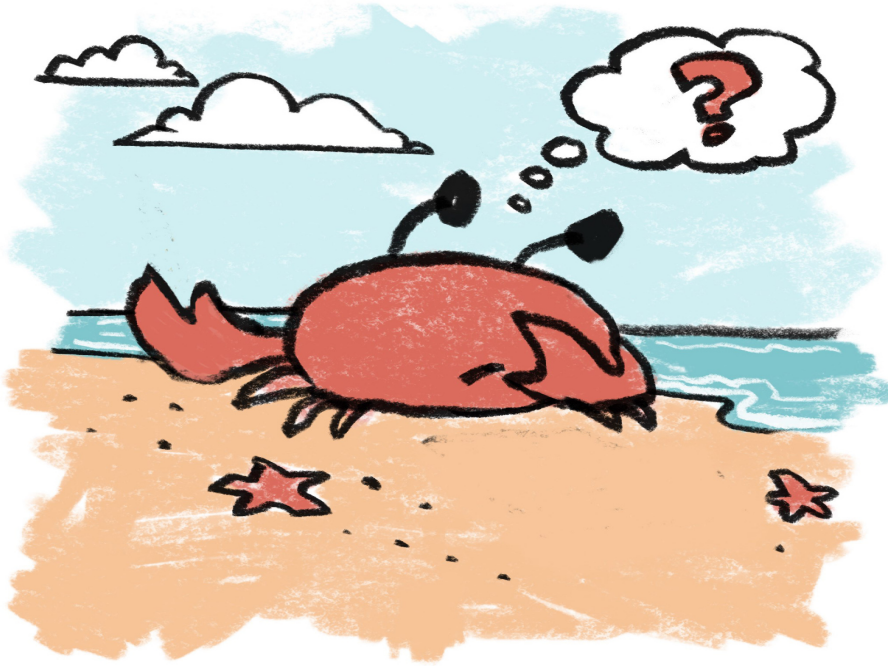
Option 1: How does trash affect ocean animals?

Make a prediction about how trash might affect ocean animals below!

I predict that trash affects ocean animals by...

Make a claim.

How do you think trash affects ocean animals?
Answer the question below!

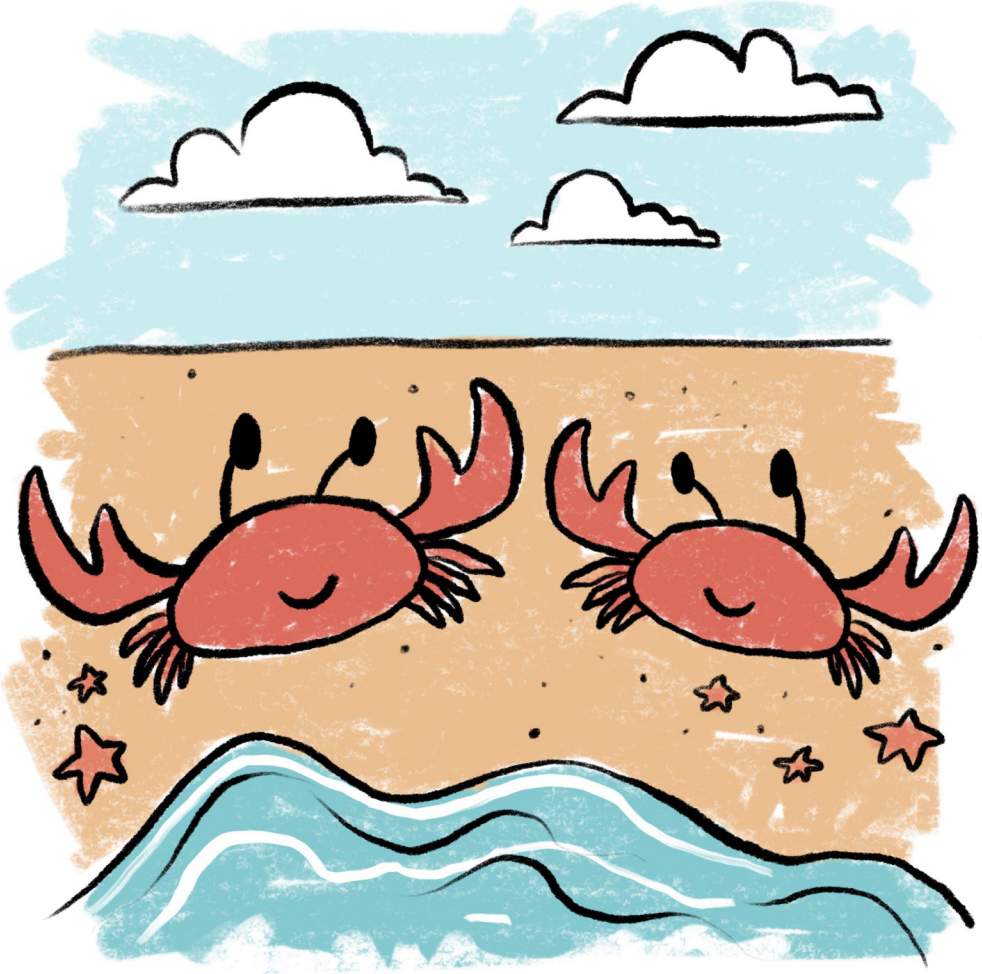


I think trash affects ocean animals by...

The evidence that supports this is...

Option 2: Conduct an Interview

Decide who you want to interview. Then, complete the sentences below about the person you have chosen.



I want to interview...

_____

_____

_____

They are...

_____

_____

_____

What questions do you want to ask?

Write three questions that you want to ask during your interview.

1.

2.

3.

Create & Share

Option 1: Making Artwork

What Colors Mean to Us

Draw a line to match each color to a feeling or thing that you want to include in your artwork.

Red	Trash
Orange	Happy
Yellow	Sad
Green	Animals
Blue	Caring
Purple	Crystal Cove

Your color: _____

Your idea: _____

_____

_____

If needed, use the space below to plan your painting!

Create & Share

Option 2: Writing a Haiku

Use the space below to brainstorm some words that describe Crystal Cove!

Some words that describe Crystal Cove are...

How many syllables do you count?

Read the example haiku below. Can you count all of the syllables in each line?

Crash! A wave rolls in.

_____

Red crabs peek from under rocks.

_____

No trash to be seen.

_____

Write your haiku!

Use the space below to write your haiku.

Module 3:

Launch

Question of the day:

How do you think most trash gets to Crystal Cove? Draw a picture to show your prediction!

I predict that most trash gets to Crystal Cove from...

What type of trash do you think is the most common on Crystal Cove's beach? Make a prediction below!

I predict that the most common type of trash is...

We might also find...

Module 3:

Explore

Where does trash come from?

Where do you predict Erick will find the most trash after a rainstorm?

I predict that we will find the most trash...

- ☐ Near trash cans
- ☐ By the river
- ☐ Near strong waves

Where does trash come from?

Based on the data, where did Erick find the most trash?

We found the most trash...

- ☐ Near trash cans
- ☐ By the river
- ☐ Near strong waves

Circle whether your prediction was or was not correct.

My prediction was / was not correct.

Module 3:

Explore: Your Watershed Story

How does trash get to the ocean?

In the spaces below, glue your watershed cards in order to show how trash moves from your school to the ocean!

1

2

3

4

Module 3:
Building a Watershed

Our Team

Geologist:_____

Meteorologist:_____

Trash Dropper:_____

Directions:

1. The geologist sets out the cups and covers them with plastic to make mountains and valleys.
2. The trash dropper drops trash on the mountain tops.
3. On the next page, draw a picture of your watershed. Make a prediction about where the trash will go.
4. When you are ready, the meteorologist uses the spray bottle to make it rain.
5. Watch what happens!

Draw a picture of your watershed model for Step 3.

When we use the spray bottle to make rain, I predict that the trash on the mountains will...

Draw a picture showing what happened to your watershed model after Step 5. Where did the trash go?

The trash on the mountains went...

Circle whether your prediction was or was not correct.

My prediction was / was not correct.

Module 3:
Explore: Sorting Trash

Question of the day:

What types of trash can we find on Crystal Cove's beach?

Directions:

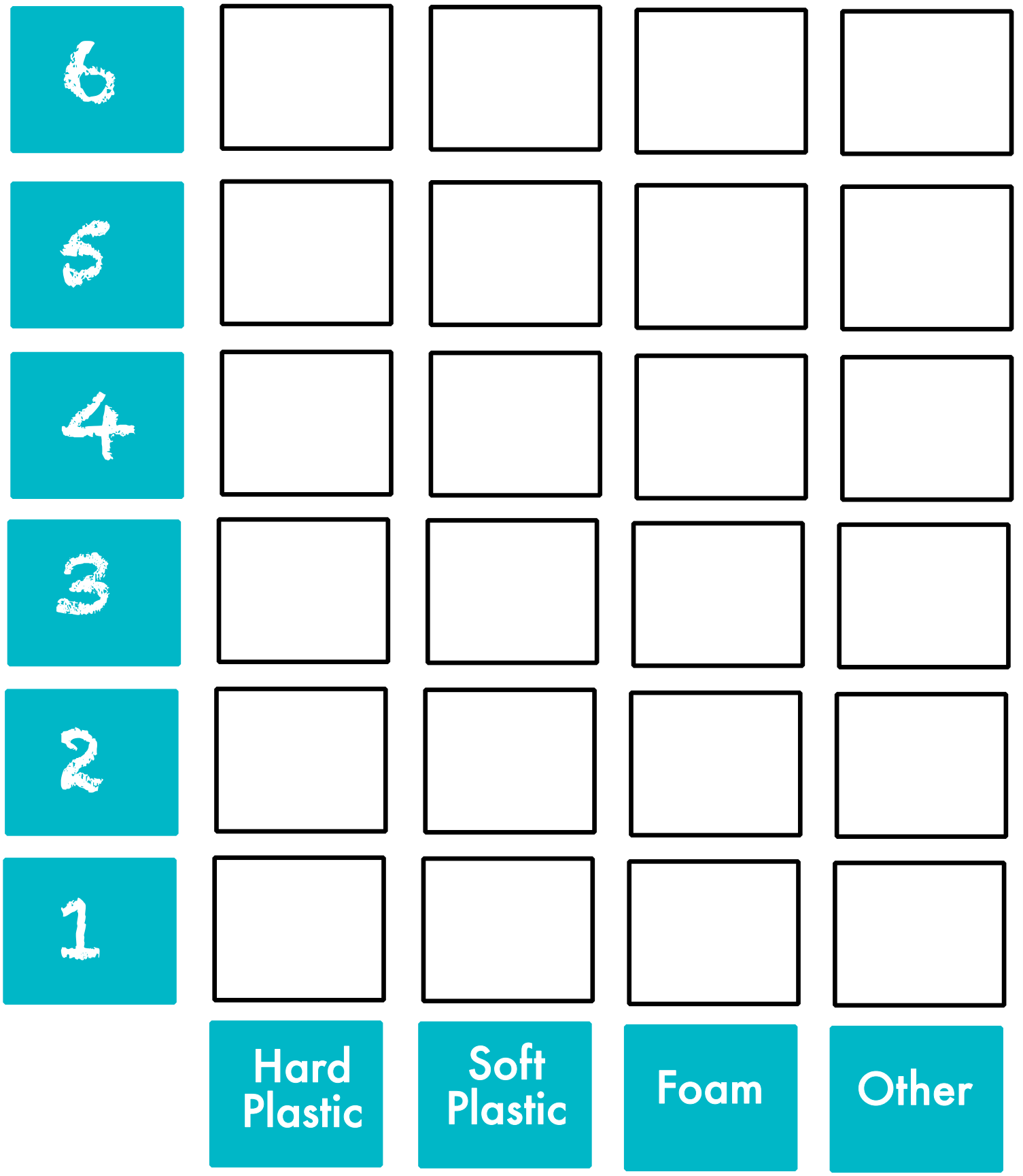
1. Empty the trash sample onto a desk.

2. Choose one piece of trash.

3. Use the field guide to decide what type of trash it is.

4. On the next page, place your piece of trash into the box for the correct type of trash.

5. Repeat steps 2-4 for each piece of trash. If there is already a piece of trash in a box, place the next piece into the box above it.


6
5
4
3
2
1
Hard Plastic
Soft Plastic
Foam
Other

Module 3:
Explore: Math Stories

Hard plastics had _____ pieces of trash.

Soft plastics had _____ pieces of trash.

Foam had _____ pieces of trash.

Other had _____ pieces of trash.

Which category had the most pieces of trash?
Which one had the fewest?

The category that had the most pieces of trash is _____.

The category that had the fewest pieces of trash is _____.

The bottle caps in the hard plastic are recyclable.

There are _____ hard plastics.

This includes _____ bottle caps.

If we take the bottle caps away and put them in a recycling can, how many hard plastics are left? Use the space below to show your work!

If we recycle the bottle caps, there are _____ hard plastics left.

Create your own math question about the graph!

Module 4

Launch

Question of the day:

Who told us about the problem?

We heard about the problem from...

What is wrong?

Crystal Cove has a problem with...

Where and when is the problem happening?

The problem is happening at...

It is happening...

Why does our community care about the problem?

We care about it because...

Module 4

Explore Option 1

Building a tool.

Think about how we can design a tool to solve the problem!

We'll design our tool to pick up...

Design your tool!

Design your tool in the space below!
Can you label the important parts?

Module 4

Explore Option 3

Use the space below to plan how you will share what you've learned!

1. I want to tell...

about the problem at Crystal Cove.

2. I think people should know about...

3. After an audience sees my message, I want them to...

4. My message will be a...

Sharing what we've learned.

Use the space below to brainstorm or draw a first draft of your PSA!

Module 4

Explore Option 4

Planning a trash cleanup.

Use the space below to plan your trash cleanup!

1. We will pick up trash at...

2. We will ask...

   to help.

3. We will need supplies like...

Module 4

Reflect

Who can help Steve?

Draw a picture of someone helping Steve with the problem that Crystal Cove is facing. Label the parts of your drawing.

Complete the sentence below to describe your drawing.

I think someone like

can help Steve by

What do you wonder?

What do you still wonder about the problem at Crystal Cove?

1.

2.

3.

What you've learned.

Read the questions below. Then, circle the answer that describes you best!

1. I like to learn about the ocean.

2. My family thinks of me as someone who can help protect the ocean.

3. I am interested in new ways to protect ocean animals.

4. I would help clean up green areas in my neighborhood.

5. I am good at science.

6. I can do something to help protect ocean animals.

7. My family thinks of me as someone who is good at science.