

EQ #12-

How is plastic pollution affecting our
Oceans?

What is the Great Pacific
GARBAGE Patch (GPGP)?

What are we learning today?

- How is plastic affecting our oceans?
- Where is the plastic coming from?
- What is the GPPG is and where is it?
- Explain the causes and effects of the GPPG,
- Discuss the laws in place relating to the GPPG,

AND

- Brainstorm potential solutions for the issue

How big of a problem is plastic in our oceans?

Read the FACT SHEET on Plastics in the Ocean

What do you think? Pair Share.

What's new information to you?

Is this about what you thought or better or worse than you imagined?

What can we do to address this problem?

How much plastic is in our oceans?

- About 8 million metric tons of plastic are thrown into the ocean annually
- 236,000 tons are micro plastics—tiny pieces of broken-down plastic
- The amount of plastic in the ocean is set to increase tenfold in the next decade.
- By 2050, there could be more plastic than fish in the ocean...

Where is the plastic coming from?

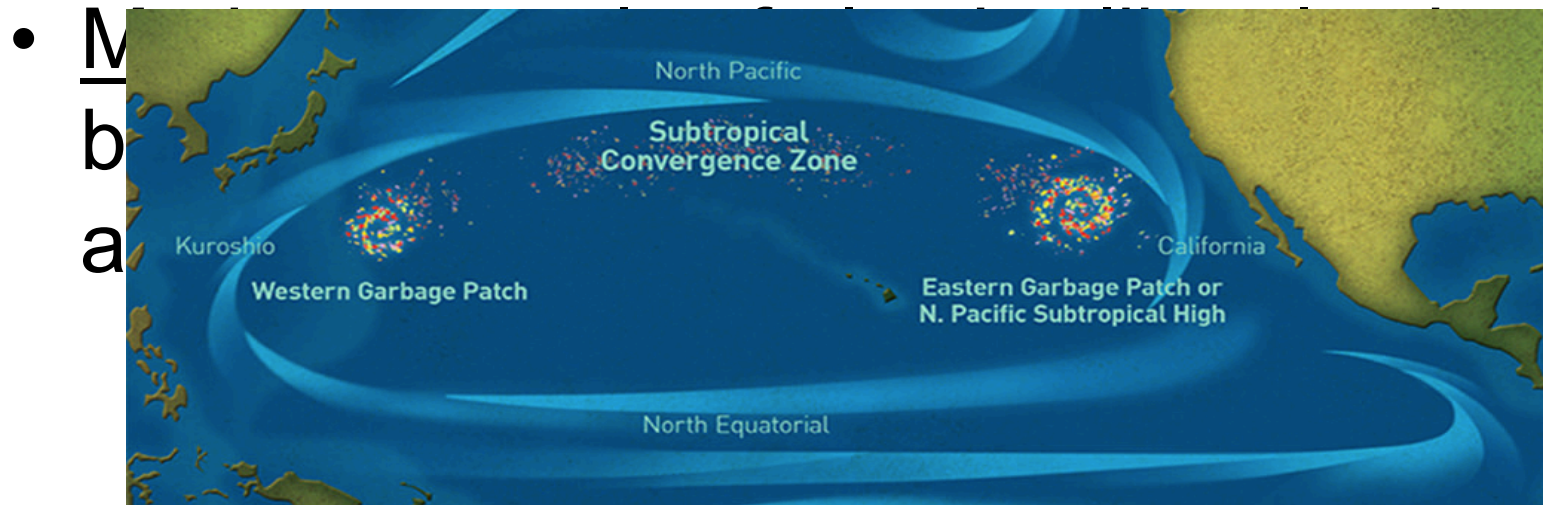
- Read the article-
<https://www.registerguard.com/opinion/20180907/rivers-of-plastic-are-overwhelming-oceans>
- Underline FIVE key points as you read
- Share your key points with partner
- **Reflection-** In what ways is this information important in trying to control plastic pollution in our oceans?

A Wave of Plastics

- View the documentary film (24 minutes)
- Record FIVE facts from the film as you watch

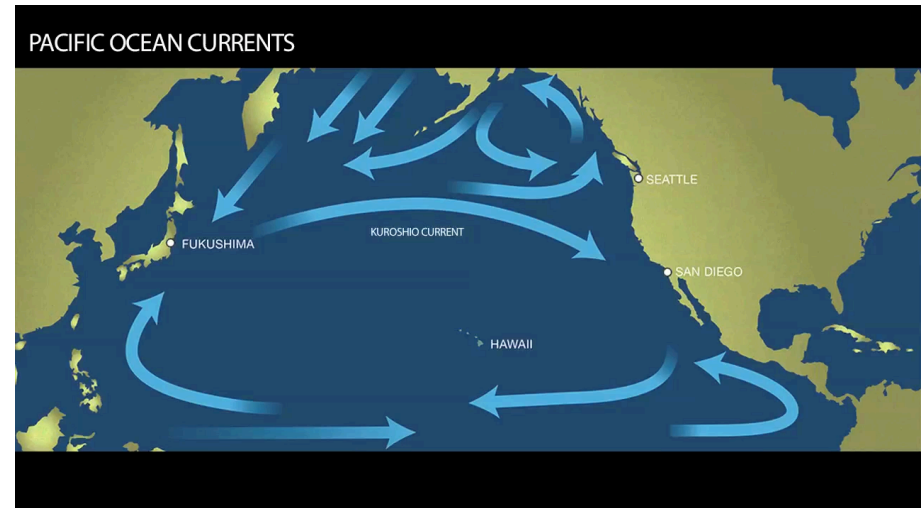
What is the gppg?

- A large area of garbage and waste that spans the Pacific Ocean from the West Coast of North America to Japan
 - Mostly made up of TWO separate patches (East and West)



What are the causes of the GPPG?

- Ocean currents, called gyres, rotate around the perimeter of the continents in a circular pattern
- This creates a calm area in the middle of the Pacific
- Pollution rotates around these currents and gets “stuck” in the middle



NOW FOR OUR ACTIVITY!

- You will be given an activities packet and you will be going through activity stations to learn more about this problem
- There will be about 3 people at each station, and we will rotate clockwise
- You will rotate upon my direction
- I will give you about 7 minutes at each station
- Let's go through the directions for each station!

Thursday

- Finish last three stations
- Turn in GPGP Activity Packet
- Last notes from EQ #12
- Article- Where is the Plastic Coming From?
- Study Guide Work Time
- **Test, Study Guide and INB #11-12** due Friday / Tomorrow

Where does the plastic come from?

- Pollution caused by humans!
 - 80% of the debris comes from land and 20% comes from boaters and ships
 - Less than 5% of plastic worldwide is recycled each year



How long does it take a plastic water bottle to biodegrade?

- **One plastic water bottle takes as much as 450-1000 years to biodegrade!**
- Plastics in the ocean may take 1000 years to decompose.
- Most plastic is rarely consumed by bacteria.
- **Only 5% of plastics worldwide are recycled!**



What are the effects of the gppp?

- Harms sea life by entangling them. When sea animals eat the plastic, toxic chemicals can kill them.
- **Blocks out sun light, which is necessary for plankton and algae**
 - Harms food web
- Is it in our food?



Laws in effect for GPPG

- **Local and State-Level-** Eugene has a plastic bag ban (2013) and now a law that restricts access to single-use plastics at restaurants—must ask. (2019)
 - Not consistent throughout regions
 - Example- Eugene has a plastic bag ban, but Springfield does not



DIVISION FOR OCEAN AFFAIRS AND THE LAW OF THE SEA



- The United Nations Convention on the

Reflection Q's- Plastics

- There are no consistent laws managing plastic pollution in the US or in the world.
- 1. In your opinion, what are the **THREE most important takeaways** about the problem of plastics pollution in the oceans? Explain/list them.
- 2. What are **THREE** things you could personally do to limit this problem?
- 3. If you were a policy maker, what law would you propose to address this issue? Be specific.