DIY OCEAN GYRES

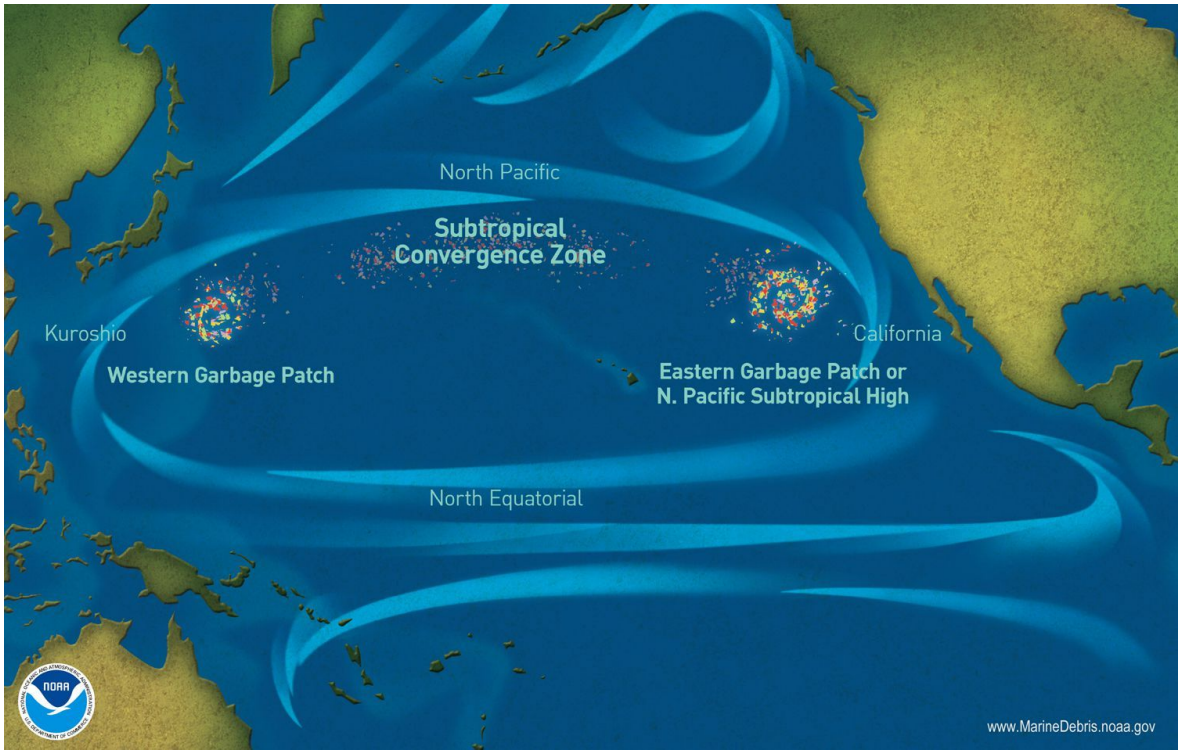
Discover how gyres move debris and trash through our oceans and why taking action to live more sustainably is important for understanding and protecting our ocean planet!

What are gyres?

A gyre is similar to the currents you experience while swimming at the beach except they are much bigger. The term gyres refers to systems of large rotating ocean currents which are made from the world's larger and more permanent currents. There are five major ocean gyres; the North and South Pacific Subtropical gyres, the North and South Atlantic Subtropical gyres, and the Indian Subtropical gyre. When combined with waste, trash and debris in the ocean, the circular flow of a gyre is causing a new phenomenon that has been grabbing the attention of researchers and environmentalists.

Why are they important?

The term gyre is also sometimes used to refer to collections of waste, trash and other debris that has been dumped into the oceans and is now circulating within the gyre. This use of the term gyre is becoming more common due to something known as the Great Pacific garbage patch.



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The Great Pacific garbage patch, also known as the Pacific trash vortex, is actually made up of two distinct garbage patches and a Subtropical Convergence Zone which are bound within the North Pacific Subtropical gyre. The eastern patch is located between California and Hawaii, the western patch is located near Japan and in between the two lies a subtropical convergence zone.

Most of the trash within these gyres is plastic which is a problem for the oceans. Plastics do not biodegrade and only break down into smaller microplastics. These plastics are harmful to sea life who mistake the debris for food, such as sea turtles who confuse plastic bags for jellies. The micro plastics also prevent producers like phytoplankton from receiving sunlight in order to create energy and nutrients. Larger animals such as sea turtles, dolphins and sharks start to suffer when producers like phytoplankton are unable to produce energy for the rest of the food web.

Materials Needed:

- Rectangular Tub
- Water
- Trash Bits (Small pieces of paper, small stickers, etc.)
- Fan
- Books to raise/angle fan

Instructions:

1. Fill your tub with water (Do not fill completely to the top)

2. Place trash bits in the water

3. Stack the fan on your books if necessary to be above the tub.
4. Position the fan in the middle of the tub lengthwise
5. Angle fan at a downward angle, pointing down at the water