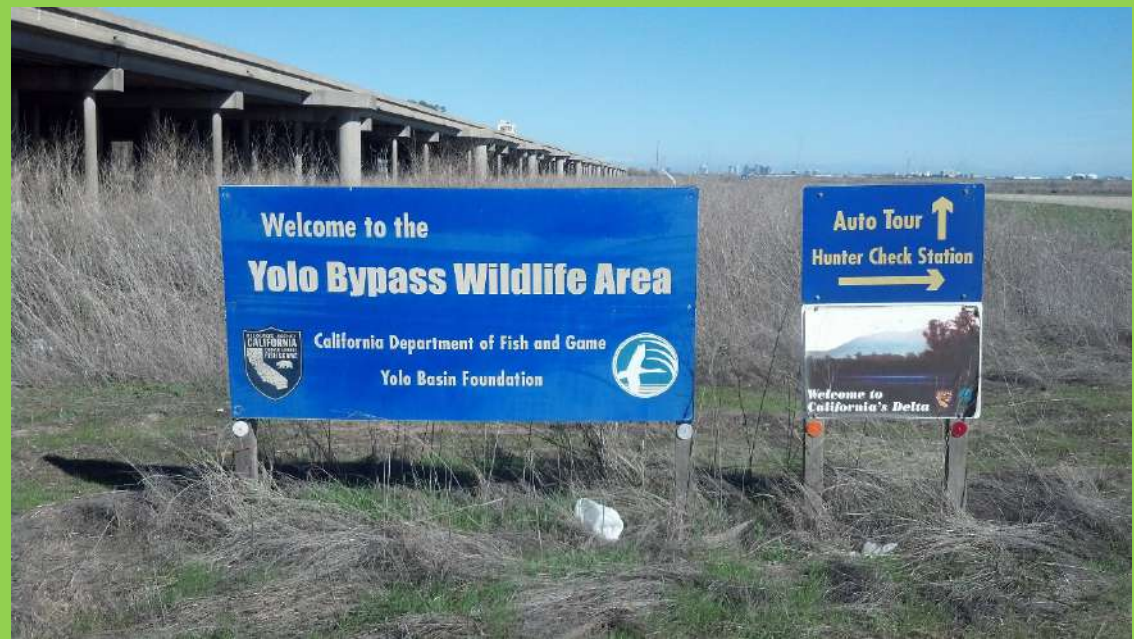
Environmental Science

Aquatic Ecosystems Chapter 7

Ecosystem Poster Project Due Sept. 25th

9/21 Freshwater Ecosystems CH 7.1
Obj. TSW explain environmental benefits of wetlands. P. 48 NB

1. What is salinity?
2. Describe a Wetland.
3. What are 3 functions or benefits of a wetland?



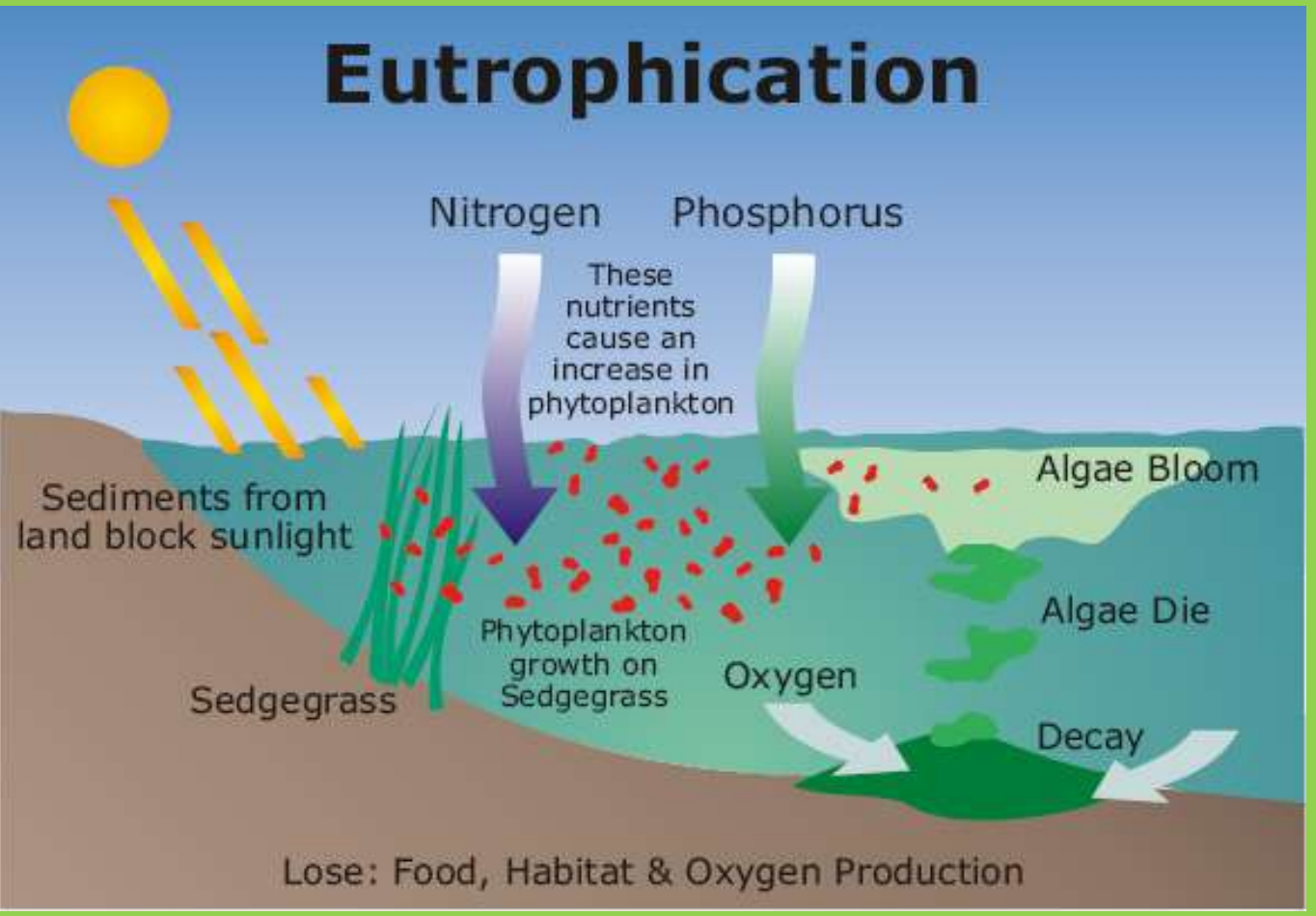
EEI Curriculum **Liquid Gold: California's Water** Articles

- Get into groups according to your row
- Read the article assigned to you.
- Write an AXES paragraph on the White Boards & page 49 NB
- Share out and take notes on others presentations.
  - Assertion – Statement about your article
  - Example – An example of what your article is discussing
  - Explanation – Explain that example
  - Significance – Show, describe why your example is important to us?

9/2 Marine Ecosystems CH 7.2
Obj. TSW explain why marine ecosystems are very productive. P. 50 NB

1. What are some names of Coastal wetlands?
2. Explain why an estuary is a very productive ecosystem.
3. Describe two threats to coral reefs.

9/23 Eutrophication & Pond Water CH 7.1
Obj. TSW learn how humans can inadvertently pollute natural waterways. P. 52 NB



1. What is Eutrophication?
2. What nutrients are involved?
3. Explain the process of eutrophication.

Monsters in the Pond Water

Eutrophication Demonstration & Monsters in the Pond Water Lab

- Page 192 – 193 Environmental Science Book
- Notes/ Data Page 51 NB
- What is the Control?
- What are the Experimental Groups
  - In your Experimental Group, What is your Independent Variable
  - What is your Dependent Variable?
  - Write a prediction as to what you think will happen in each of the three beakers.

Steps to Eutrophication

1. Fertilizer (Nitrogen and Phosphorus) get into the water.
2. There is an increase in algae.
3. Increase competition for fertilizer.
4. Some of the plants/ algae die
5. Bacteria start to decompose the dead plants/ algae
6. Bacteria consume the Oxygen in the water
7. Fish and other organisms suffer and die.
8. Water quality decreases more.

Homework Week 6
CH 7 Aquatic Ecosystems

- Read CH 7
- Finish and turn in your Ecosystem Poster
- 1 page of Notes page 53 NB

Biome Activity Page 47 NB

- For you Biome 10 Biotic
- 5 Abiotic
- 5 ways they affect each other
- Make an energy pyramid
- Discuss Succession
- How does the cycles in nature impact your ecosystem?

Class Time to Work on Ecosystem Project

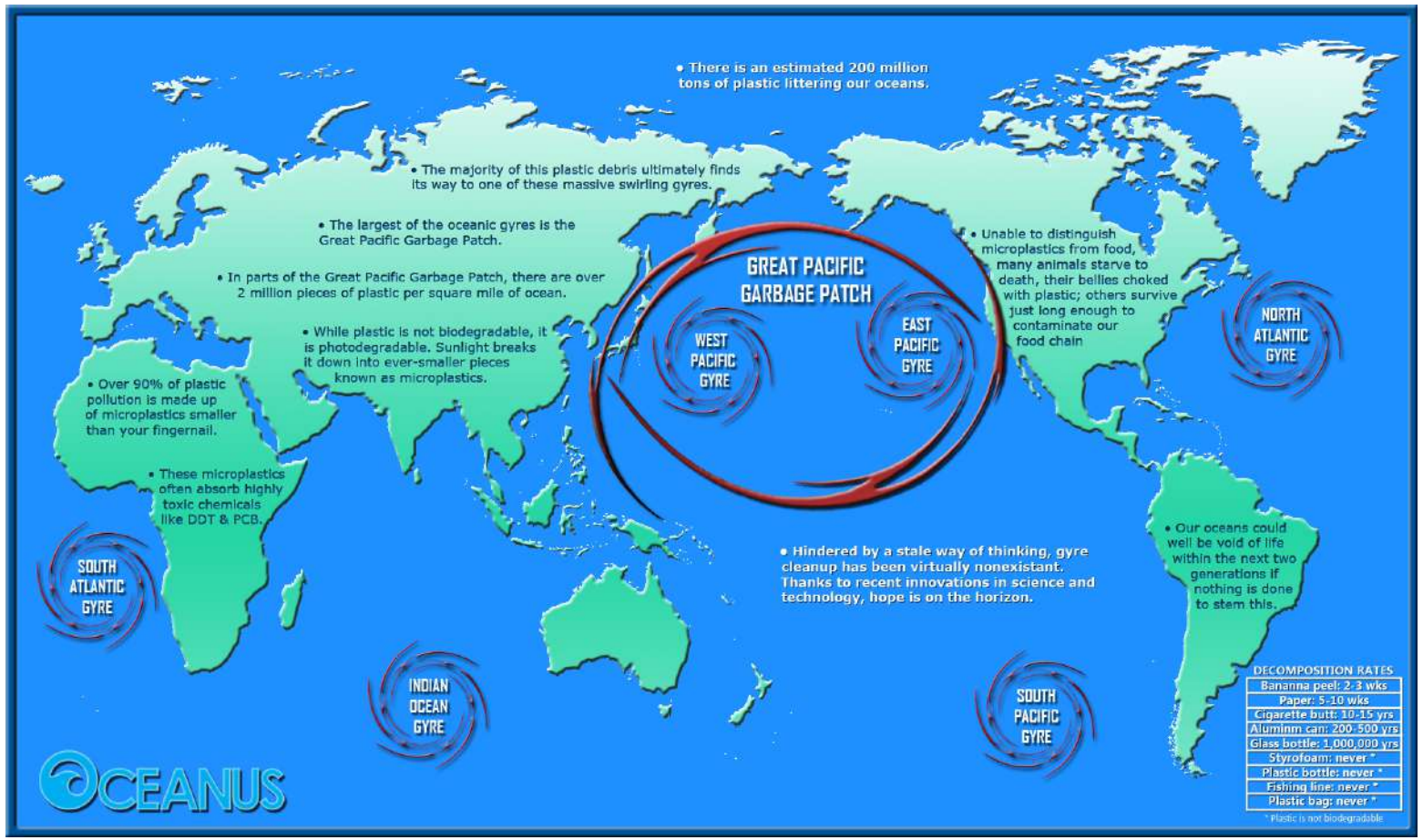
- Crash Course Ecology
- Bozeman Science
- Ecosystem Poster Project is due tomorrow☺

Thursday
Ecosystem Projects due

- Notes – Ocean Acidification page 57NB
- NOAA
- The Acid Test

9/24 Threats to Marine Ecosystems CH 7
Obj. TSW understand how threats to marine ecosystems impact us. P. 54NB

1. What are some threats to Ecosystems?
2. What are some threats to the Oceans?
3. Viewing Wetlands Historically P. 186, What might have caused Florida's and Louisiana's wetlands to decrease?


• There is an estimated 200 million tons of plastic littering our oceans.
• The majority of this plastic debris ultimately finds its way to one of these massive swirling gyres.
• The largest of the oceanic gyres is the Great Pacific Garbage Patch.
• In parts of the Great Pacific Garbage Patch, there are over 2 million pieces of plastic per square mile of ocean.
• While plastic is not biodegradable, it is photodegradable. Sunlight breaks it down into ever-smaller pieces known as microplastics.
• Over 90% of plastic pollution is made up of microplastics smaller than your fingernail.
• These microplastics often absorb highly toxic chemicals like DDT & PCB.
GREAT PACIFIC GARBAGE PATCH
WEST PACIFIC GYRE
EAST PACIFIC GYRE
• Unable to distinguish microplastics from food, many animals starve to death, their bellies choked with plastic; others survive just long enough to contaminate our food chain
NORTH ATLANTIC GYRE
SOUTH ATLANTIC GYRE
INDIAN OCEAN GYRE
SOUTH PACIFIC GYRE
• Hindered by a stale way of thinking, gyre cleanup has been virtually nonexistant. Thanks to recent innovations in science and technology, hope is on the horizon.
• Our oceans could well be void of life within the next two generations if nothing is done to stem this.
DECOMPOSITION RATES
Bananna peel: 2-3 wks
Paper: 5-10 wks
Cigarette butt: 10-15 yrs
Aluminm can: 200-500 yrs
Glass bottle: 1,000,000 yrs
Styrofoam: never *
Plastic bottle: never *
Fishing line: never *
Plastic bag: never *
* Plastic is not biodegradable
OCEANUS

What helps prevent flooding?

Friday – Video
I will grade your Notebook Check P. 46 - 57
60 points

- Hurricane Katrina

9/25 Hurricane Katrina & New Orleans CH 7
Obj. TSW learn how society and the environment are related. P. 56 NB

1. What structures were supposed to protect New Orleans from flooding?
2. How do the wetlands help prevent flooding?
3. Should a city have been built in an environment known to be so unstable?