Glossary of Terms

AQUATIC : Consisting of, relating to, or being in water; living or growing in, on, or near the water.

AQUIFERS: A naturally occurring underground geologic formation that stores a significant amount of water.

BENTHOS: The communities of aquatic life that dwell in or on the bottom sediments of oceans, seas, rivers, lakes and other water bodies.

BIODIVERSITY: The variety of life on Earth and the natural patterns it forms, including all species of life and the genes that each individual contains, as well as the critical inter-relationships or "ecosystems" which those species form.

BRACKISH: Brackish water is saltier than fresh water but less salty than seawater.

CARGO: The freight carried by a ship, airplane, truck, or other vehicle.

CHANNEL: A passage for water (or other fluids) to flow through; groove: a long narrow furrow cut either by a natural process (such as erosion) or by a tool.

CREEK: A natural stream of water, normally smaller than, and often tributary to, a river.

DEBRIS: Debris is the scattered remains of something broken or destroyed.

DELTA: The fan--shaped area at the mouth, or lower end, of a river, formed when sediment is deposited by the slowing of water on entering the sea.

DREDGING: Removing material (usually sediments) from wetlands or waterways, usually to make them deeper and wider.

ECOSYSTEM: A community of plants and animals existing in an environment that supplies them with water, air, and other elements they need for life.

ENVIRONMENT: The area in which something exists or lives

ESTUARY: Somewhat enclosed coastal area at the mouth of a river where nutrient rich fresh water meets with salty ocean water.

HABITAT: The area in which an animal, plant, or microorganism lives and finds the nutrients, water, sunlight, shelter, living space, and other essentials it needs to survive.

HYDROLOGIC CYCLE: With reference to water and the water cycle in the environment.

HYDRODYNAMIC: Pertaining to the process of water and its ability to move and change over time.

INVASIVE: An introduced (non-native) plant, animal, or other living organism with a tendency to spread and disrupt local ecosystems.

IRRIGATION: Watering of land by artificial methods, such as canals or sprinkler systems, providing water for crops in areas that have long periods of little or no rainfall.

LEVEE: A natural or manmade earthen barrier along the edge of a stream, lake, or river built to prevent flooding of low-lying land.

MOUNTAIN: A land mass that projects well above its surroundings; higher than a hill

NATURE: The natural physical world including plants, animals and landscapes etc.

NULL ZONE: A place within the mixing zone of an estuary where the fresh and saltwater churn together and create a turbulent action that stirs up nutrients and plankton growth that attracts fish and larger organisms. It is the most ecologically productive part of the Bay-Delta system.

PACIFIC FLYWAY: The territory of this flyway, comprises the western Arctic, including Alaska and the Aleutian Islands and the Rocky Mountain and Pacific coast regions of Canada, the United States and Mexico, south to where it becomes blended with other flyways in Central and South America.

PORT: A safe place where people, ships, and merchandise can enter or leave.

RECYCLE: To reclaim or reuse old materials in order to make new products.

SALINE: A solution of salt in water.

SALINITY: A measure of the salt concentration of water. Higher salinity means more dissolved salts.

SEDIMENT: Rock and soil particles that have been transported and deposited by water.

SCIENTIST: A person with advanced knowledge of one of more sciences.

SIMULATOR: A machine that imitates an environment for the purpose of training or research

SLIDE RULE: A piece of equipment made of a ruler and a movable middle piece that is used to find answers to math problems; have been replaced by pocket calculators.

SLOUGH: A small muddy marshland or tidal waterway which usually connects other tidal areas.

SPECIES: A "species" is generally accepted as a group of individuals that look the same and can breed with each other but not usually with individuals of another species.

STEWARDSHIP: Caring for the land and its resources to pass healthy ecosystems to future generations.

TACTILE: Describes an object that can be perceived using the sense of touch.

THEORY: An explanation of a problem based upon observations and experiments.

TIDE: The periodic rise and fall of the sea level under the gravitational pull of the moon. There are two flood tides (high) and two ebb tides (low) each lunar day.

TRIBUTARY: A stream or river that flows into a larger stream, river, lake, or ocean.

TOXIC: Poisonous.

WATERSHED: A watershed consists of all the land and waterways that drain into the same body of water.

WEB-OF-LIFE: An ecosystem is made up of all the living animals and plants and the non-living matter in a particular place, like a forest or lake. All the living things in an ecosystem depend on all the other things - living and non-living for continued survival - for food supplies and other needs.

In some ways, the actions and reaction that take place within an ecosystem are like a spider web - when one strand is broken, the web starts to unravel. What affects one part of an ecosystem, affects the whole in some way.

WETLAND: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

FACTOID:

The San Francisco Bay is one of the largest natural estuaries in the world. And, it is one of the most endangered.

FACTOID:

The Corps carries on a proud heritage that began in 1775 when the Continental Congress authorized the first Chief Engineer whose first task was to build fortifications near Boston at Bunker Hill.

More Fun Stuff To Do!!!!!
Can You Unscramble This???

EPEK TI LAECN

_____ ___ _____

BRAIN TEASE TIME!!!!! LET'S SEE HOW MATH SMART YOU ARE!!! Now to solve this next question…you can only use a SLIDE RULE! Just kidddiiinnnggggg! You can use whatever method you choose. You can even ask a classmate, parent, or teacher for help if you need it. Have fun!

Since the Bay Model's time scale is greatly sped up, a day passes 100 times faster than a real Lunar Day. Use fundamental math to figure out how many minutes it takes for a Bay Model to represent one day's worth of tides. Here's how"

The number of minutes in a Lunar Day (24 hour and 50 minutes) equals how many minutes? _____ (Hint: 60 minutes equal one hour)

Since a Bay Model day is 100 times faster than a real day, we get our answer by dividing the above amount by 100!

Therefore, the Bay Model shows an entire Lunar Day (or 1/100th of a real lunar day) in how many minutes? _____

FACTOID:

Any time a member, or any part of the web-of-life is disrupted, it affects the entire food chain from the bottom to the top. We, human beings, are also a part of that of that delicate BIODIVERSITY too. Practicing the art of stewardship by protecting and preserving our natural environment is not only important for our own survival but the survival of future generations as well.

PLEASE CHECK OUT THIS SITE: http://www.spk.usace.army.mil/cespk-de/kidssite/watersafety/

CLASSROOM ACTIVITIES:

Zoom Into Engineering:

http://pbskids.org/zoom/grownups/engineering/

Erosion and Deposition:
http://www.kented.org.uk/ngfl/subjects/geography/rivers/Teacher%20Plans/whatiserosionanddeposition.htm

Protect Your Watershed:
http://cals.arizona.edu/waterquality/YouthActivityPages/ActivityS2.html

MORE CLASSROOM ACTIVITIES:

Drinking Water for Kids:
http://www.epa.gov/safewater/kids/games.html

Drinking Water and the Water Cycle (Lots of Great Stuff To Do!):
http://www.kathimitchell.com/water.htm

Monterey Bay Aquarium: Family and Educational Activities and Games:
http://www.mbayaq.org/lc/activities.asp

Really Cool Links To Explore:

Lunar Tides:
http://csep10.phys.utk.edu/astr161/lect/time/tides.html

Tides:
http://hyperphysics.phy-astr.gsu.edu/hbase/tide.html

Geography and Tides:
http://geography.about.com/od/physicalgeography/a/tides.htm

Daily Tide Chart:
http://tbone.biol.sc.edu/tide/tideshow.cgi?site=Sausalito%2C+Corps+of+Engineers+Dock%2C+San+Francisco+Bay%2C+California

Daily San Francisco Weather Info:
http://www.wunderground.com/US/CA/San_Francisco.html

Satellite Meteorology:
http://www.nrlmry.navy.mil/projects/sat_products.html

Web Cam of the SF Bay (double click on the image to get a larger version):
http://cbs5.com/cams/baycam/

Adopt a Watershed! Great Link for Teachers to Explore! Open the web site and double click on the Adopt a Watershed image:
http://www.adopt-a-watershed.org/Default.aspx

WEB OF LIFE—NASA
http://weboflife.nasa.gov/

WEB OF LIFE—University of Illinois
http://www.urbanext.uiuc.edu/ecosystems/teacherguide6.html