Aquatic Lab Choices

2011-2012

Aqua Terra Column (Aqua)* (Grades 3-5)
Students build an aqua terra column to investigate the connection and interaction between terrestrial and aquatic ecosystems. (Classroom teacher to provide one clean 2 liter plastic bottle for each team of students)

Clear or Cloudy (Cloudy)* (Grades 3-5)
Many water problems are caused by mismanagement of our water supply. Untreated sewage and wastes are dumped into lakes and rivers contaminating them. Students complete this investigation to determine the best method to clean a polluted water sample.

Integrated Pest Management (IPM)* (Grades 3-5)
Farmers use a variety of methods to protect their crops. This investigation introduces students to pheromones and insect traps as one method of controlling insects. Students pretend to be an insect and discover how they can communicate with other insects. Math connections allow students to calculate their insect population.

The Gulf Oil Spill (Oil)* (Grades 3-5)
The effect of oil spills can be disastrous to aquatic life, wildlife, agriculture, the economy, and recreation. Students use a variety of materials to clean up a simulated oil spill and then draw conclusions as the to most effective clean-up material.

Measuring Water Quality (H_2O Qual)* (Grades 3-5)
Chemical tests are performed to determine the water quality of selected water samples. The tests performed measure pH, dissolved oxygen, nitrate and ammonia levels.

Salinity ~ Its effect on animals (Salinity)* (Grades 3-5)
(This should be selected early in the week to allow students to monitor the growth of organisms.)
The Chesapeake Bay is an estuary that is composed of fresh, brackish, and salty water. This investigation allows students to set up an experiment, observe the growth of organisms, and collect data as they determine the best habitat for brine shrimp.

Salt Water Layers (Salt Water)* (Grades 3-5)
Students are challenged as they try to determine which water sample is salt water. A simulated estuary enables students to discover how salt and fresh water mingle to create brackish water.

Super Slurper (Slurper)* (Grades 3-5)
Students examine the absorbency of several household products and then investigate the water holding properties of a commercial agricultural product and a pure chemical. The results of this experiment are related to new developments in the agricultural industry and served as a precursor to the development of disposable diapers.

Well Contamination ~ From Where to Where? (Well)* (Grades 3-5)
An imaginary town is experiencing pollution in some of its wells. Students collect data as they analyze potentially contaminated wells and the possible source of contamination. Conclusions are drawn as students report to the town council their findings.

Wetlands in a Pan (Wetlands)* (Grades 3-5)
Students experiment with a wetland model and discover the benefits wetlands provide as well as the consequences that may arise from their destruction.

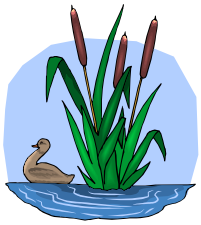
Important Scheduling Information

When planning a schedule, allow a minimum of **50-60 minutes** for scientific investigations. **Allow 10 minutes between classes** for clean up and set up. If the need arises to change entirely from one experiment to another (this is NOT recommended) an additional 30 minute break must be allotted for the change-over. A 30 minute lunch break for the teacher must be included.

***When listing your selections on the class schedule, just use the shortened (Title)* for lab choice. Our teachers have the option of changing a lab selection when it seems not to be age appropriate.**

A parent volunteer is needed for each morning and afternoon (not each class) to help prepare materials, cut yarn, refill containers, and assist with classes.

Prior to coming out to the lab, please divide your class into 12 equal teams for each of the 12 work stations.



Aquatic Lab Walk Through Selections

1. **Who Lives in the Wetlands?** (WLW)* (Grades K-4)
   Animals and plants living in the wetlands are adapted to their environment in many ways. Students are introduced to these plants and animals and then "roll" and "stamp" their own wetland environment.


GREAT BLUE HERON

2. **Wetland Charm** (Wet Charm)* (Grades K-3)
   After a BIG BOOK experience, students discover the animals and plants that make up a wetland habitat as well as the benefits provided by a wetland when they make a "charm" to take with them.

3. **Bug Out** (Bugs)* (Grades K-5) ~ After a "bug" dress up, students group themselves according to their own bug smell or "pheromone". Session ends with students creating a "bug rubbing."

4 **After a story ~ Crabby & Nabby, Pearlie Oyster, or Harry the Horseshoe Crab** ~(C&N, PO, or HHC)* (Grades K-2) students make a Bay Charm.

5. **Aquatic Animals Sticker Puzzle** (SP)* (Grades K-5) – Students discover some little known facts about several aquatic animals using stickers to answer questions.

6. **Water Over the Earth** (Earth)* (Grades 4-5) – Students discover exactly how much of earth's water can be used. (Suitable for 4-5th grades that understand percent.)

When planning a schedule, walk-through selections need **25-30 minutes** per class. Allow 10 minutes between classes for clean up and set up.

Kindergarten classes may only visit the lab one time. Kindergarten students are best served by selecting the Story and Bay Charm activity or the Wetland Charm activity. . **Lab experiences are not appropriate for Pre-K classes.**

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