

# **Materials List:**

## **Ecology: Interactions Unit**

**The materials needed for this unit are presented in chronological order as the unit progresses. Many lab activities can be presented as demonstrations if you are short on equipment.**

- 1.) Computer that runs Powerpoint.**
- 2.) LCD Projector (For Classroom Teachers)**
- 3.) Powerpoint remote for advancing slides (Recommended! - Unit has 1050+ slides)**
- 4.) realPlayer for videos**  
<http://www.real.com/realplayer/search>
- 5.) Marbled Science Journal (Class Set)**
- 6.) Class set of Petri-dishes / compass or other method to draw circles in the students notebooks / journal.**
- 7.) Class set of color pencils for the food pyramid activity as well as rulers.**
- 8.) (Optional) – Creation of class bio-domes. Clear container with air tight cap. (The supermarket has been generous in the past and given me the salad trays with domes). Base of soil and gravel, place top-soil on top of gravel (Students can't drop). Visit natural area outside of school to collect some moss / other plant sample to place on top of soil. Live specimens will usually emerge from the moss / plant life later on.**
- 9.) Area in the middle of room for all of the students to gather for the need for space demonstration (small carpet or boundary item such as cones or meter sticks.**

- 10.) Class set of dominoes or other materials to build a tower.**
- 11.) Competitive Exclusion Activity – Class set of small balls that can be picked up with grabbers. I use test tube holders and wooden molecule balls to represent the seeds. Students could use hands if not available. The other half of the class uses plastic spoons. I also have short barriers that I lay on the ground so that the balls cannot escape the “play area”. Students also need large cups to hold their “Seeds”. Directions and visuals are provided in the slideshow.**
- 12.) Long length of string to build a food web in a class circle. I also give the students the test tube / holders so the string doesn’t pain their fingers. Anything that the string can wrap around and allows the students to hold will work.**
- 13.) Outdoor area needed for the bean game simulation. I buy two bags of large white seeds, two bags of medium sized red/brown seeds, and one bag of split peas from the supermarket. I spread the beans around the playing area (grass moderately cut). Student then use cups to collect seeds. Habitats can be Hula-hoops and cones can be used to mark the playing area. Teachers and support professional can become the Hawk predators.**
- 14.) For the population sampling activity I go outside and collect leaves from various trees. In this Powerpoint I include common trees found in the eastern deciduous forest – sugar maple, red maple, red oak, white oak, beech, birch, quaking aspen, other – Your own trees in your area can be swapped in. This activity also**

**requires trays so the students can sort, and having plastic bags and a sharpie can help if the activity runs into the next day.**

- 15.) Game of Jenga® for Biodiversity Jenga. Each wooden block represents a species. Students see what can happen to an ecosystem when too many species are removed.**
- 16.) Color pencils for the camouflage a lizard challenge. Tape and scissors are also required so students can cut-out and then hang their camouflaged lizard in the school. I have the elementary students in our building go on a lizard quest and try to find all the lizards hiding on the school bulletin boards.**
- 17.) Class set of old cd's. These are the 50/50 mimicry challenge run in the slideshow. Students use the cd to visually represent their answer to a question in the slideshow. If they get it correct they get to keep their cd for the next question. The goal is not lose your cd.**
- 18.) Nastieeos Activity – I make two batches of Cheerios. One batch is given sugar, cinnamon, maple syrup, and anything else sweet and tasty. The other batch of Cheerios is given lemon juice, garlic salt, mustard seasoning, Worcestershire Sauce. The students learn first hand why birds won't eat the model or the mimic because the horrible taste for eating the wrong prey item isn't worth it. Jelly-Belly® also sells a product called Bean Boozled that has good tasting jelly beans and horrible flavors that look identical. It is very difficult to tell the difference. These would better if they are available in your area.**

- 19.) Class set of warning colors. Yellow, black, orange, blue, red, white – color pencils, or crayons, or markers.**
- 20.) Computer access (Optional) – I have the students research a type of parasite and then create a detailed Powerpoint presentation full of information and images. Computer access and Microsoft Powerpoint is needed. Teacher can always have students create poster etc. if computer access is limited.**
- 21.) Posters / large pieces of paper and colored pencils / markers to create organisms adapted to eat plant, and plant adapted to defend against organism.**
- 22.) I use computers and Microsoft Publisher® to have the students create a WANTED poster of an exotic species. Students research an exotic species and then create the poster. Good links are provided in the slideshow. Regular poster boards or white paper will work as well.**