



Biological Scavenger Hunt

Your assignment is to “collect” some of the biological items on the following list and post them onto a common class blog. Your grade will be the cumulative point values of the correct items you collect. This grade will count as a 100 point assignment during the marking period it is due.

To prove that you’ve seen the items, your submission must include;

- A digital photograph of the object, or
- A hand-drawn image of the object in its found location (limited to **5** submissions maximum), or
- A newspaper or magazine article that has that object as its primary subject (limit = **5**), or
- An internet article/image of the organism (limited = **5**)

AND every organism submitted must be labeled with the properly-formatted scientific name and location at which you saw the organism.

For example, a woodchuck in your yard would be labeled as;



Marmota monax
N42.4012 W-71.5872
Photo by T. Ryan

Newspaper and magazine articles must include a correct citation for the article and the article must have been written during the summer (June – August). Internet citations must include the URL and date the item was printed.

CAUTIONS:

- **Never** touch plants or animals with exposed fingers. If you must touch the organism, use gloves and/or forceps.
- Remember, we don't want to deplete the environment. Don't kill organisms. Organisms should be photographed or drawn in their native habitat.

PUBLISHING THE PROJECT

The project should be published on the class blog located at;

http://BLOG_URL

Once I receive an appropriate email from you, I'll add you as an author to the blog and you can upload your items there. Alternatively, it can be submitted as a PowerPoint presentation (although you cannot earn the points for consecutive weeks of blog postings). A word of caution, many digital cameras will record HUGE picture files and a digital version of this project can become tremendously large. Limit the size of your photos if you are submitting this as a PowerPoint or you won't be able to put the entire project on a single CD. There are freeware programs on the internet that will reduce the file size of your photos.

In order to receive full credit for this project you must submit the attached completed logsheet by **DATE**. Your grade will be reduced by 5% for every school day (regardless of whether our class period meets or not). The scoring rubric is available as a download on Moodle.

Identification of Species

This will likely be one of the most challenging aspects of the project. The internet can be helpful as there are identification guides available online. The classification of many organisms is presented at the Encyclopedia of Life (www.eol.org). Many libraries also have field guides and most museums and zoos identify their organisms for you. You can also post questions on the class Moodle site and perhaps one of your colleagues will assist you in identification.

Specimen List: Below are the items you are to “collect”. An individual organism (e.g. your pet cat) can only be used once although different individuals of that same species can be used as appropriate. Humans are acceptable for one category only. You may use internet-based images for no more than 5 of these items.

LOCAL ORGANISMS: PROGRESSIVE POINT VALUES (maximum of 5 sets)

The first organism in each category counts 1 pt, the second different type of organism is 2 additional pts (total 1 + 2 = 3), the third is 3 (6 pts total), etc up to a total of 5 organisms in the category. Every organism/example must be indigenous to Massachusetts.

Different Biomes (only three must be within MA)	1,2,3,4,5 (max 15) <input type="checkbox"/>
Different carbohydrates	1,2,3,4,5 (max 15) <input type="checkbox"/>
Distinguishing characteristics between monocots and dicots	1,2,3,4,5 (max 15) <input type="checkbox"/>
Different classes of proteins	1,2,3,4,5 (max 15) <input type="checkbox"/>
Evidence of alleles for the same trait	1,2,3,4,5 (max 15) <input type="checkbox"/>
Organisms in different animal phyla	1,2,3,4,5 (max 15) <input type="checkbox"/>
Organisms in different kingdoms	1,2,3,4,5 (max 15) <input type="checkbox"/>
Organisms in different plant divisions	1,2,3,4,5 (max 15) <input type="checkbox"/>
Organisms in same class but different orders	1,2,3,4,5 (max 15) <input type="checkbox"/>
Organisms in same genus but with different species	1,2,3,4,5 (max 15) <input type="checkbox"/>
Organisms in same order but different family	1,2,3,4,5 (max 15) <input type="checkbox"/>
Organisms on different levels of the same food chain	1,2,3,4,5 (max 15) <input type="checkbox"/>

These do not need to be indigenous to Massachusetts (you may have up to two examples of each category; submitting more than two will not add any additional points).

- Altruistic Behavior (2)
- Amphibian (1)
- An organism that cannot be classified according to the “biological” species concept (1)
- Analogous structures (2)
- Angiosperm (1)
- Animal adaptation for a specific environment (2)
- Animal larva or pupa (1)
- Annelida (1)
- Arthropod (1)
- Asexual reproduction (1)
- Bilaterally symmetrical organism (1)
- Biogeochemical cycle (3)
- Bryophyte (1)
- C₃ and either C₄ or CAM organisms (2)
- Commensalism (2)
- Crustacean (1)
- Detritivore (1)
- Dominant vs. recessive phenotypes (2)
- Endangered species (2)
- Endothermic organism (1)
- Energy transfers (1)
- Evidence of evolution (2)
- Example of reproductive isolation (2)
- Exothermic organism (1)
- Fungal reproductive structures (1)
- Genetic variation within a population (2)
- Homeostasis of an organism (2)
- Homologous structures (2)
- Instinctual behavior (2)
- Interaction between science and technology (1)
- Introduced species (1)
- Lepidopteron (1)
- Logging in to Moodle (1x only/1)
- Mating behavior (2)
- Mollusk (1)
- Mutualism (2)
- Nematode (1)
- Nonvascular plant (1)
- Organism’s home (1)
- Parasitism (2)
- Participation in a citizen science experiment (2)
- Passeriform (1)
- Plant adaptation for a specific environment (2)
- Plant reproductive structures (1)
- Plant using animals for seed dispersal (1)
- Plant using either wind or water for seed dispersal (1)
- Population (2)
- Predation (2)
- Pterophyte (1)
- Radially symmetrical individual (1)
- Redox reaction (2)
- Secondary Succession (3)
- Sporophyte and gametophyte generations of the same plant (3)
- Storage polysaccharides (2)
- Street/road sign with famous biologist’s last name (1x per name) (1)
- Taxis (biological; not automotive) (1)
- Territorial behavior (2)
- Tropism (2)
- Turgid versus flaccid organism (2)
- Two morphologically distinct life stages of the same organism (i.e., tadpole/frog or caterpillar/butterfly) (2)
- Venation patterns (palmate, pinnate and parallel) (3)
- Vestigial structure in an animal (2)
- Weekly submission of at least one item onto the class blog (1x only/1 pt per consecutive week)(a week is defined as starting on a Sun and ending on Sat)

Name: _____ Date: _____ Period: _____

Summer Scavenger Hunt Logsheet

Identify the organisms that are submitted in your project:

ITEM	Date(s) Posted to Blog:
<input type="checkbox"/> Different Biomes	
<input type="checkbox"/> Different carbohydrates	
<input type="checkbox"/> Distinguishing characteristics monocots / dicots	
<input type="checkbox"/> Different classes of proteins	
<input type="checkbox"/> Evidence of alleles for the same trait	
<input type="checkbox"/> Organisms in different animal phyla	
<input type="checkbox"/> Organisms in different kingdoms	
<input type="checkbox"/> Organisms in different plant divisions	
<input type="checkbox"/> Organisms in same class	
<input type="checkbox"/> Organisms in same genus	
<input type="checkbox"/> Organisms in same order	
<input type="checkbox"/> Organisms of the same food chain	
<input type="checkbox"/> Altruistic Behavior (2)	
<input type="checkbox"/> Amphibian (1)	
<input type="checkbox"/> Non-“biological” species concept (1)	
<input type="checkbox"/> Analogous structures (2)	
<input type="checkbox"/> Angiosperm (1)	
<input type="checkbox"/> Animal adaptation (2)	
<input type="checkbox"/> Animal larva or pupa (1)	
<input type="checkbox"/> Annelida (1)	
<input type="checkbox"/> Arthropod (1)	
<input type="checkbox"/> Asexual reproduction (1)	
<input type="checkbox"/> Bilaterally symmetrical organism (1)	
<input type="checkbox"/> Biogeochemical cycle (3)	
<input type="checkbox"/> Bryophyte (1)	
<input type="checkbox"/> C3 and either C4 or CAM organisms (2)	
<input type="checkbox"/> Commensalism (2)	
<input type="checkbox"/> Crustacean (1)	
<input type="checkbox"/> Detritivore (1)	
<input type="checkbox"/> Dominant vs. recessive phenotypes (2)	
<input type="checkbox"/> Endangered species (2)	
<input type="checkbox"/> Endothermic organism (1)	
<input type="checkbox"/> Energy transfers (1)	
<input type="checkbox"/> Evidence of evolution (2)	
<input type="checkbox"/> Example of reproductive isolation (2)	
<input type="checkbox"/> Exothermic organism (1)	
<input type="checkbox"/> Fungal reproductive structures (1)	
<input type="checkbox"/> Genetic variation within a population (2)	
<input type="checkbox"/> Homeostasis of an organism (2)	

<input type="checkbox"/> Homologous structures (2)	
<input type="checkbox"/> Instinctual behavior (2)	
<input type="checkbox"/> Interaction between science/technology (1)	
<input type="checkbox"/> Introduced species (1)	
<input type="checkbox"/> Lepidopteron (1)	
<input type="checkbox"/> Logging in to Moodle (1x only/1)	
<input type="checkbox"/> Mating behavior (2)	
<input type="checkbox"/> Mollusk (1)	
<input type="checkbox"/> Mutualism (2)	
<input type="checkbox"/> Nematode (1)	
<input type="checkbox"/> Nonvascular plant (1)	
<input type="checkbox"/> Organism's home (1)	
<input type="checkbox"/> Parasitism (2)	
<input type="checkbox"/> citizen science experiment (2)	
<input type="checkbox"/> Passeriform (1)	
<input type="checkbox"/> Plant adaptation (2)	
<input type="checkbox"/> Plant reproductive structures (1)	
<input type="checkbox"/> Plant using animals for seed dispersal (1)	
<input type="checkbox"/> Plant using wind/water for seed dispersal (1)	
<input type="checkbox"/> Population (2)	
<input type="checkbox"/> Predation (2)	
<input type="checkbox"/> Pterophyte (1)	
<input type="checkbox"/> Radially symmetrical individual (1)	
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<input type="checkbox"/> Secondary Succession (3)	
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<input type="checkbox"/> Taxis (biological; not automotive) (1)	
<input type="checkbox"/> Territorial behavior (2)	
<input type="checkbox"/> Tropism (2)	
<input type="checkbox"/> Turgid versus flaccid organism (2)	
<input type="checkbox"/> Two distinct life stages (2)	
<input type="checkbox"/> Venation patterns (3)	
<input type="checkbox"/> Vestigial structure in an animal (2)	