

The Importance of Biodiversity

Situation

You are a biologist who believes sincerely that the health of our entire Earth depends on keeping the balance among all the living species on Earth, no matter how ugly, small, or dangerous to humans they may be. You understand that every species has its place in the web of life, and our Earth needs each and every species.

You have dedicated your life to researching one particular species in the wild. You live in a tent and do nothing but study your species and write about it. Now, however, the habitat for your species is about to be destroyed. You must suddenly convince the world that your species is special enough to be protected – and that the world needs to understand how the web of life affects us all.

To protect your species you will write a **persuasive report**, and produce a **colorful artistic rendering** of your species to convince the other scientists in your room that your species needs protection. Your artistic rendering may be a poster, mobile, brochure, or poster. Good luck.

Assignment

Research the plant or animal you have been assigned. With each species name are one or more good web sites to start with – but remember, **BOOKS ARE BETTER**. Researching hint:

- start with an encyclopedia, and then
- use the web. (must use something other than wikipedia)
 - be sure to type the addresses exactly, and
 - searching works better with your species' Latin name

There are two parts to this assignment:

1. Write a **one-page report** (single spaced) about your animal or plant. The report should be typed, but NEAT handwriting is acceptable. Please include:

- what they look like
- where in the world are they found (include the map you've been provided, and color in the area in which the species is naturally found)
- what kind of habitat they live in
- what they eat/how they get their nourishment, and what eats them (food web information; you can draw this as a web if you'd like)
- make a persuasive case for protecting your species (10 pts)
- what you predict would happen to their environment if they became extinct
- what impact do they have on man, and how would man be affected if they were gone
- List of references you used in your research

2. Create a **color advertisement** to show your species to everyone so that they might help you save your species. The advertisement must include at the least (can include more):

- the name of your species in large print
- a color picture or artistic rendering of your species
- the classification of your species (kingdom, phylum, class, order, family, genus, species)
- One to three reasons (no more than three!!!), in large print, why it should be protected

This part of the project can be done in any of the following ways:

- One slide on powerpoint
- Poster (by hand or on google docs)
- Brochure

Species

American Bombardier Beetle (*Brachinus fumans*)

- [http://animaldiversity.ummz.umich.edu/accounts/brachinus/b._fumans\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/brachinus/b._fumans$narrative.html)
- <http://tolweb.org/tree/eukaryotes/animals/arthropoda/hexapoda/coleoptera/treehouse/amazing.html>

Common loon (*Gavia immer*)

- <http://www.aquatic.uoguelph.ca/birds/speciesacc/accounts/loons/immer/account.htm>
- [http://animaldiversity.ummz.umich.edu/accounts/gavia/g._immer\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/gavia/g._immer$narrative.html)

Harp seal (*Phoca groenlandica*)

- <http://animal.discovery.com/guides/mammals/habitat/marine/harpseal.html>
- <http://www.pinnipeds.org/species/harp.htm>
- [http://animaldiversity.ummz.umich.edu/accounts/phoca/p._groenlandica\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/phoca/p._groenlandica$narrative.html)

Corpse Flower (*Rafflesia arnoldi*)

- <http://sarawak3.tripod.com/raffles.htm>
- <http://www.senckenberg.uni-frankfurt.de/private/gwinter/rafl.htm>
- <http://www.geocities.com/RainForest/Jungle/7172/rafflesia.html>
- <http://depcla4.bio.psu.edu/extras/rafflesia.html>
- http://www.lostworldarts.com/asia/rafflesia_2.htm

Carnivorous Pitcher Plants (*Nepenthes*)

- <http://www.pitcherplant.com/nepenth.html>
- <http://www.sarracenia.com/faq/faq5400.html>

Box jellyfish (*Chiropsalmus quadrigatus*)

- [http://animaldiversity.ummz.umich.edu/accounts/chiropsalmus/c._quadrigatus\\$narrative.html#phylogeny](http://animaldiversity.ummz.umich.edu/accounts/chiropsalmus/c._quadrigatus$narrative.html#phylogeny)
- <http://www.avru.unimelb.edu.au/avruweb/jellyfi.htm#Box%20Jellyfish>
- <http://www.gov.sg/moh/health/mohiss/poison/prseawsp.html>

Cannonball Tree (*Couroupita guaianensis*)

- <http://mgonline.com/cannonball.html>
- <http://www.tropilab.com/couroupita.html>

Colugu or flying lemur (*Cynocephalus variegatus*)

- <http://www.mered.org.uk/saraweb/animals/colugo.htm>
- [http://animaldiversity.ummz.umich.edu/accounts/cynocephalus/c._variegatus\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/cynocephalus/c._variegatus$narrative.html)

Snow leopard (*Panthera uncia*)

- <http://www.pbs.org/kratts/world/>
- <http://www.primenet.com/~brendel/snolep.html>
- http://www.pbs.org/edens/bhutan/a_sl.htm
- <http://www.lam.mus.ca.us/~pcannon/cats/snowleop.html>

Ring-Tailed Lemur (*Lemur catta*)

- <http://www.pbs.org/kratts/world/>
- [http://animaldiversity.ummz.umich.edu/accounts/lemur/l._catta\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/lemur/l._catta$narrative.html)

Platypus (*Ornithorhynchus anatinus*)

- <http://www.pbs.org/kratts/world/> (choose Australia then pick platypus)
- [http://animaldiversity.ummz.umich.edu/accounts/ornithorhynchus/o._anatinus\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/ornithorhynchus/o._anatinus$narrative.html)

Flying Fox (*Pteropus vampyrus*)

- [http://animaldiversity.ummz.umich.edu/accounts/pteropus/p._vampyrus\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/pteropus/p._vampyrus$narrative.html)
- <http://www.lubee.com/vamp.htm>

- <http://www.pbs.org/kratts/world/> (pick Australia – this is a related but different species)

Siberian Tiger (*Panthera tigris altaica*)

- [http://animaldiversity.ummz.umich.edu/accounts/panthera/p._tigris_altaica\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/panthera/p._tigris_altaica$narrative.html)
- <http://www.hwi.org/research/tiger.htm>
- <http://www.pbs.org/kratts/world/eurasia/tiger/>
- <http://www.sibertiger.com/>

Flying lizard (*Draco volan*)

- http://animaldiversity.ummz.umich.edu/site/accounts/information/Draco_volans.html
- <http://www.centralpets.com/pages/critterpages/reptiles/lizards/LZD2644.shtml>

Wallace's flying frog (*Rhacophorus nigropalmatus*)

- http://www.ecologyasia.com/Vertebrates/wallace's_flying_frog.htm
- [http://animaldiversity.ummz.umich.edu/accounts/rhacophorus/r._nigropalmatus\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/rhacophorus/r._nigropalmatus$narrative.html)
- http://frogweb.org/species_accounts/rhacophorus_nigropalmatus.html

Blue Poison Frog (*Dendrobates azureus*)

- [http://animaldiversity.ummz.umich.edu/accounts/dendrobates/d._azureus\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/dendrobates/d._azureus$narrative.html)
- <http://www.poison-frogs.nl/e020302.html>
- <http://www.scz.org/animals/f/blufrog.html>

Nautilus (*Nautilidae*)

- <http://tolweb.org/tree?group=Nautiloidea&contgroup=Cephalopoda>
- [http://animaldiversity.ummz.umich.edu/accounts/nautilus/n._pompilius\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/nautilus/n._pompilius$narrative.html)

Giant red octopus *Haliphron Atlanticus*

- <http://animal.discovery.com/news/reu/20020325/octopub.html>
- <http://www.niwa.co.nz/pubs/bu/05/>
- http://tolweb.org/tree?group=Alloposidae&contgroup=Argonautoid_families#TOC4

Blue-Ringed Octopus: *Hapalochlaena maculosa*

- <http://www.cairnholiday.com.au/GreatBarrierReef/blueringedoctopus.htm>
- [http://animaldiversity.ummz.umich.edu/accounts/hapalochlaena/h._maculosa\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/hapalochlaena/h._maculosa$narrative.html)
- http://www.webone.com.au/~diving/nelsonbay/cephlapods/hapalochlaen_maculosa.jpg
(Picture only)
- <http://www.ausemade.com.au/group/f/fauna/octopus/blueringed.htm>
- <http://tolweb.org/tree?group=Octopodidae&contgroup=Incirrata>

Giant Squid (*Architeuthis dux*)

- http://seawifs.gsfc.nasa.gov/OCEAN_PLANET/HTML/squid_Architeuthis.html
- http://animaldiversity.ummz.umich.edu/site/accounts/information/Architeuthis_dux.html
- <http://www.tonmo.com/science/public/giantsquidfacts.php>
- <http://www.angelfire.com/mo2/animals1/squid/giantsquid.html>

Atlantic Bottlenose dolphin (*Tursiops truncatus*)

- pictures: <http://www.dolphinimages.com/>
- <http://www.tmmsn.org/mmgulf/tursiops.html>
- <http://www.nhptv.org/natureworks/nwep6i.htm>

Snowy Owl (*Nyctea scandiaca*)

- http://animaldiversity.ummz.umich.edu/accounts/nyctea/n_scandiaca.html
- <http://magma.nationalgeographic.com/ngm/0212/feature6/index.html>
- <http://www.owlpages.com/species/nyctea/scandiaca/Default.htm>
- <http://www.owlinstitute.org/owls/snowy.html>

Common porcupine (*Erethizon dorsatum*)

- http://animaldiversity.ummz.umich.edu/accounts/erehizon/e_dorsatum.html
- <http://www.nhptv.org/natureworks/porcupine.htm>
- <http://imnh.isu.edu/digitalatlas/bio/mammal/Rod/prcpn/copo.htm>

Gila monster (*Heloderma suspectum*)

- [http://animaldiversity.ummz.umich.edu/accounts/heloderma/h_suspectum\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/heloderma/h_suspectum$narrative.html)
- <http://www.scz.org/animals/g/gila.html>

Atlantic puffin (*Fratercula arctica*)

- http://animaldiversity.ummz.umich.edu/site/accounts/information/Fratercula_arctica.html
- http://www.birdguides.com/html/vidlib/species/Fratercula_arctica.htm
- http://www.arkive.org/species/ARK/birds/Fratercula_arctica/

American Pica (*Ochotona princeps*)

- <http://www.nhptv.org/natureworks/americanpika.htm>
- [http://animaldiversity.ummz.umich.edu/accounts/ochotona/o_princeps\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/ochotona/o_princeps$narrative.html)

Magnificent frigatebird (*Fregata magnificens*)

- <http://www.nhptv.org/natureworks/magnificanfrigate.htm>
- [http://animaldiversity.ummz.umich.edu/accounts/fregata/f_magnificens\\$media.html](http://animaldiversity.ummz.umich.edu/accounts/fregata/f_magnificens$media.html)

Greater flamingo (*Phoenicopterus ruber*)

- [http://animaldiversity.ummz.umich.edu/accounts/phoenicopterus/p_ruber\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/phoenicopterus/p_ruber$narrative.html)
- <http://www.nhptv.org/natureworks/flamingo.htm>

Wood duck (*Aix sponsa*)

- http://birds.cornell.edu/programs/AllAboutBirds/BirdGuide/Wood_Duck.html
- <http://www.nenature.com/WoodDuck.htm>

Roseate Spoonbill (*Ajaia ajaja*)

- <http://www.scz.org/animals/s/roseate.html>
- <http://www.birding.com/3760rs.asp>
- http://animaldiversity.ummz.umich.edu/site/accounts/information/Ajaia_ajaja.html

Brown pelican (*Pelecanus occidentalis*)

- <http://www.nhptv.org/natureworks/brownpelican.htm>
- [http://animaldiversity.ummz.umich.edu/accounts/pelecanus/p._occidentalis\\$narrative.html](http://animaldiversity.ummz.umich.edu/accounts/pelecanus/p._occidentalis$narrative.html)

Timber Wolf (*Canis lupus lycaon*)

- <http://www.dnr.state.wi.us/org/caer/ce/eek/critter/mammal/wolves.htm>
- http://www.kidsplanet.org/factsheets/eastern_timber_wolf.html
- http://www.panda.org/news_facts/education/virtual_wildlife/animal_profiles/wolf_timber_intro.cfm

Kodiak Bear (*Ursus arctos middendorffi*)

- <http://www.kodiak.org/bears.html>
- <http://www.wildlife.alaska.gov/aawildlife/trivia.cfm>

Blue Whale (*Balaenoptera musculus*)

- <http://www.acsonline.org/factpack/bluewhl.htm>
- http://www.kidsplanet.org/factsheets/blue_whale.html

Hawksbill Turtle (*Eretmochelys imbricata*)

- <http://www.turtles.org/hawksd.htm>
- <http://www.pacificwhale.org/childrens/fshawksbill.html>
- http://animaldiversity.ummz.umich.edu/site/accounts/information/Eretmochelys_imbricata.html

Oceanic Whitetip Shark (*Carcharhinus longimanus*)

- <http://www.flmnh.ufl.edu/fish/Gallery/Descript/OceanicWT/OceanicWT.html>
- <http://www.flmnh.ufl.edu/fish/gallery/descript/wtreefshark/wtreefshark.html>
- <http://www.flmnh.ufl.edu/fish/sharks/innews/texas2004.html>
- <http://www.fishbase.org/Summary/SpeciesSummary.cfm?id=875>
- http://www.shark.ch/cgi-bin/Sharks/spec_conv.pl?E+Carcharhinus.longimanus

Name: _____ Period: _____

Biodiversity Assignment Assessment

Please attach this sheet to your project when turning it in to your teacher.

	Required Sections and Possible Points	Score
<p>Report (60 points)</p>	<p>Complete, well organized and includes all required sections; typed or neatly written; uses correct English grammar and spelling (10 points)</p> <p>Includes information about the species (25 points)</p> <ul style="list-style-type: none"> ● what they look like (5 pts) ● where in the world are they found (attach the map you've been provided, and color in the area in which the species is naturally found) (5 points) ● what kind of habitat they live in and what their life is like (10 pts) ● what they eat/how they get their nourishment, and what eats them (food web information; you can draw this as a web if you'd like) (10 pts) <p>Reason for protection (20 points)</p> <ul style="list-style-type: none"> ● Make a persuasive case for protecting your species (10 pts) ● what you predict would happen to their environment if they became extinct (5 pts) ● what impact do they have on man, and how would man be affected if they were gone (5 pts) <p>List of references you used in your research in the correct format (5 points)</p>	
<p>Artistic Rendering (40 points)</p>	<p>Includes:</p> <ul style="list-style-type: none"> ● The name of your species in large print (5 points) ● A color picture or artistic rendering of your species, neatly and carefully done (20 points) ● One to three persuasive reasons (no more than three!!!), in large print, why it should be protected (15 points) 	
<p>Total</p>	<p>100 points possible</p>	