

Intro to Life and Animals

Life, as we call it.

I suppose that before we talk about life, we should somehow name it....

Classifying Organisms

- You have at least a two part name.....your first, and your last.
- For example, George Washington.
 - First name George, last name Washington.
 -Duh!

Classifying Organisms.

- Let's use the common house cat as an example...
- Felis domesticus.
- The first part of the name is called....
 - _____
 - First name (always capital case)
 - refers to similar closely related organisms

Classifying Organisms.

- Continuing Felis domesticus
- The second name is the.....

A group of organisms that can mate and produce fertile offspring in nature.

- Lower case

Classifying Organisms.

- So, in the case of Felis domesticus (the common house cat) Felis is the genus and domesticus is the species.
- You can tell the house cat is related to the puma because the puma's scientific name is Felis concolor.
- Both from the same genus.

Classifying Organisms.

- As it turns out, there is more than just a genus and species involved in naming organisms. In fact there are 7 steps or levels in classifying organisms.

The seven levels of classification.

- 1 - Kingdom **K**ings
- 2 - Phylum **P**lay
- 3 _____ **C**ards
- 4 - Order **O**n
- 5 - _____ **F**at
- 6 - Genus **G**reen
- 7 - Species **S**tools

The seven levels of classification.

- How 'bout a human
 - Kingdom - Animalia
 - Phylum - Chordata
 - Class - Vertebrata
 - Order - Mammalia
 - Family - Primates
 - Genus - Homo
 - Species - sapiens

The Kingdoms

- There are a total of _____ Kingdoms for all life based on their cell type, ability to make food and cell number.

The Kingdoms

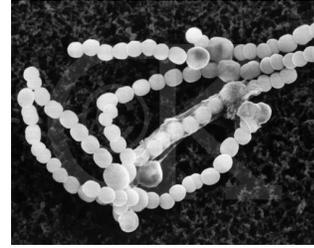
- 1. _____
 - “Ancient Bacteria”
 - Unicellular Prokaryote
 - Found in boiling hot vents....and you.
 - autotrophs and heterotrophs



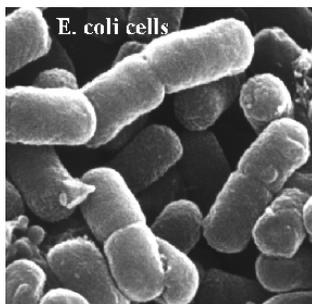
http://commons.wikimedia.org/wiki/Image:Colourful_Thermophilic_Archaeobacteria_Stain_in_Midway_Geyser_Basin.jpg

The Kingdoms

- 2. _____
 - Unicellular Prokaryote
 - Different cell chemistry from Archaeobacteria
 - autotrophs and heterotrophs



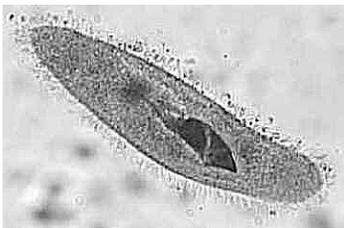
<http://www.emc.maricopa.edu/faculty/farabee/BIOBK/84150f.jpg>



<http://www.emc.maricopa.edu/faculty/farabee/BIOBK/ecolism.gif>

The Kingdoms

- 3. _____
 - Mostly unicellular eukaryote
 - Seaweeds and other colony organisms are exceptions
 - autotrophs and heterotrophs



http://www.fas.org/irp/imint/docs/rst/Sect20/paramecium_stained.jpg



<http://ebiomedica.com/prod/ProtistsVideoDVD.html>

The Kingdoms

- 4. _____
 - Mostly multicellular eukaryotes
 - All are heterotrophs
 - Mushrooms, molds and mildew....yuck



http://www.bbc.co.uk/devon/content/image_galleries/fungi_gallery.shtml

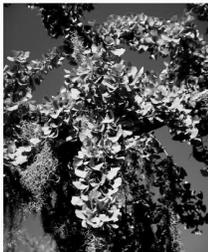


<http://lamington.nrsm.uq.edu.au/images/fungi/fungi068.JPG>

The Kingdoms

- 5. _____
 - All multicellular eukaryotes
 - Autotrophs ... Yes I know, what about venus fly traps and such

phylum Ginkgophyta



<http://www.biologyreference.com/Ep-FI/Evolution-of-Plants.html>

Coniferophyta



<http://www.biology4kids.com/misc/coniferrepro.html>

Magnoliophyta (Angiospermae)



<http://www.britannica.com/eb/art/print?id=8446&articleTypeId=1>

The Kingdoms

- 6. _____
- All animals are multi-cellular, heterotrophic aerobic, eukaryotes.
 - Lots of cells.
 - Must eat other organisms.
 - Need air.
 - Has a Nucleus in each cell.

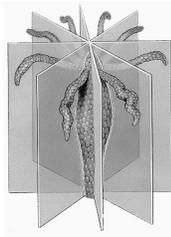
Animals

- Animals are divided into about 35 phyla.
 - Remember....Kings Play Cards On Fat Green Stools.
- One of the biggest separation occurs between...
 - _____
 - Animals without a backbone
 - _____
 - Animals with a backbone.

Animal Symmetry

- The bodies of (almost) all complex animals exist either as:
 - _____ - External body parts are spaced equally around a center

Radial Symmetry

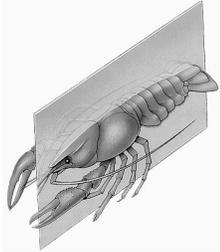


<http://www.uic.edu/classes/bios/bios100/labs/radial.jpg>

Animal Symmetry

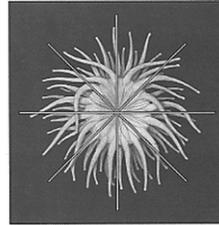
- The bodies of all complex animals exist either as:
 - _____ - One line of symmetry that divides it into mirror images.

Bilateral Symmetry



<http://www.uic.edu/classes/bios/bios100/labs/bilateral.jpg>

Animal Symmetry



Radial symmetry

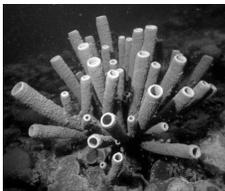


Bilateral symmetry

<http://www.mindcreators.com/DevelopmentalSim/DorsalVentral.htm>

Animal Run-Down

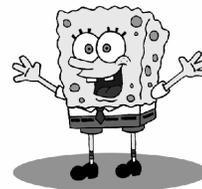
- _____, Cnidarians and Worms
 - Exception to symmetry, sponges can be irregular.



<http://www.mbgnet.net/salt/animals/1sponge.jpg>

Animal Run-Down

- Sponges, Cnidarians and Worms



Animal Run-Down

- Sponges, Cnidarians and Worms
 - Carnivores with stinging cells.



http://www.mbari.org/seminars/2001/spring2001/may2_raskoff.html

Animal Run-Down

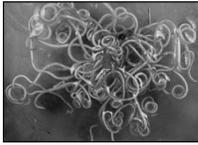
- Sponges, Cnidarians and Worms
 - Flatworms



http://www.geocities.com/thera_maria/flatworms.html

Animal Run-Down

- Sponges, Cnidarians and Worms
 - Roundworms



http://www.wormawareness.com/Tell_me_all_about_worms___/body_tell_me_all_about_worms___.html

Animal Run-Down

- Sponges, Cnidarians and Worms
 - Segmented



<http://www.britannica.com/eb/art-19575/Common-earthworm-These-segmented-worms-feed-on-both-mineral-and>

Animal Run-Down

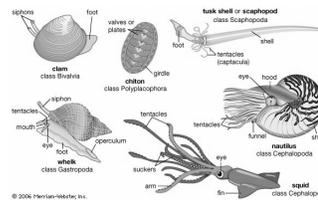
- _____, Arthropods and Echinoderms
 - Invertebrates with soft unsegmented bodies.



http://www.weichtiere.at/images/weichtiere/muscheln/stachlige_herzmuschel.jpg

Animal Run-Down

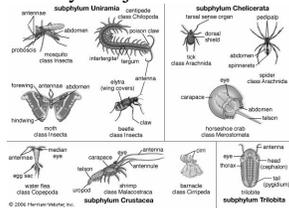
- Mollusks, Arthropods and Echinoderms
 - Invertebrates with soft unsegmented bodies.



<http://student.britannica.com/eb/art-66087/Representative-mollusks>

Animal Run-Down

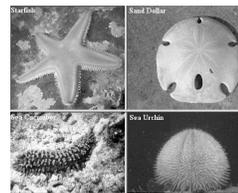
- Mollusks, Arthropods and Echinoderms
 - Invertebrates with external skeleton, segmented body and jointed attachments



<http://www.britannica.com/eb/art-66006/Representative-arthropods>

Animal Run-Down

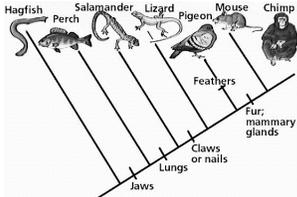
- Mollusks, Arthropods and Echinoderms
 - Include only marine animals which have a water vascular system, which is used as a means of locomotion.



<http://universe-review.ca/R10-33-anatomy.htm>

Animal Run-Down

- The _____you and me
 - All at some point have a dorsal supporting rod called a **notochord**.



<http://universe-review.ca/I10-82-vertebrates.jpg>

Animal Run-Down

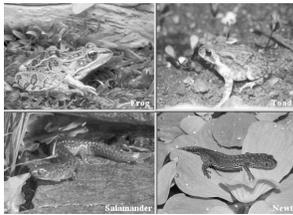
- The Cordates
 - Fish, Amphibians and Reptiles



http://news.nationalgeographic.com/news/2005/10/1007_051007_robot_fish.html

Animal Run-Down

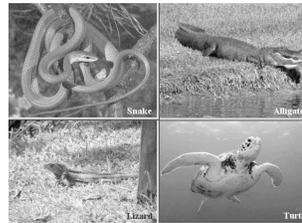
- The Cordates
 - Fish, Amphibians and Reptiles



<http://universe-review.ca/I10-82-amphibians.jpg>

Animal Run-Down

- The Cordates
 - Fish, Amphibians and Reptiles



<http://universe-review.ca/I10-82-reptiles.jpg>

Animal Run-Down

- The Cordates
 - Birds



<http://universe-review.ca/I10-82-birds.jpg>

Animal Run-Down

- The Cordates
 - Mammals



<http://universe-review.ca/I10-82-mammals.jpg>