

The background of the slide is a light blue botanical illustration. It features various plant parts such as leaves, stems, and seed pods, rendered in a detailed, line-art style. The illustrations are scattered across the entire page, creating a dense, decorative pattern.

SPECIES (3.1) & TAXONOMY (3.2)



TAXONOMY & KINGDOMS OF LIFE

Can you think of the
different groups of living
things?

Taxonomy

- Taxonomy is the classification system used for living things based on their shared characteristics
- Our taxonomy system has 7 different levels (**taxons**)
 - Kingdom
 - Phylum
 - Class
 - Order
 - Family
 - Genus
 - Species

KeeP **P**ond **C**lean **O**r **F**roggy **G**ets **S**ick

King **P**hilip **C**rossed **O**ceans **F**or **G**old **S**tick

Taxonomy

- As you go down the list of taxa, the groups get smaller and more specific

Let's take a look at the different **Kingdoms!**



Animals



Animals

- Members of **kingdom Animalia**:
 - Are multicellular
 - Have cells with a nucleus
 - Can move on their own
 - Feed on other living things (plants, animals, etc)
 - Reproduce sexually

Plants



Plants

- Members of kingdom **Plantae**:
 - Are multicellular
 - Have cells with a nucleus
 - Cannot move on their own
 - Get food from sun
 - Absorb solar energy (photosynthesis)
 - Reproduce sexually and asexually
 - Use seeds

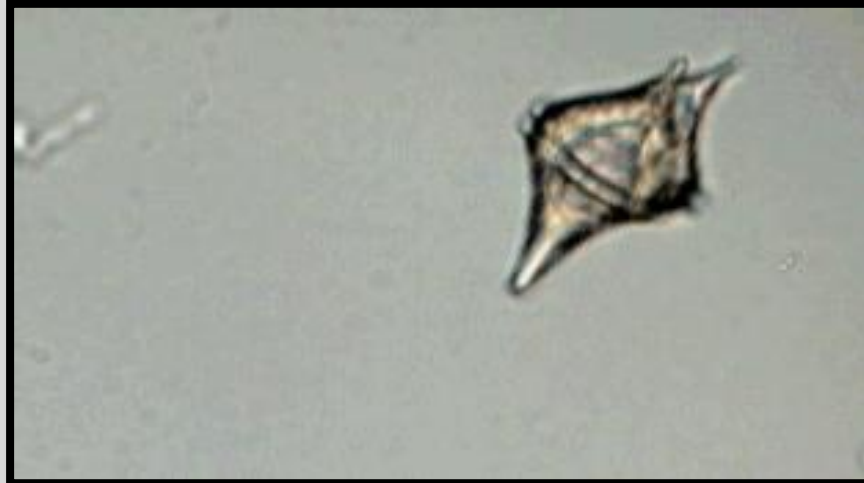
Fungi



Fungi

- Members of kingdom **Fungi**:
 - Are multicellular
 - Have cells with a nucleus
 - Cannot move on their own
 - Absorb nutrients
 - They are decomposers that secrete chemicals that break down organic matter and then they absorb the nutrients
 - Reproduce sexually and asexually
 - Use spores

Protists



Slime mold



Amoeba



Euglena



Dinoflagellate



Paramecium



Diatom



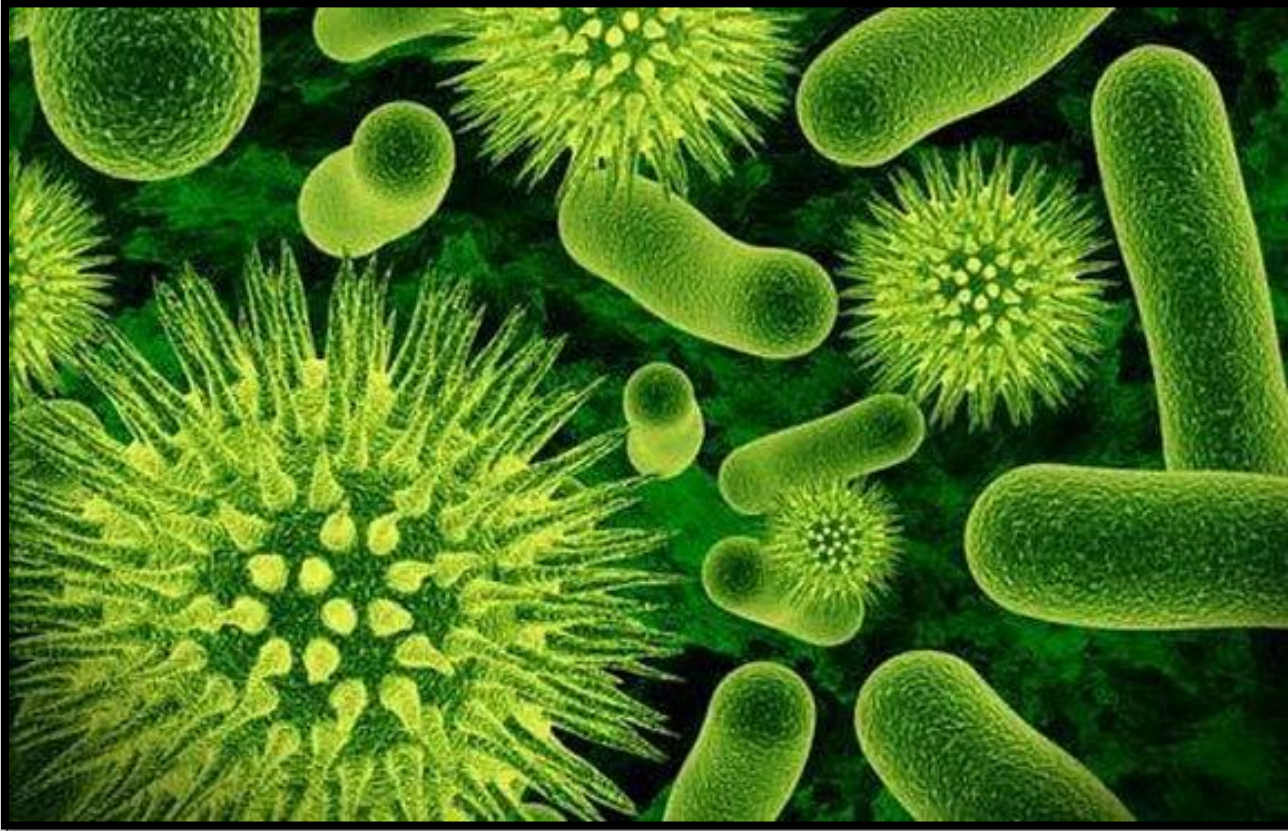
Macroalga



Protists

- Members of kingdom **Protista**:
 - Are unicellular (single cell)
 - Have cells with a nucleus
 - Can move on their own
 - Can either absorb energy through sunlight (photosynthesis) or feed on other single-celled organisms
 - Reproduce sexually and asexually

Bacteria



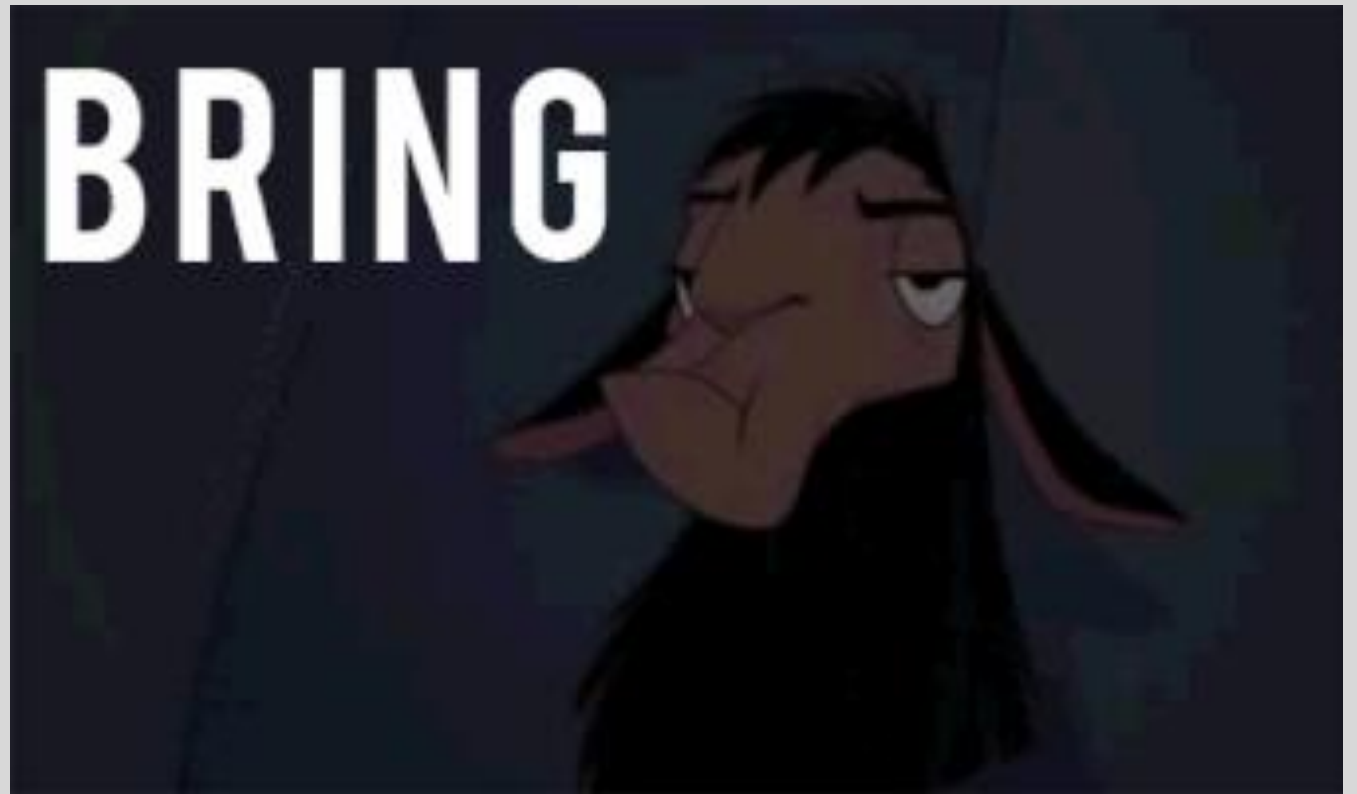
Bacteria

- Members of kingdom **Monera** (Bacteria):
 - Are unicellular (single cell)
 - No nucleus
 - Can move on their own
 - Feed in many different ways:
 - Some absorb sunlight, some are decomposers, others eat other organisms!
 - Reproduce mostly asexually (binary fission)
 - Can survive in extreme climates!

Bacteria

- The Kingdom Monera is actually divided into two groups:
 - Eubacteria
 - Archaeobacteria

Let's put your new knowledge
to the test!



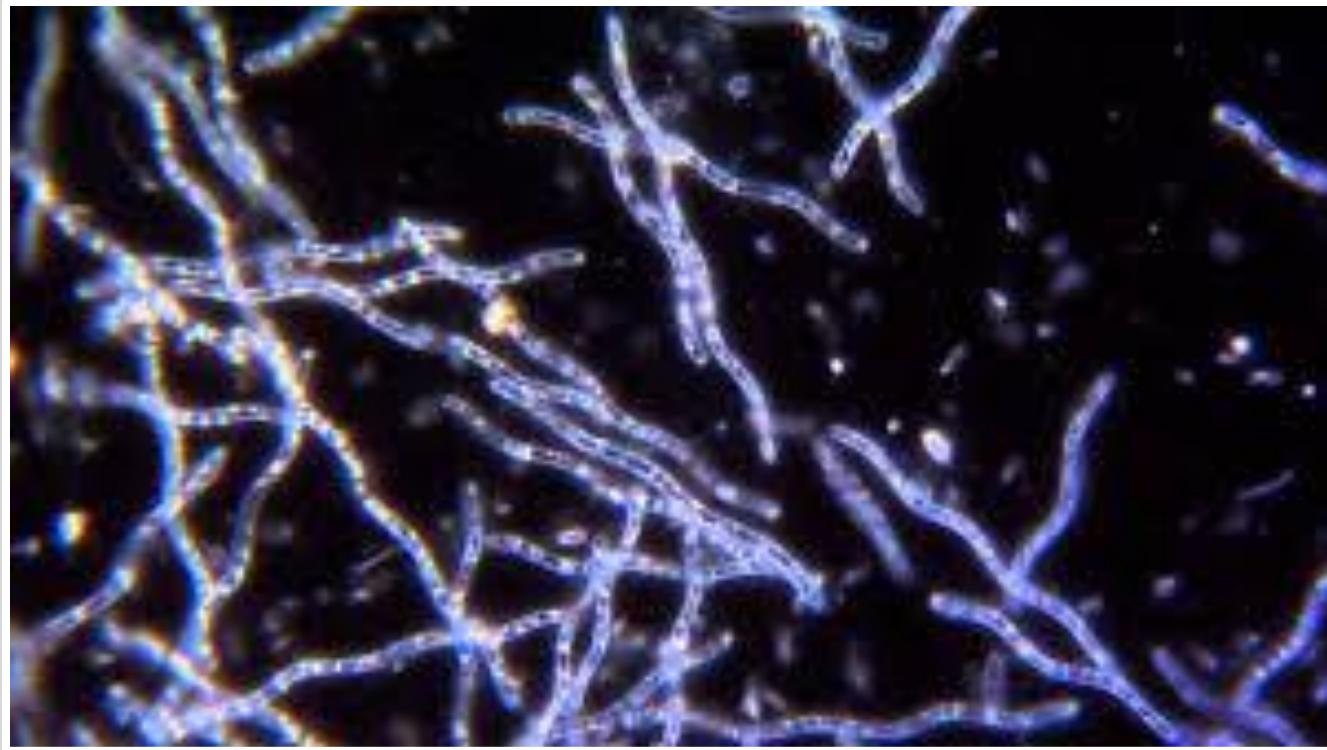
Name the kingdom

Animalia!



Name the kingdom

Bacteria!



Name the kingdom

Plantae!



Name the kingdom

Fungi!



Name the kingdom

Protista!



Name the kingdom

Fungi!



Name the kingdom

Animalia!



Workbook

- p.86-87

- (skip questions #5 and #6 for now)



SPECIES

Are these the same species?



Yes!

Are these the same species?



Yes!

Are these the same species?



Nope!

Are these the same species?




Yes!

Are these the same species?



Nope!



How can you tell if two organisms are part of the same species?

Species

◦ To be considered part of the same species, two organisms must meet the following criteria

1. Look similar

2. A male and female can produce viable offspring together

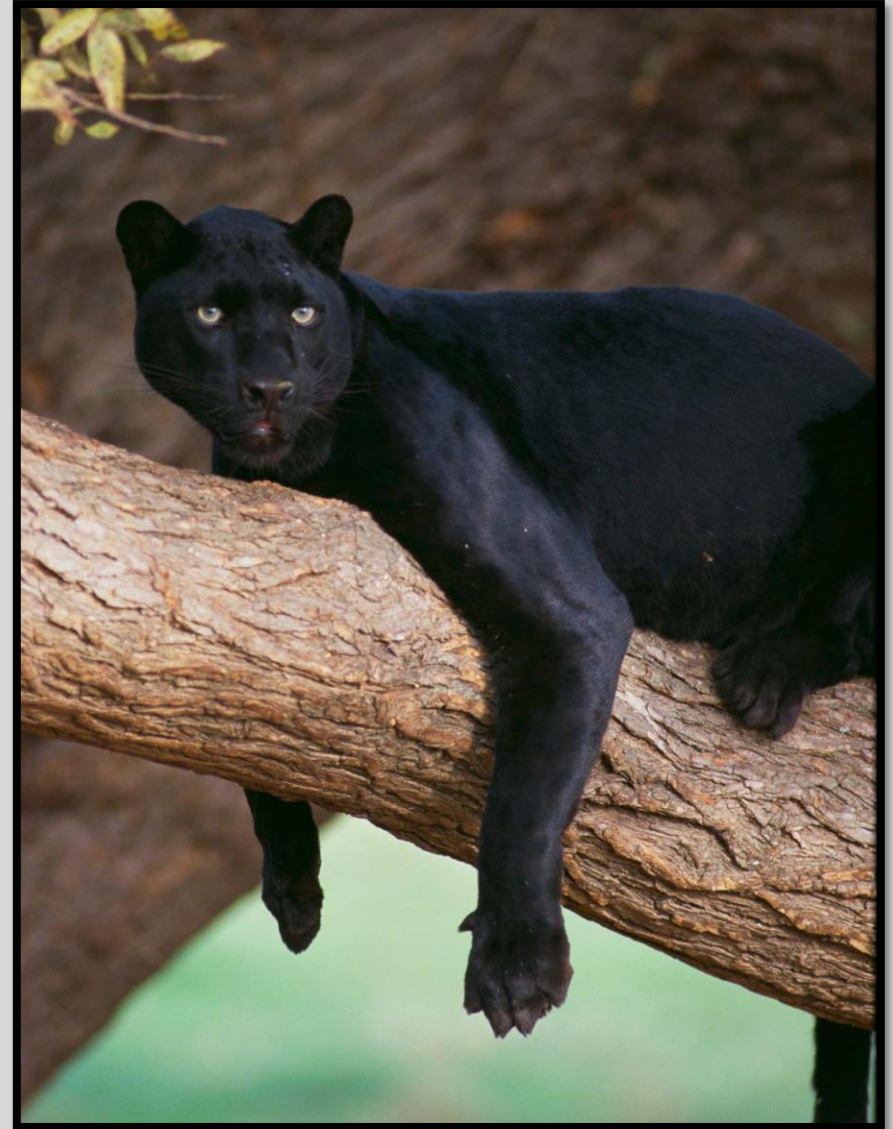
3. The offspring produced are also able to reproduce

4. ***would be able to come together naturally***

Example



VS



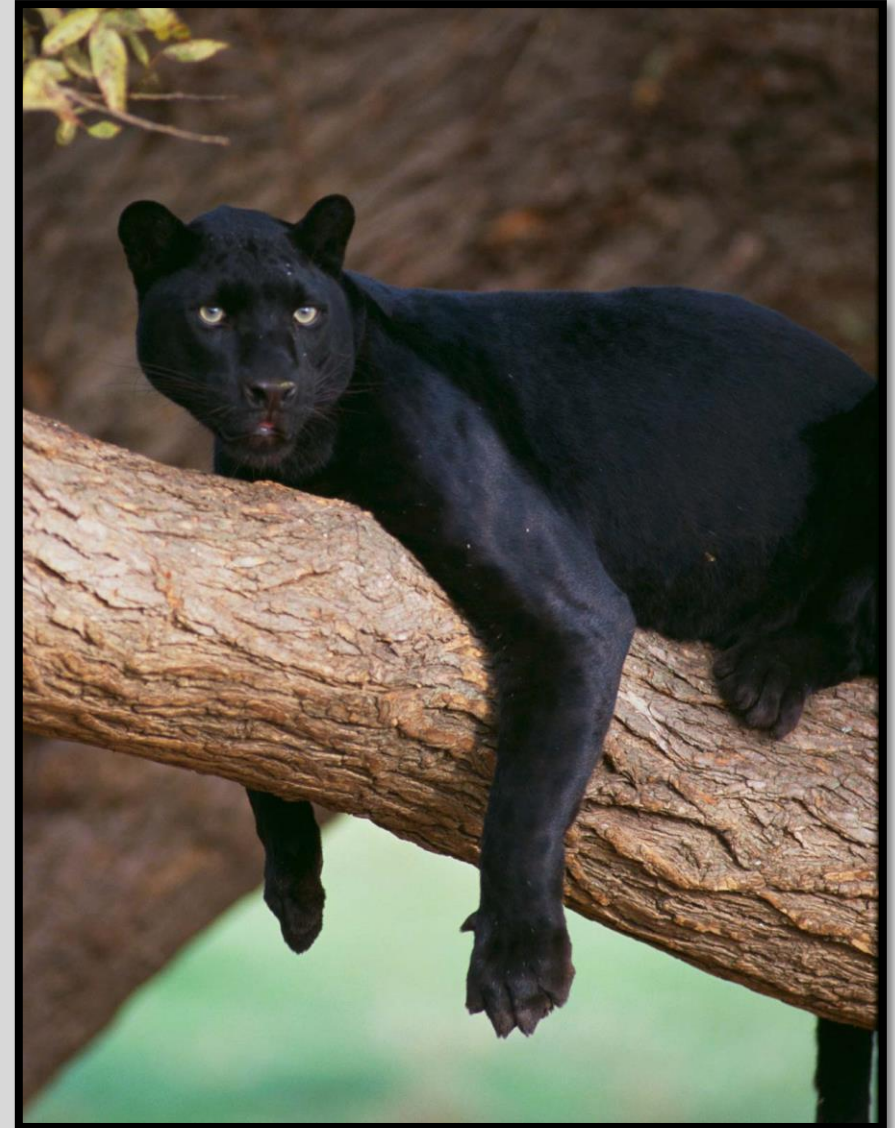
Example

| | Jaguar | Black Panther |
|------------------|---|----------------------|
| Fur colour | Tawny yellow with brown spots | Black |
| Adult size | 1.12-1.85 m | 1.12-1.85 m |
| Adult mass | 56-96 kg | 56-96 kg |
| Lifespan in wild | 12-15 years | 12-15 years |
| Reproduction | Can reproduce together and produce viable offspring | |

Example



VS

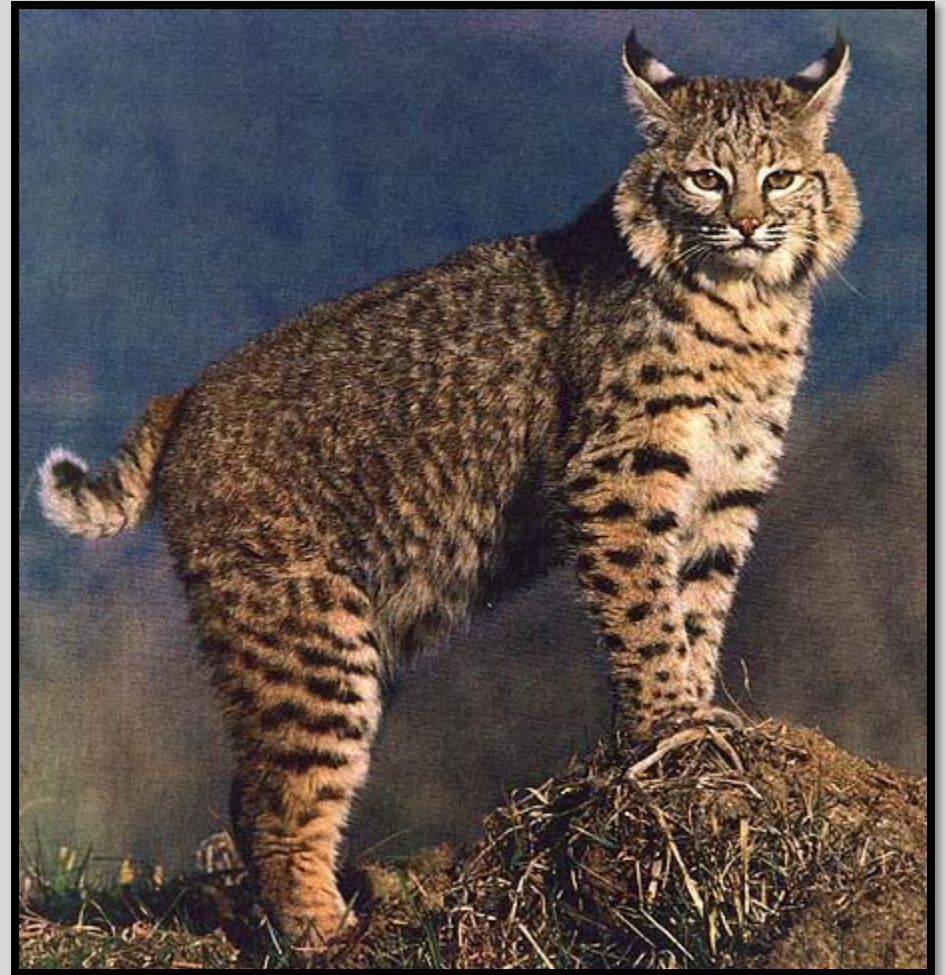


Same species!

Example



VS



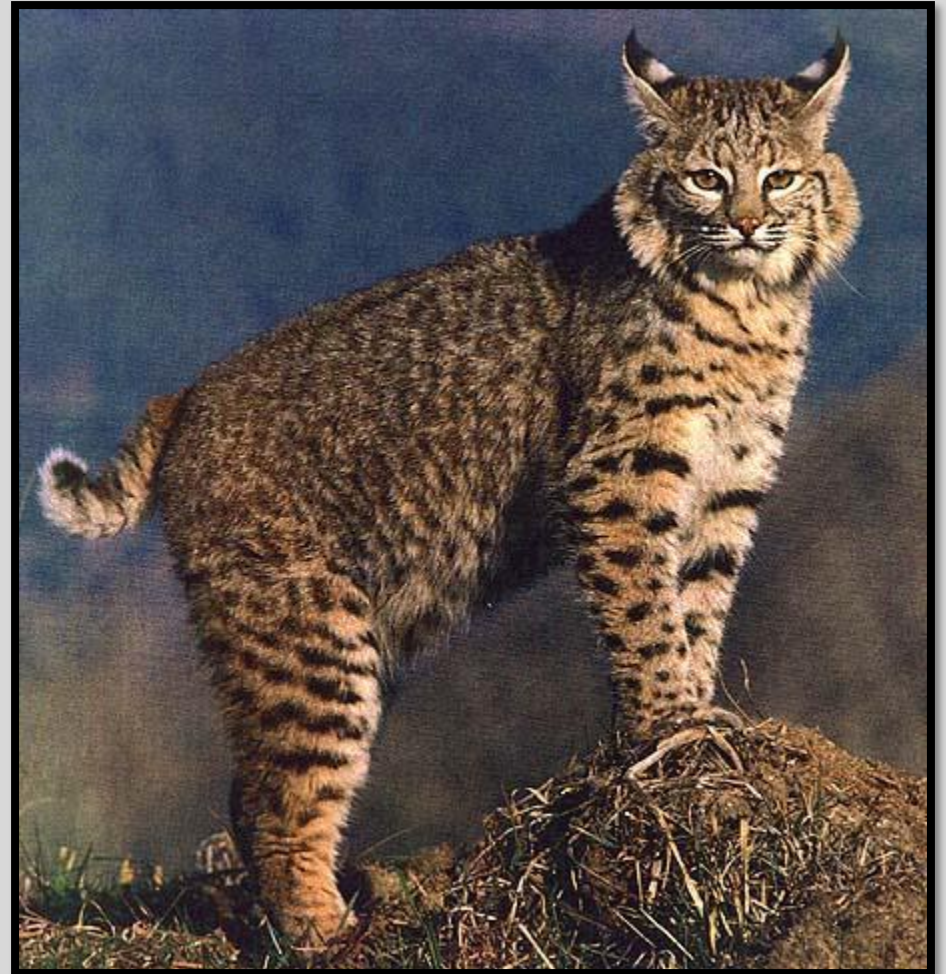
Example

| | Canadian Lynx | Bobcat |
|------------------|--|---|
| Fur colour | Light brown/grey fur with light black spots | Light brown/grey fur with light black spots |
| Adult size | 75-110 cm | 47.5-125 cm |
| Adult mass | 6-17 kg | 6.4-18.3 kg |
| Lifespan in wild | 10-16 years | 7-10 years |
| Reproduction | Can reproduce together but offspring are sterile | |

Example



VS



Different species!

Naming Species

Many organisms have common names, but these names can be confusing, making it sound like a lot of creatures are part of the same species when they are not!

aka Binomial nomenclature

Naming species

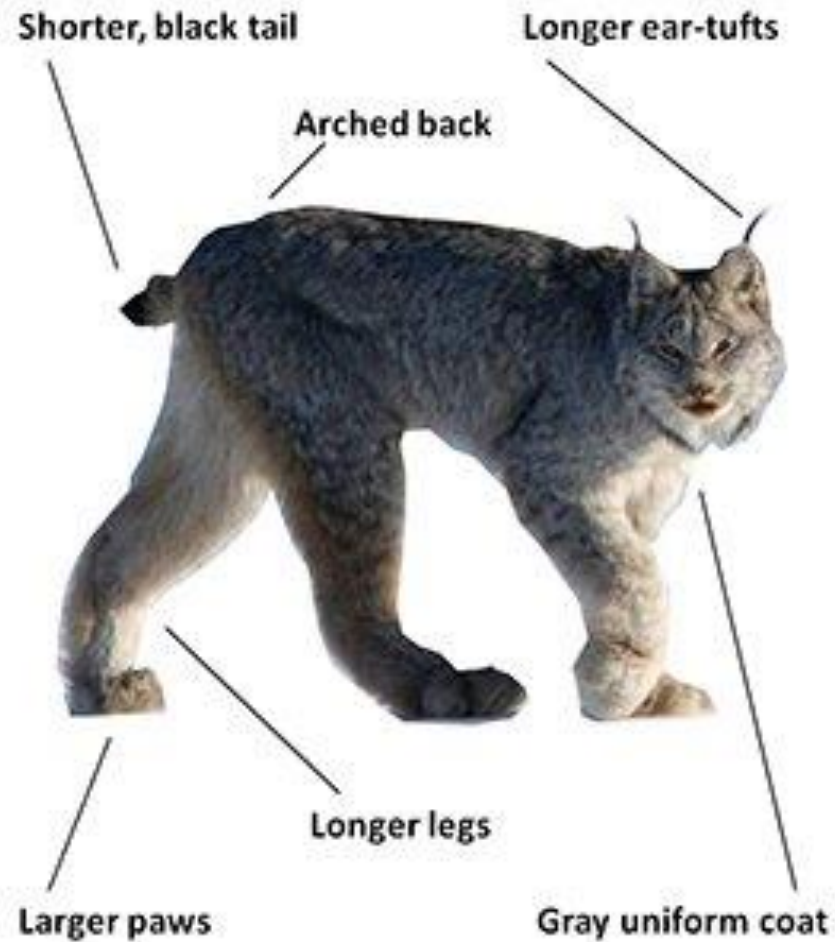
- So we use the scientific name instead!
- Every species name is made up of two parts:
 - *Genus name* + *species name*

Genus takes a capital

species is in all lowercase

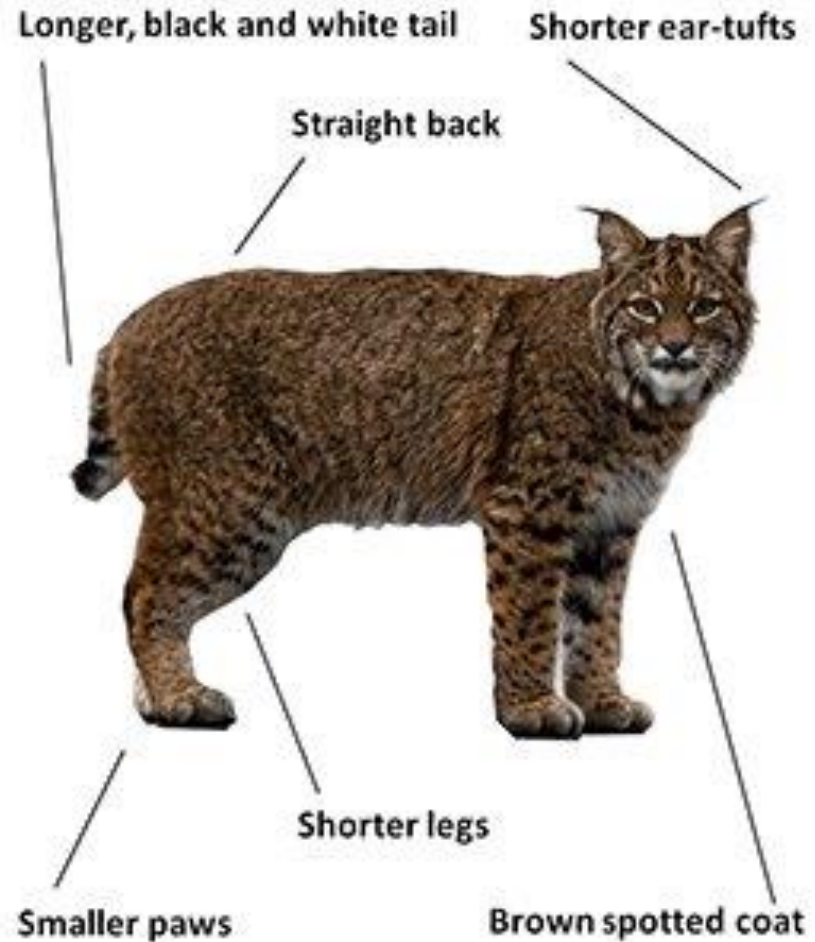
Both written in *italics*

Lynx or Bobcat?



Lynx (*Lynx canadensis*)

Photo by Keith Williams



Bobcat (*Lynx rufus*)

Photo by Kevin Pickell

Examples



◦ *Siberian tigris*

Examples



◦ *Aegolius acadicus*

Examples



◦ *Canis lupus*

Taxonomic Keys

- A taxonomic (or dichotomous) key is a tool that scientists use to help identify what species an organism belongs to
- It looks like a series of choices which allows you to then narrow down your options until you find the exact species

Let's look at p.85

Workbook

p.80-81

