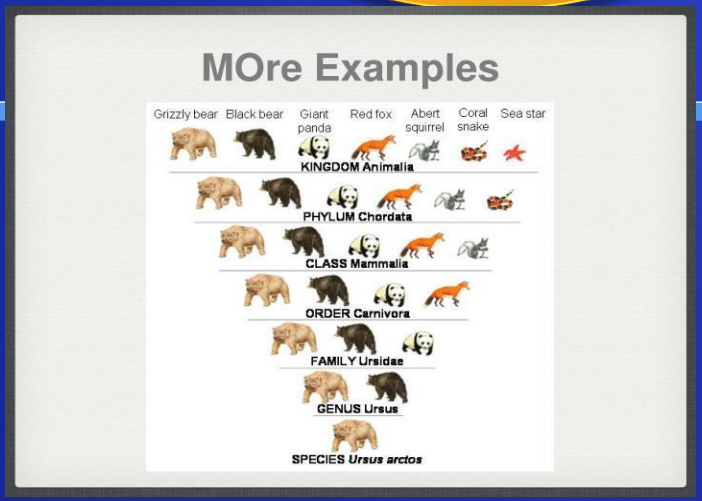
T2..WEEK 1 : UNIT 4

Lesson 1 : How Are Living Things Grouped?

5th Grade Science



MS NOURA AND MS NAAZ.

***Learning Objective*:**

-Students will describe the basic characteristics of the six kingdoms of organisms.

***Success Criteria*:-**

- - Students will be able to describe the basic characteristics of the six kingdoms of organisms.

Who developed the scientific naming system?

- Carolus Linnaeus

What is binomial nomenclature?

- A two word naming system used to name organisms
- Example- *Panthera leo*

What language is used for binomial nomenclature?

- Latin

Is it living or not?

Characteristics of living things

MRS GREN

Movement
Respiration
Sensitivity

Growth
Reproduction
Excretion
Nutrition

First word of scientific name

- Genus
- Represents a group of similar species
- Always written with a capital letter and italicized when possible
- Example- *Panthera*

Second word of scientific name

- Species
- Represents a feature of an organism, identifies a place, or honors a person
- Written in lower case and italicized when possible
- Example- *leo* in the scientific name *Panthera leo*
- Can mate and produce fertile offspring

Why are scientific names used?

- Four reasons
  1. Avoid mistakes- many organisms have more than one common name
  2. Organisms with similar evolutionary histories are classified together
  3. Scientific names give descriptive information about a species
  4. Information about organisms are organized easily and efficiently

What characteristics do today's scientists use to help them classify?

- Similarities in structure
- Fossils
- Hereditary information
- Early stages of development

what are the 7 levels of classification?

- Kingdom
  - Six different ones- Animals, Plants, Fungi, Archaebacteria, Eubacteria, and Protists
- Phylum
- Class
- Order
- Family
- Genus
- Species
- The more levels that are shared, the more closely related organisms are

CLASSIFICATION OF LIVING THINGS

- TAXONOMIC CATEGORIES
  - **K**INGS
    PLAY
    CHESS
    ON
    FLAT
    GLASS
    SQUARES

NAME AND DESCRIBE TWO TOOLS FOR IDENTIFYING ORGANISMS

- Field Guides- contains descriptions and pictures of organisms and information about where they live
- Dichotomous Keys- a list of paired statements that identify characteristics of organisms; unique to type of organism being identified

More dichotomous key practice

Step 1

a. Shoe is a hightop Go to step 2
b. Shoe is not a hightop Go to step 3

Step 2

a. Shoe has a star on it **Converse**
b. Shoe does not have a star on it **Nike**

Step 3

a. Shoe is mostly black **Nike**
b. Shoe is not mostly black Go to step 4

Step 4

a. Shoe is mostly white **Reebok**
b. Shoe is mostly red **Puma**

CLASSIFICATION OF LIVING THINGS

- MAJOR TAXONOMICAL GROUPS

CLASSIFICATION OF LIVING THINGS

- KINGDOM – MONERA
  - PROKARYOTES
  - ARCHAEBACTERIA
    VS.
    EUBACTERIA

- KINGDOM – PROTISTA
  - EUKARYOTE
  - ***AMEBA***
  - ***PARAMECIUM***
  - EUGLENA

CLASSIFICATION OF LIVING THINGS

- KINGDOM – FUNGI
  - EUKARYOTES
  - HETEROTROPH
  - CELL WALL

- KINGDOM – PLANTS
  - EUKARYOTES
  - AUTOTROPH
  - CELL WALL

CLASSIFICATION OF LIVING THINGS

- KINGDOM – ANIMALS
  - EUKARYOTES
  - HETEROTROPH
  - REPRESENTATIVE ORGANISMS
    - HYDRA
    - EARTHWORM
    - GRASSHOPPER
    - HUMAN

PLENARY

PLENARY EXIT SLIPS

'I don't understand this yet.'

'I think I understand, but could not explain it to someone else.'

'I understand this well and could explain it to a friend.'