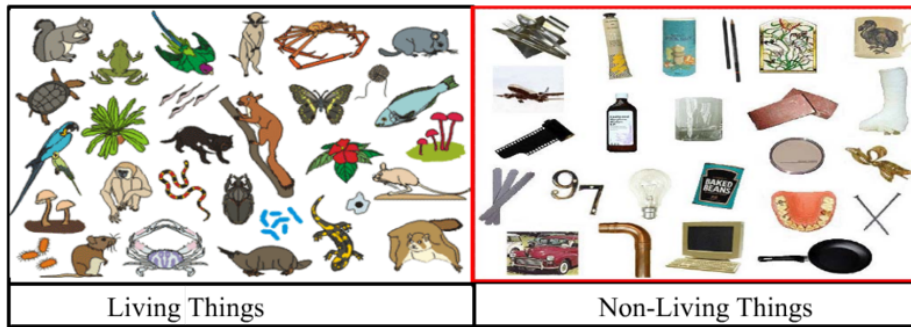
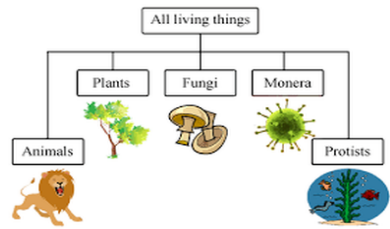


# Unit 3: Variety of Life



## Curriculum Outcomes

STSE	Skills	Knowledge
<p>Students will be expected to</p> <p><b>Nature of Science and Technology</b></p> <p>104-5 describe how results of similar and repeated investigations may vary and suggest possible explanations for variations</p> <p>104-8 demonstrate the importance of using the languages of science and technology to compare and communicate ideas, processes, and results</p> <p>105-1 describe examples of scientific questions and technological problems that are currently being studied</p> <p>105-5 identify examples of scientific knowledge that have developed as a result of the gradual accumulation of evidence</p> <p><b>Relationships Between Science and Technology</b></p> <p>106-3 describe examples of improvements to the tools and techniques of scientific investigation that have led to new discoveries</p> <p><b>Social and Environmental Contexts of Science and Technology</b></p> <p>107-1 describe examples, in the home and at school, of tools, techniques, and materials that can be used to respond to their needs</p> <p>107-6 provide examples of how science and technology have been used to solve problems around the world</p> <p>107-11 identify examples of careers</p>	<p>Students will be expected to</p> <p><b>Initiating and Planning</b></p> <p>204-1 propose questions to investigate and practical problems to solve</p> <p>204-6 identify various methods for finding answers to given questions and solutions to given problems, and select one that is appropriate</p> <p>204-8 identify appropriate tools, instruments, and materials to complete their investigations</p> <p><b>Performing and Recording</b></p> <p>205-7 record observations using a single work, notes in point form, sentences and simple diagrams and charts</p> <p>205-8 identify and use a variety of sources and technologies to gather pertinent information</p> <p><b>Analysing and Interpreting</b></p> <p>206-1 classify according to several attributes and create a chart or diagram that shows the method of classifying</p> <p>206-9 identify new questions or problems that arise from what was learned</p> <p><b>Communication and Teamwork</b></p> <p>207-2 communicate procedures and results, using lists, notes in point form, sentences, charts, graphs, drawing, and oral language</p>	<p>Students will be expected to</p> <p>300-15 describe the role of a common classification system for living things</p> <p>300-16 distinguish between vertebrates and invertebrates</p> <p>300-17 compare the characteristics of mammals, birds, reptiles, amphibians, and fish</p> <p>300-18 compare the characteristics of common arthropods</p> <p>300-19 examine and describe some living things that cannot be seen with the naked eye</p> <p>302-12 describe how microorganisms meet their basic needs, including obtaining food, water, and air, and moving around</p> <p>301-15 compare the adaptations of closely related animals living in different parts of the world and discuss reasons for any differences</p> <p>301-16 identify changes in animals over time, using fossils</p>



Think about the layout of a grocery store, what do you notice?

Produce, Bakery, Meat, Dairy, frozen food are all along the outside. Then rows of food that are labeled. Ex) Baking Needs, Cleaning, condiments, and so on.



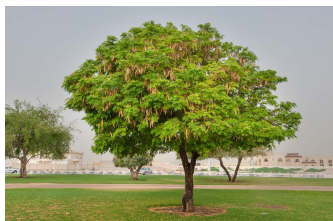
## Why do we classify things?



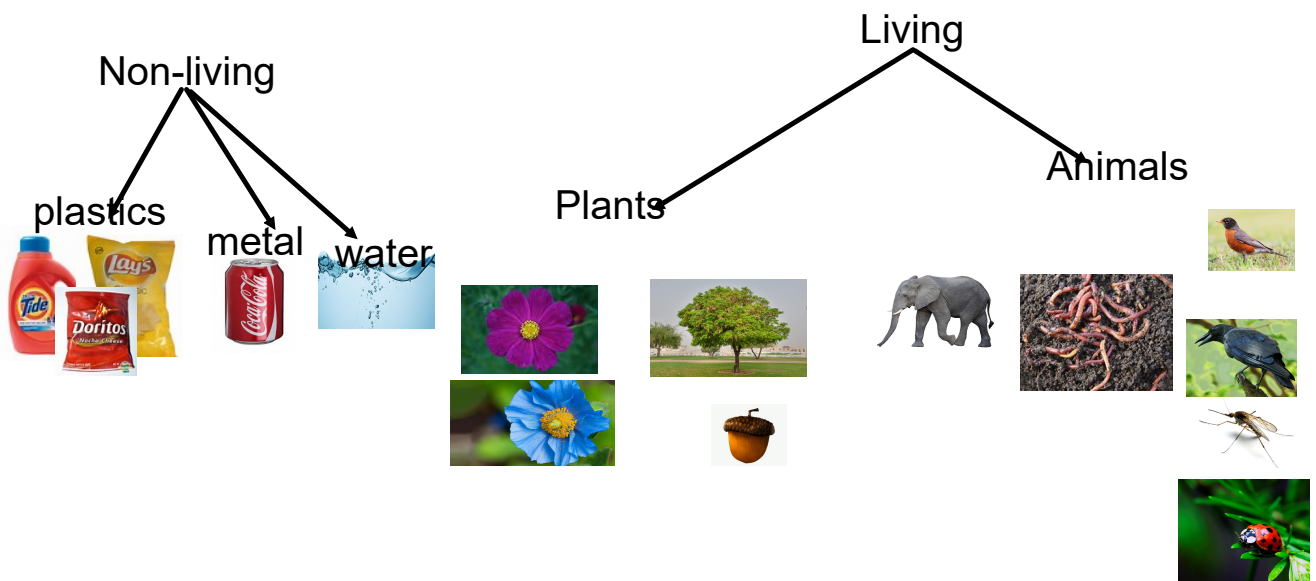
- Supermarket aisles
- Libraries
- Classes
- Teams/sports
- Members of a family
- Roads
- Cities
- Money



How would you group these items and why?



How would you group these items and why?



**Taxonomy** - is the science of grouping or organizing things into groups based on common characteristics.

### **\* Classifying Living or Non-living**

Science biologist study life, they need to be able to tell the difference between living things and non-living things. They ask themselves a set of questions:

- Can it grow and develop?
- \* Can it reproduce to make more of its own kind?
- Can it make or get food?
- Can it use food?
- Can it sense and react to living and non-living things in its surroundings, and react to them?
- Is it made up of cells?

If the all are yes then classify as living.

**Ecology** is the study of how living things interact with each other

## Factors of our Environment

**Biotic** are living factors include:

- Plants
  - Animals
  - Dead organisms & Waste Products  
(came from living at one time)
- } organisms

**Abiotic** are nonliving factors that affect other living things:

- Air
- Water
- Soil
- Rocks
- Light
- Temperature
- Climate