

# Grade 7 - Unit 1 – Interactions & Ecosystems Concepts

## BASIC NEEDS of Living Things

Water      Food      Energy      Oxygen

Suitable Living Conditions (Shelter)

## ECOSYSTEMS

### BIOTIC

(Living Parts)  
Species  
Population  
Community

### ABIOTIC

(Non-living Parts)



### ADAPTATIONS

(Structural or Behavioral)

### PRODUCERS

Plants  
(Photosynthesis)  
(Cellular Respiration)

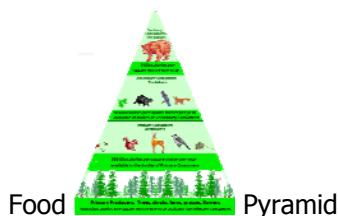
### CONSUMERS

Carnivores  
Herbivores  
Omnivores

### DECOMPOSERS

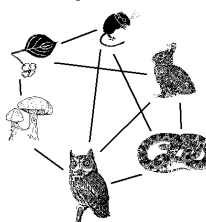
Scavengers  
Decomposers  
(bacteria, fungi, mould)

Helpful  
or  
Harmful

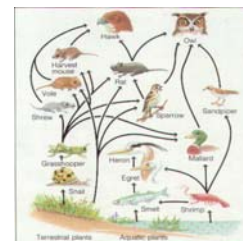


## FOOD CHAINS

A Simple Food Chain



## FOOD WEBS



Energy Flow

## Interdependence (SYMBIOSIS)

*Commensalism*  
One Benefits,  
the other is not  
affected

*Mutualism*  
Both benefit

*Parasitism*  
One benefits,  
the other is  
harmed



## Distribution of Living Things

Between  
Ecosystems

Competition

Within  
Ecosystems

Bioinvasion



Predation

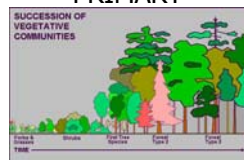
Within  
Species

Resource  
Partitioning

Species  
Distribution

## SUCCESSION

### PRIMARY

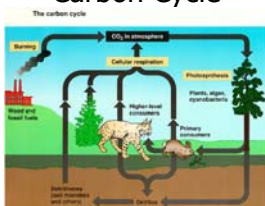


### SECONDARY

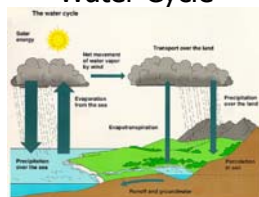


## Environmental CYCLES

### Carbon Cycle



### Water Cycle



## Human IMPACT on the Environment

Pollution (DDT)

Habitat Destruction

Waste Disposal

Ecological Footprint

## Status of Living Things - COSEWIC

EXINCTION  
EXTIRPATION  
ENDANGERED  
THREATENED  
DECLINING

**Intervention Programs:** Captive Breeding, Parks & Zoos, Biodiversity Banks, Wildlife Corridors,