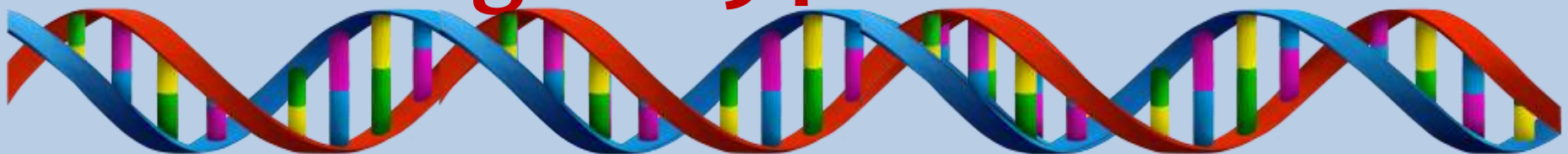
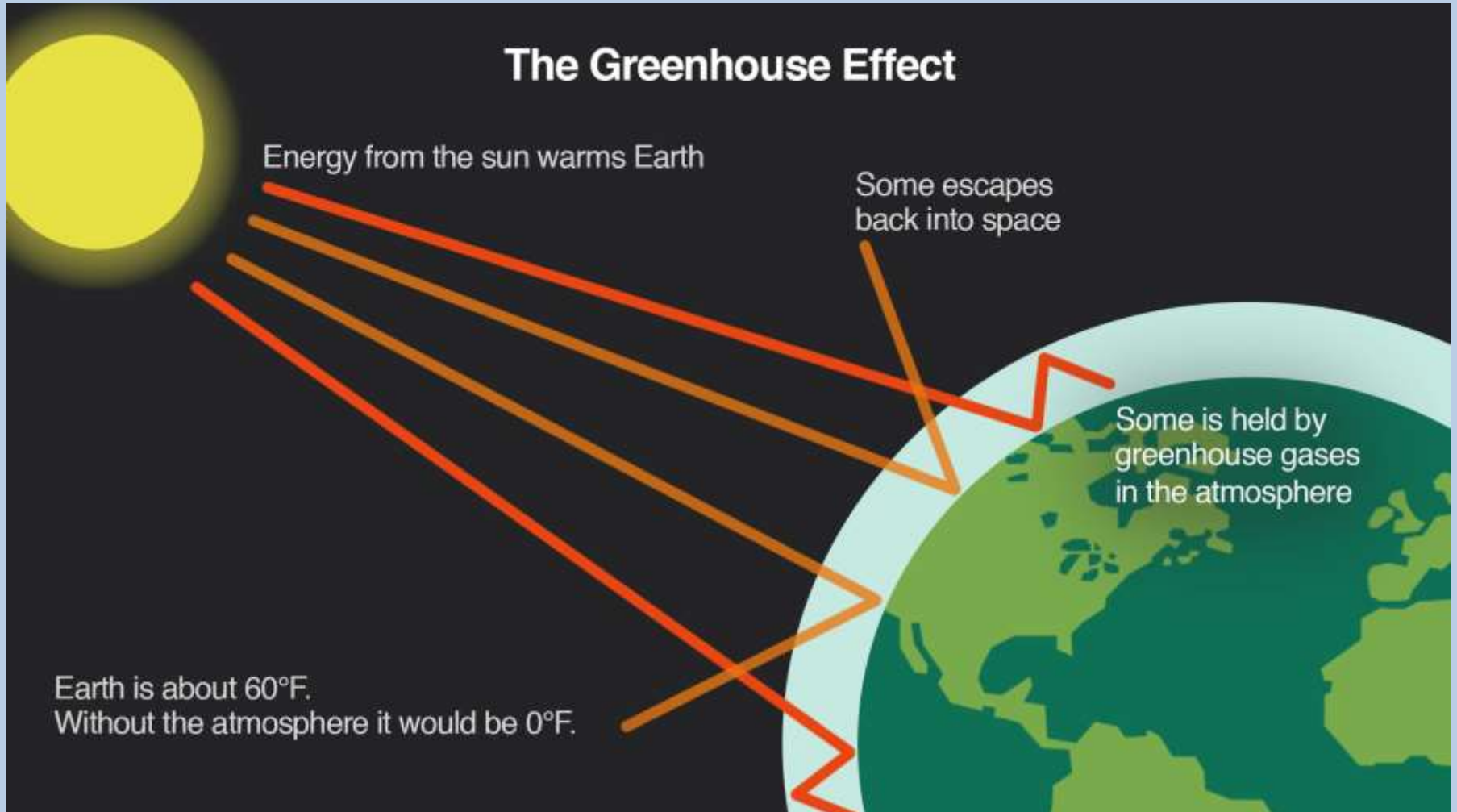


1. What is the greenhouse effect?
2. What is the difference between;  
“The annual average temperature in Las Vegas between 1985-2015 was 100 °F” and “On June 14<sup>th</sup>, 2019 Las Vegas had clear skies with a high of 94°F”



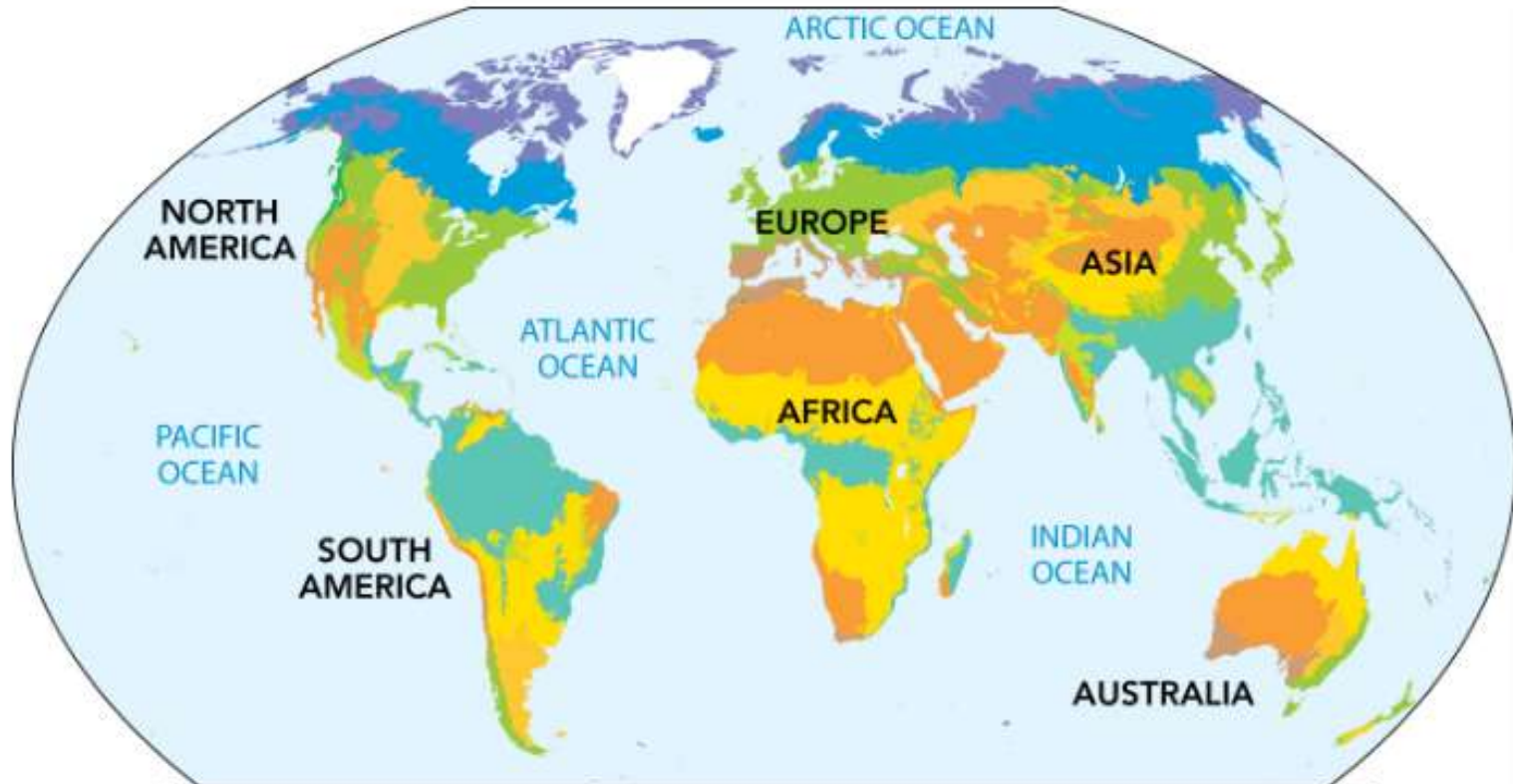
# Greenhouse Effect













# Biomes

- **Get out your Biome Climate Worksheet**
- **Make sure you have every row filled out on your worksheet**
- **Ask questions!**

# Biomes



## KEY

 Tropical rain forest	 Temperate grassland	 Northwestern coniferous forest
 Tropical dry forest	 Temperate woodland and shrubland	 Boreal forest
 Tropical grassland	 Temperate forest	 Tundra
 Desert		

# Ecology Methods

- **Brainstorm different ways that ecologists can study environmental changes**

# Ecology Methods

- **In ecology controlled experiments are usually not possible**
- **Ecologists rely heavily on observations**

# Ecology Methods

- In ecology controlled experiments are not usually possible → ecologists conduct field studies
- Ecologists rely heavily on observations and models

# Ecology Methods

- **Scientists tried to recreate this system in biosphere 2:**  
<https://www.youtube.com/watch?v=1nk-Ok4QL4s>



# Ecology Methods

- **What you need to know:**
  - Ecologists study ecology through observations, experimentation (artificial environment), models + mathematical equations to make predictions**

# CHECK-IN

- **Make sure you can answer objectives 1-6**
- **Ask Questions!**

# Ecology

- Let's review!



# Community:

- **Groups of different species living together in an ecosystem**



# Population:

- **All the members of the same type of organism living in an ecosystem**

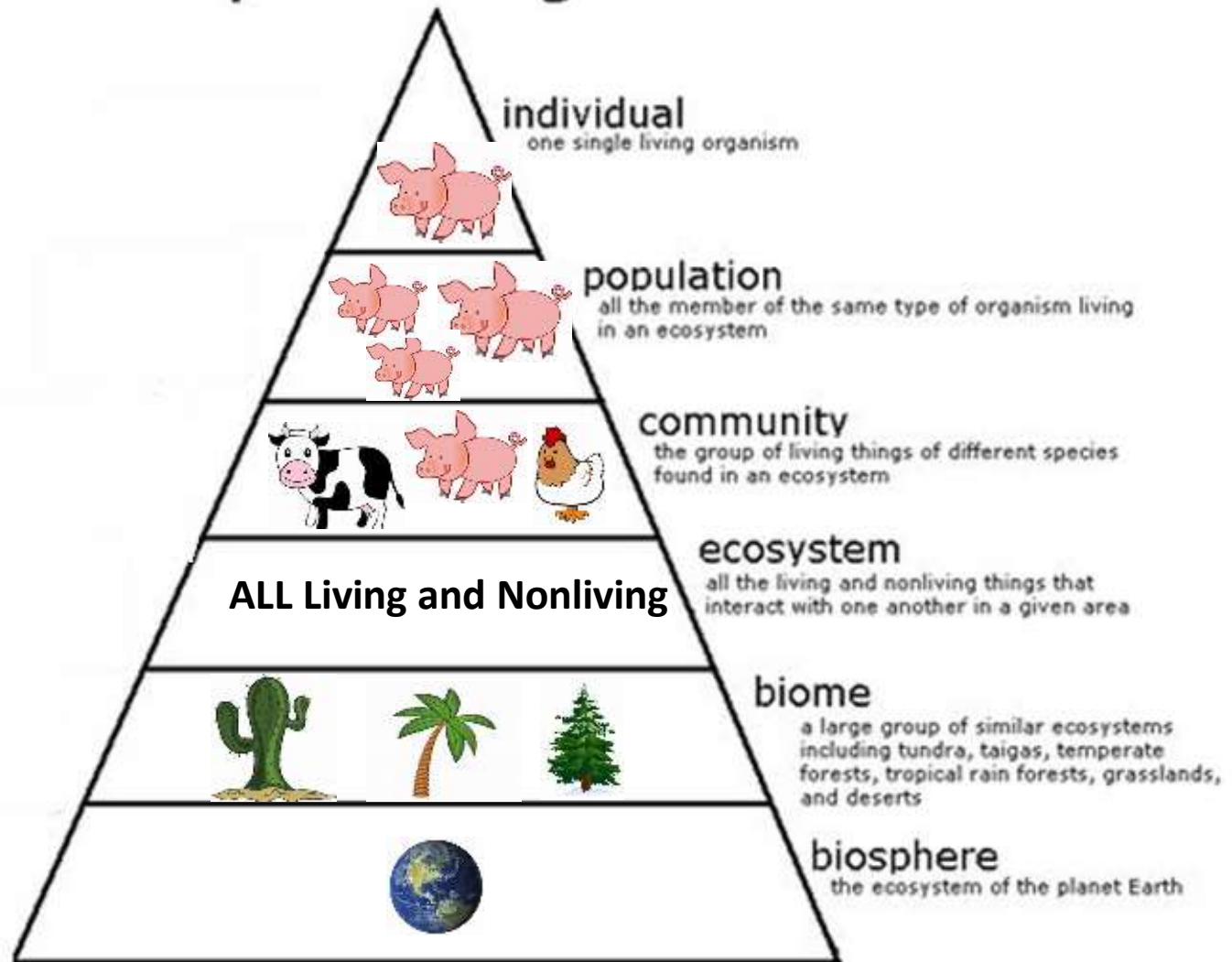


# Individual:

- **One single living organism**



# Ecosystem Organization





**INTERMISSION**

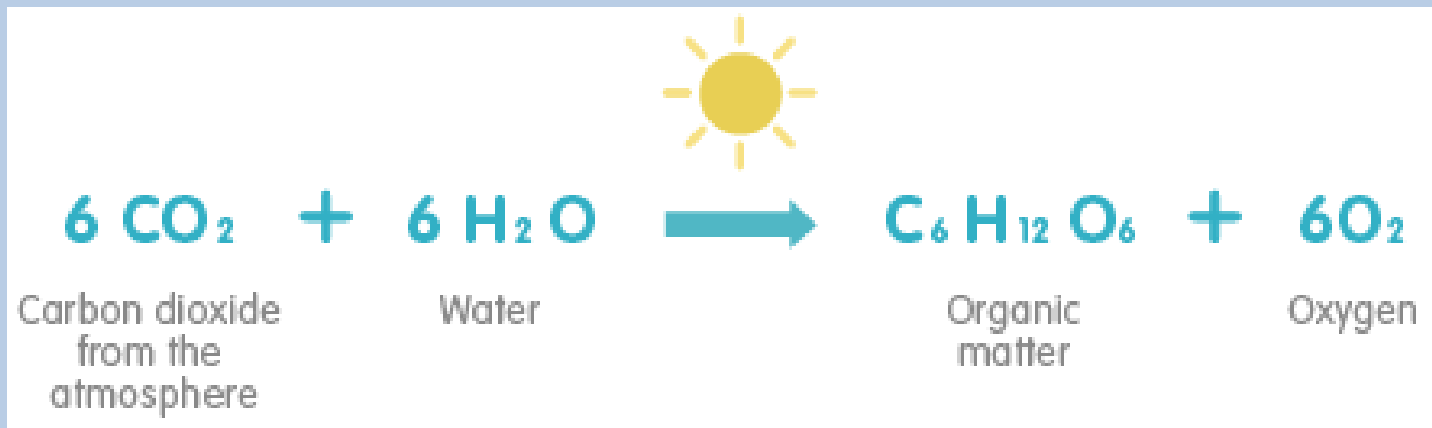




# Categorizing Organisms

- How do plants obtain energy?

**CAPTURE** sunlight and convert it into carbohydrates!



# Categorizing Organisms

- **Autotroph**: capture energy through abiotic sources

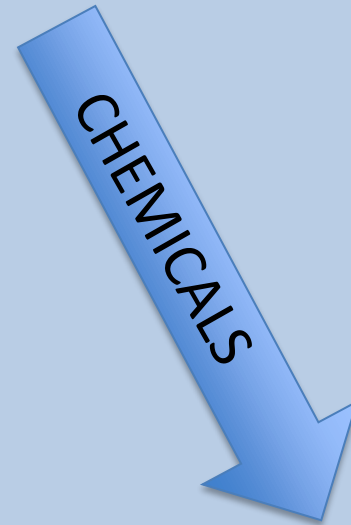
**Auto = Self**

**Troph = Nourishment**

# Autotrophs



**Photosynthesis**

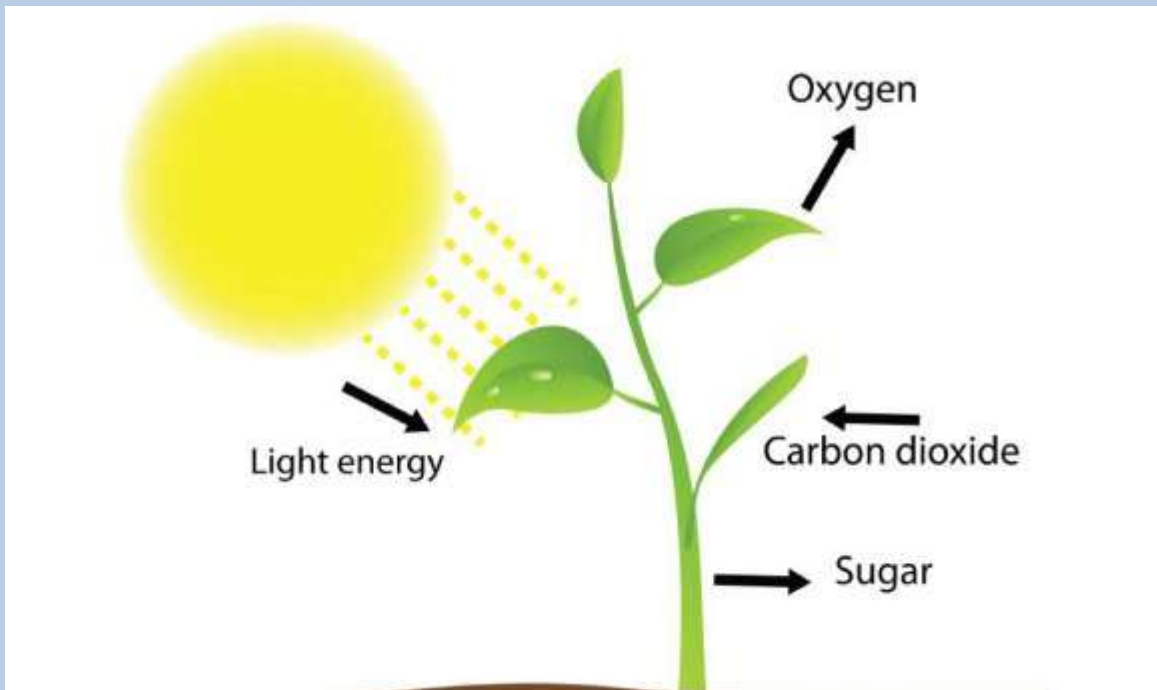


**Chemosynthesis**



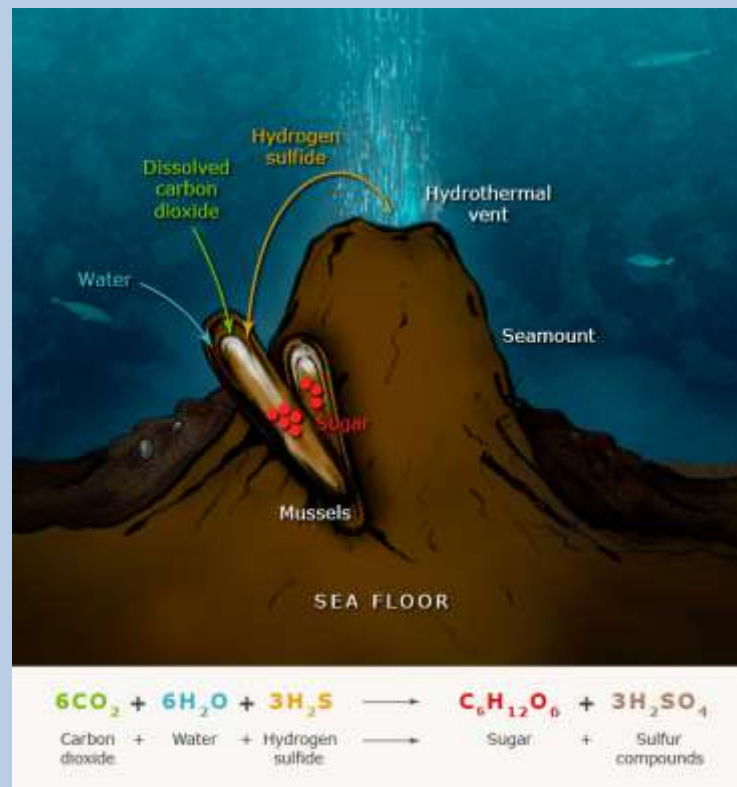
# Autotrophs

- **Photo = Light**
- **Synthesis = To make**



# Autotrophs

- Chemo = Chemicals
- Synthesis = To make



# Autotrophs

**Photosynthesis** needs the presence of light.



© Buzzle.com

**Chemosynthesis** occurs in total darkness on the sea floor.



# Categorizing Organisms

- **What you need to know:**
- **Energy is not CREATED it is absorbed and changes form into energy-rich compounds → sugars, starch**

# Categorizing Organisms

- How do humans obtain energy?

**We must CONSUME  
macromolecules!**



# Categorizing Organisms

- **Heterotroph**: capture energy through biotic sources
- Hetero = Different
- Troph = Nourishment

# Formative Assessment

- Is the organism an **AUTOTROPH** or **HETEROTROPH**?

# Categorizing Organisms







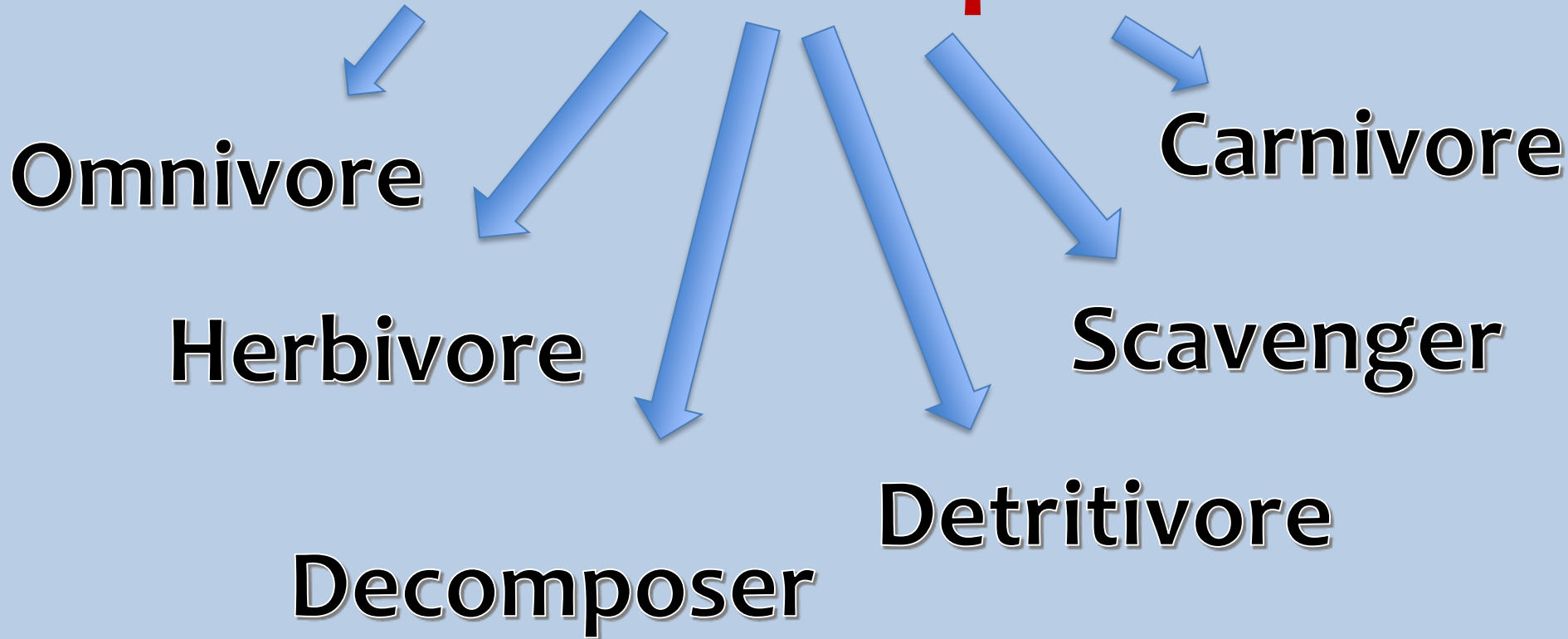








# Heterotrophs



# Categorizing Organisms

- **Carni = Meat**
- **Vore = To eat**



# Categorizing Organisms

- **Herbi = Plant**
- **Vore = To eat**



# Categorizing Organisms

- **Omni = All**
- **Vore = To eat**



# Categorizing Organisms

- **Detriti = Debris**
- **Vore = To eat**



# Formative Assessment

- **Things you need to know:**
  - **Animals do not always fit perfectly into categories**
  - **Diets may change**

# **Formative Assessment**

- **Is the organism a CARNIVORE, HERBIVORE, OMNIVORE or DETRIVORE?**













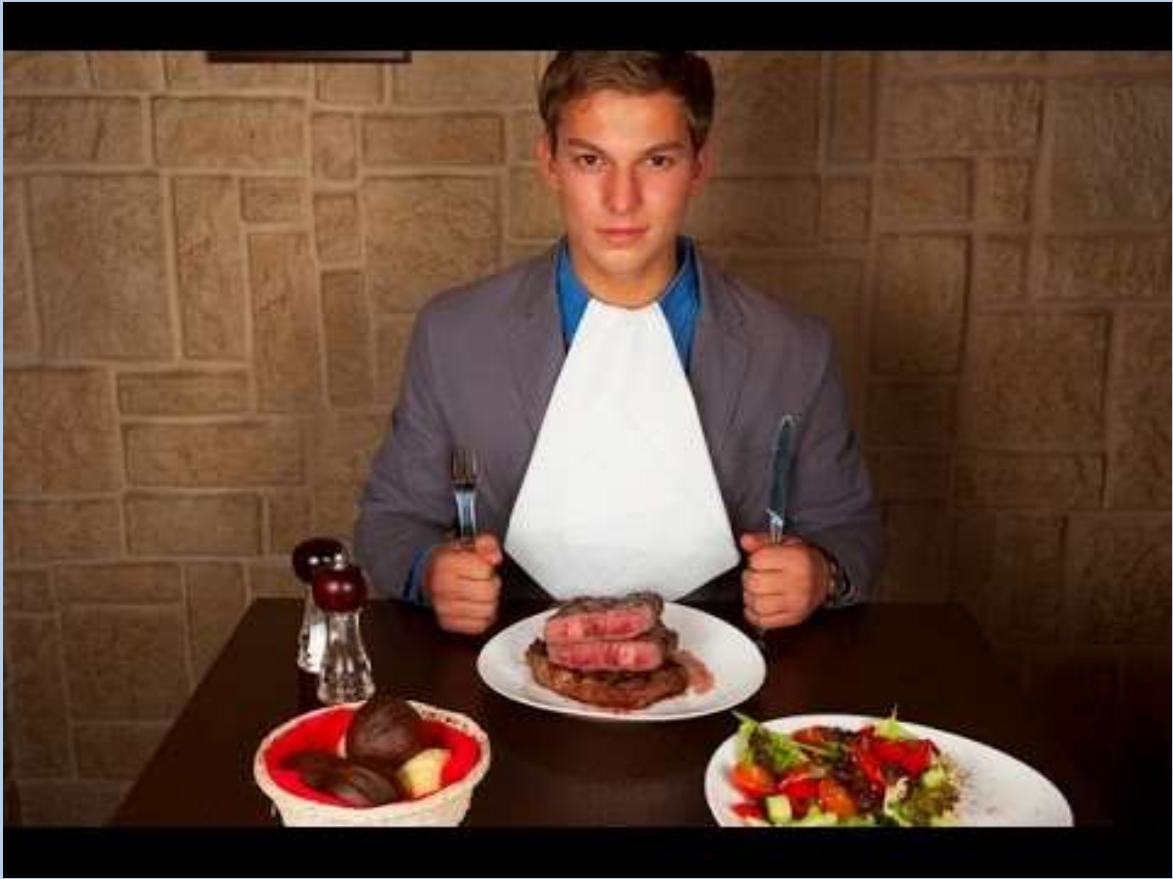












# Categorizing Organisms

**Decomposers  
BREAK DOWN  
dead organic  
matter**



# Categorizing Organisms

**Scavengers  
EAT dead  
organic  
matter**



# Formative Assessment

- Is the organism a **SCAVENGER** or a **DECOMPOSER**?











# Categorizing Organisms

- What is the difference between a detritivore and a decomposer?



# Categorizing Organisms

- **Detritivore- internal digestion**
- **Decomposer- external digestion by chemically breaking down decay (organic matter)**

# Categorizing Organisms

- **DETRITIVORE or DECOMPOSER?**



# Categorizing Organisms

- You are going to choose an organism
- Create a business card to introduce yourself to others

# Categorizing Organisms

Name

Address

Photo

Your favorite hobby

How you get energy  
(Biotic or abiotic source)

Favorite Food

# Categorizing Organisms

Marlon Moss

1400 oak tree drive



Favorite Hobby:

Chill out and absorb water!

Autotroph

Favorite Food:

Sunlight

(Photosynthetic)

# Categorizing Organisms

Name: Must include organism

Address: Habitat/ Niche

Photo!

Your favorite hobby: fun fact or  
role in the ecosystem

How you get energy:

Autotroph vs Heterotroph

What you eat:

(favorite food)

Carnivore, Omnivore

# Time for a Gallery Walk!!

- Autotrophs- left side of the room
- Heterotrophs- right side of the room



# Time for a Gallery Walk!!

- You must vote for your favorite **AUTOTROPH** and **HETEROTROPH**



# Time for a Gallery Walk!!

- **Winners will be rewarded with energy!**

