

Name _____

Date _____

APES Topic 4: Ecology – Ecosystems (structure, function, interactions)

Mr. Romano

Aim: What are the properties of the major subdivisions of the Earth?

1. Lithosphere

solid outer part of Earth
(Earth's crust and upper mantle)

thickness = 40-280 km

most abundant elements: silicon and oxygen

location of fossil fuels and mineral resources

2. Hydrosphere

water part of Earth
(surface and groundwater, ice, and water vapor)

average ocean depth = 3.6km

3. Atmosphere

shell of gases surrounding Earth that extends up from Earth's surface approximately 480km

d. THERMOSPHERE

c. MESOSPHERE

b. STRATOSPHERE

OZONE LAYER ($O_3(g)$) (lower part of stratosphere) – absorbs harmful UV rays

a. TROPOSPHERE

78% nitrogen
21% oxygen
1% other

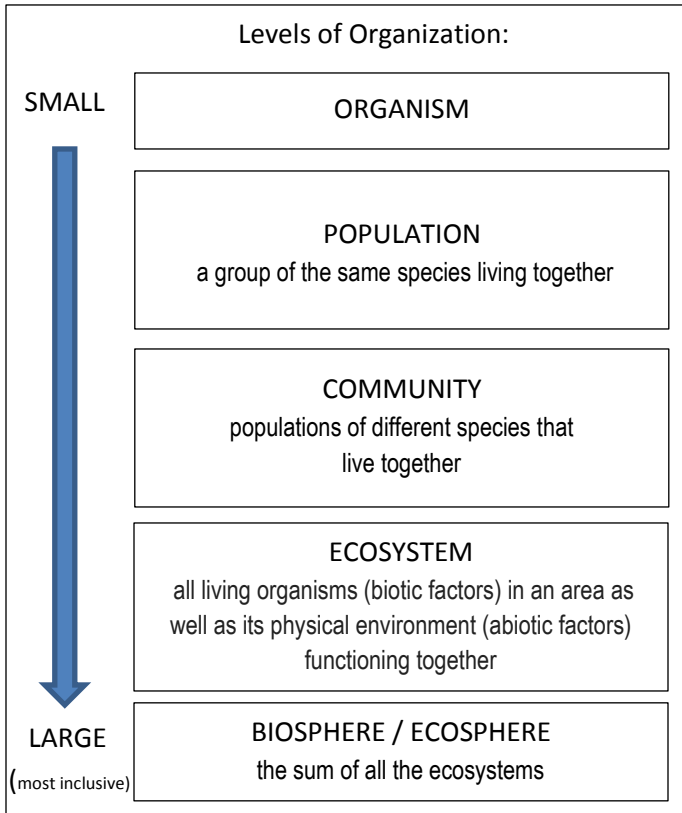
(water vapor, argon, carbon dioxide)

location of life, weather, pollutants



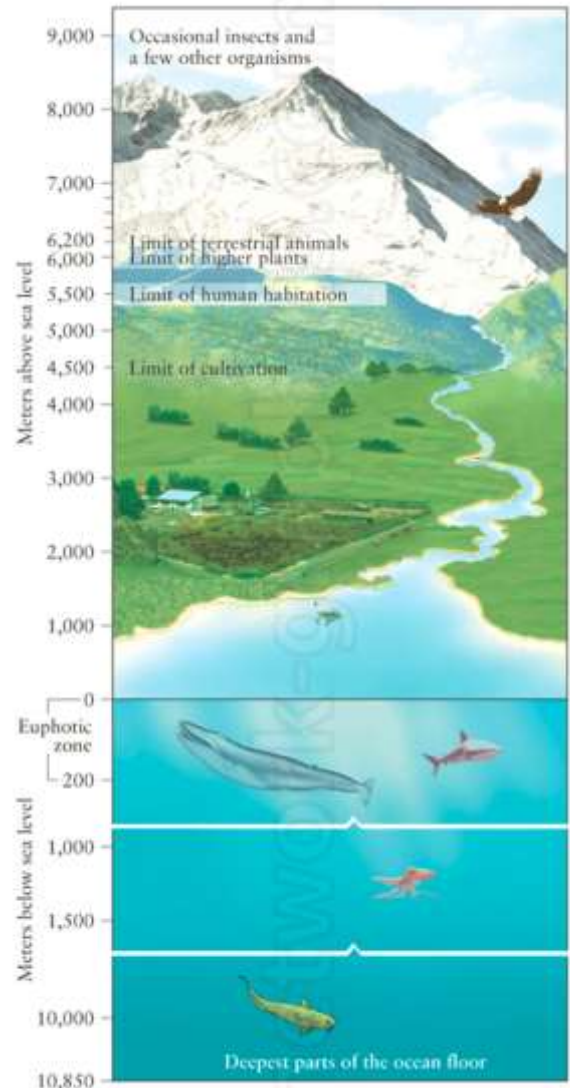
4. BIOSPHERE / ECOSPHERE

the portion of Earth where living organisms exist and interact with each other and with their nonliving environment



Ecotone

the transitional zone in which one ecosystem merges with an adjacent one



TO SUSTAIN LIFE ON EARTH:

1. The Sun –
since energy can't be recycled → it's just degraded and dispersed
2. Nutrient Cycling (a.k.a. biogeochemical cycles)
3. Gravity