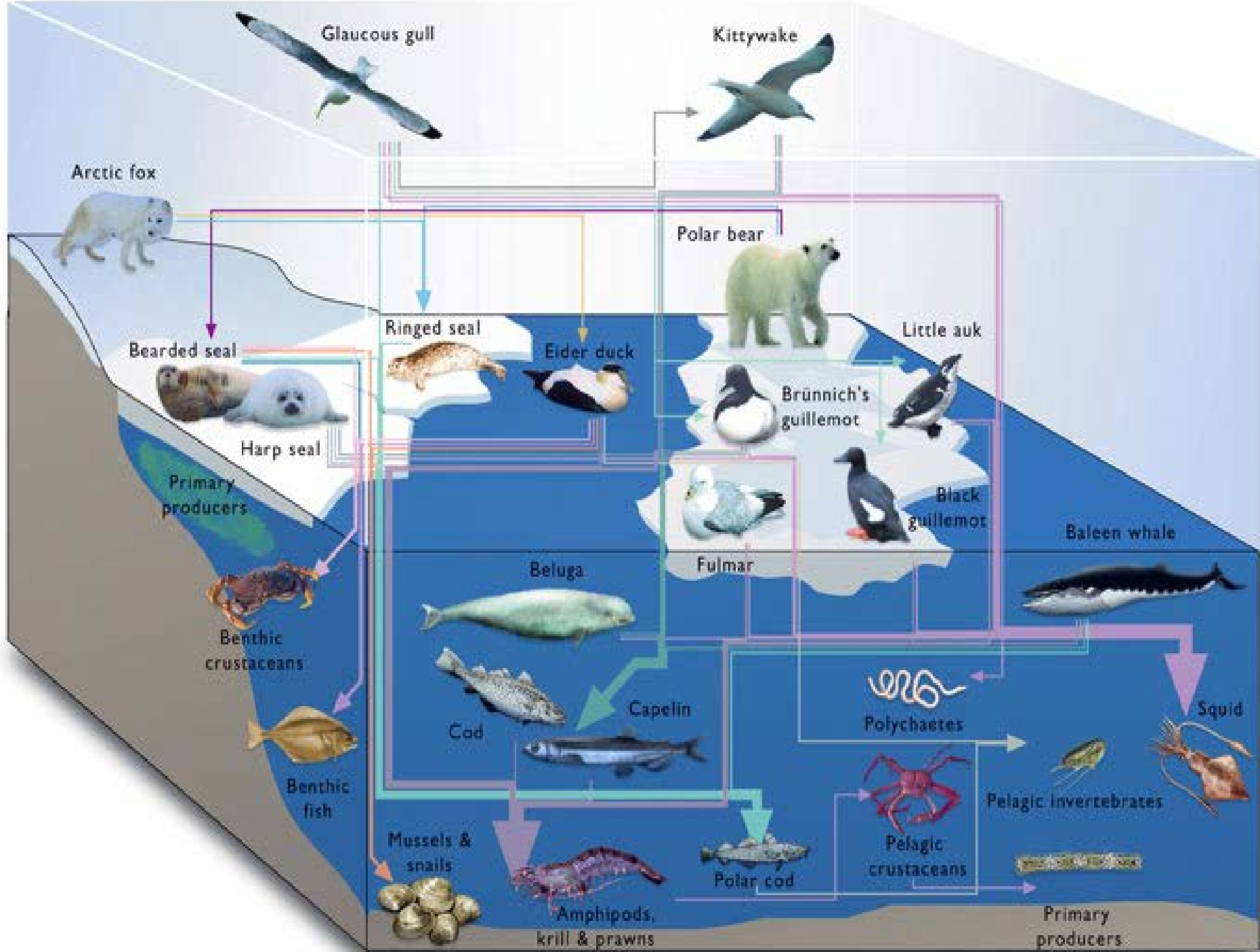


21-25 March Science Assignments

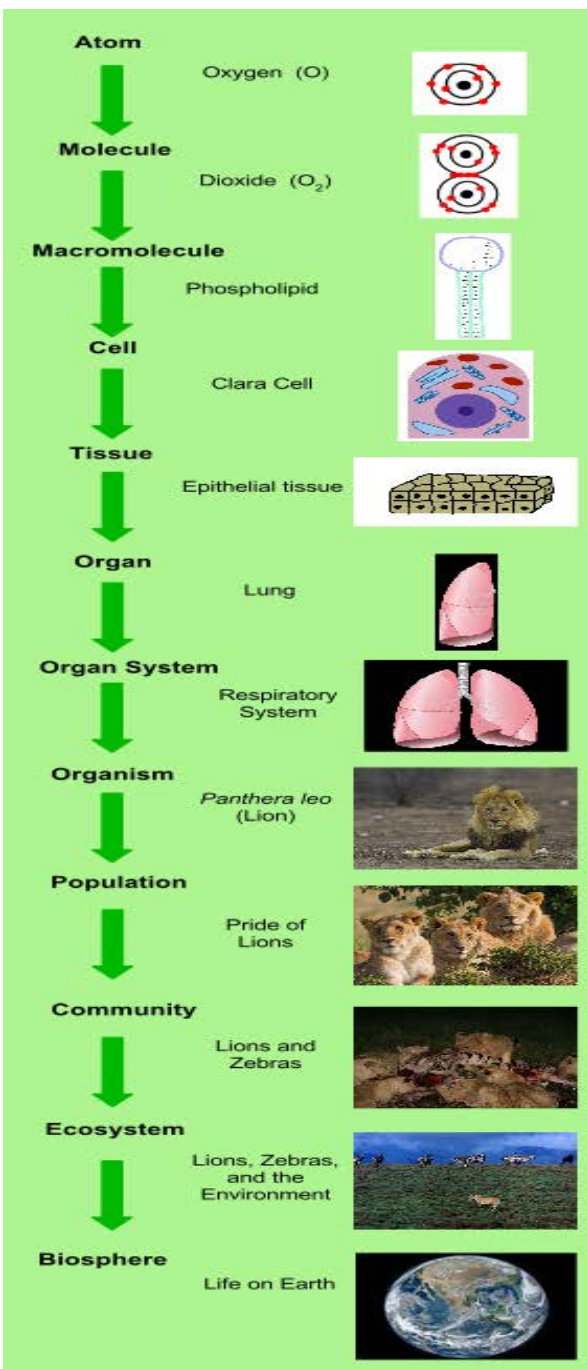
- **Homework assignments will only be able to be completed once for the rest of the year.**
- **Ecosystems Project due on 25 March. Turned into me on Google Drive.**
- **Ecosystems Project Presentations 25March-1 Apr.**
- **Extra Credit Assignment on my website due on 5 April.**





Cloning Project

- If finished, work on cue cards.
- Practice your part – memorize.
- Insure you know the information for every part of your presentation.
- Then share your project with Mr. Hanson:
christopher.hanson@student.dodea.edu

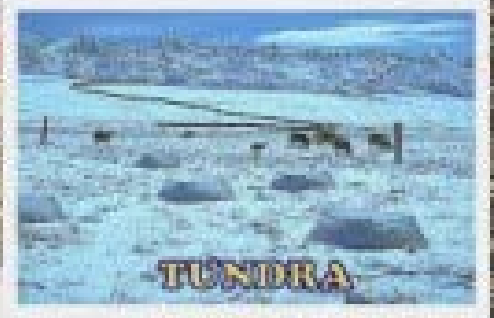


Biosphere	The part of Earth that contains all ecosystems	
Ecosystem	Community and its nonliving surroundings	
Community	Populations that live together in a defined area	
Population	Group of organisms of one type that live in the same area	
Organism	Individual living thing	
Groups of Cells	Tissues, organs, and organ systems	
Cells	Smallest functional unit of life	
Molecules	Groups of atoms; smallest unit of most chemical compounds	

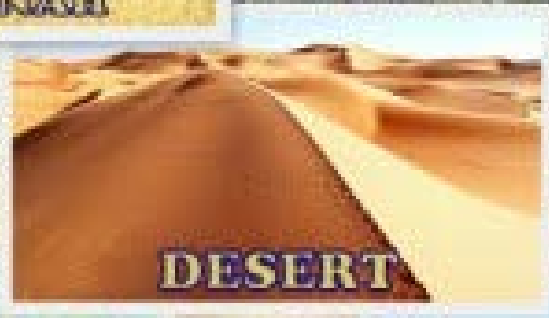
BIOMES



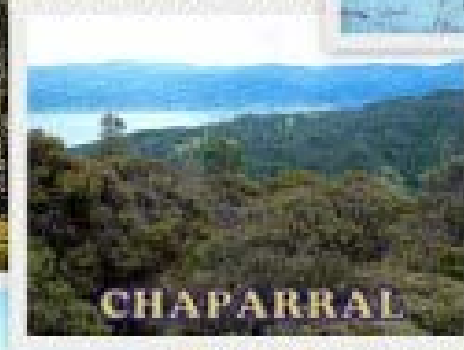
SAVANNAH



TUNDRA



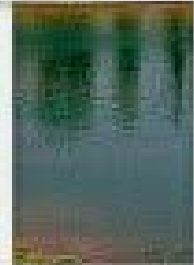
DESERT



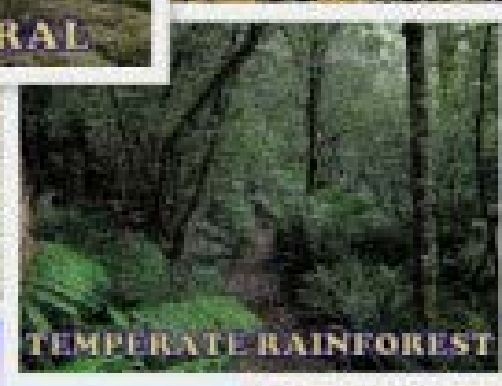
CHAPARRAL



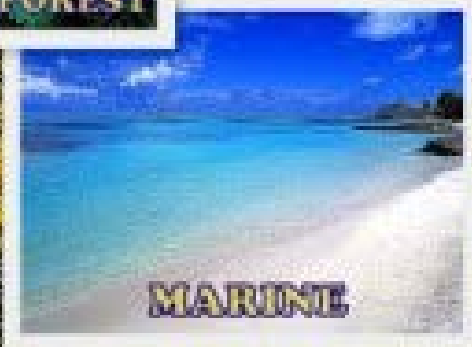
TROPICAL RAINFOREST



TAIGA



TEMPERATE RAINFOREST



MARINE



FRESHWATER

ECOSYSTEMS OF THE WORLD

Ecosystems are dynamic interactions between plants, animals, and microorganisms and their environment working together as a functional unit. Ecosystems will fail if they do not remain in balance. No community can carry more organisms than its food, water, and shelter can accommodate. Food and territory are often balanced by natural phenomena such as fire, disease, and the number of predators. Each organism has its own niche, or role, to play.

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Marine ecosystems can be divided into the following zones:

Oceanic. The relatively shallow part of the ocean that lies over the continental shelf.
Profundal. Bottom or deep water.

Benthic. Bottom substrate- sediment surface and some sub-surface layers.

Intertidal. The area between high and low tides.

Estuaries. Salt marshes; coral reefs; and hydrothermal vents.

Different from freshwater ecosystems by the presence of dissolved compounds, especially salts, in the water. Approximately 85% of the dissolved materials in seawater are sodium and chlorine.

Gulf Stream, makes northwest Europe much more temperate than any other region at the same latitude.

Ocean current is a continuous movement generated by the forces such as breaking waves, wind, Coriolis force, temperature and salinity differences and tides caused by the gravitational pull of the Moon and the Sun.

Phytoplankton are responsible for much of the oxygen present in the Earth's atmosphere - half of the total amount produced by all plant life. As well as being the base of the aquatic food web, providing an essential ecological function for all aquatic life.

Location of Dead zones

Dead zones are locations in the oceans that are unable to support life due to depleted oxygen levels.

Some of these were as small as a square kilometre (0.4 mi²), but the largest dead zone covered 70,000 square kilometres (27,000 mi²).

Of 845 reef building corals species

27% Threatened **20%** Near-Threatened

Due to coral mining, pollution, overfishing, blast fishing, the digging of canals and warming oceans

There are 3 principal reef types

Fringing reef - attached to a shore or borders it with an intervening shallow channel or lagoon.

Barrier reef - a reef separated from a mainland or island shore by a deep lagoon.

Atoll reef - circular or continuous barrier reef extending all the way around a lagoon without a central island.



containing 97% of the world's water

Marine covers 71% of world's surface

Home to 34% of all marine species

500m people depend on coral reefs for food and income

Coral Reefs covers 1% of aquatic ecosystems

Home to 25% of all marine species

Over 4,000 species of fish inhabit coral reefs

Principal coral reefs and reef areas

Many species of fish reproduce in freshwater, but spend most of their adult lives in the sea. Known as anadromous fish, these include salmon, trout but some fish are born in salt water, living most of or parts of their adult lives in fresh water; like eels.

There are three basic types of freshwater ecosystems

Lentic. Slow-moving water, including pools, ponds, and lakes.

Lotic. Rapidly-moving water, for example streams and rivers.

Wetlands. Areas where the soil is saturated or inundated for at least part of the time.

Home to 41% of all marine species

Freshwater covers 0.8% of aquatic ecosystems

containing 0.009% of its total water

Home to 13% of world's population

Desert covers 33% of land mass

The temperature in deserts can reach 113 F in the summer and as low as 32 F in the winter.

Forest covers 30% of land mass

32m acres of forest are lost each year

Rainforest covers 6% of land mass

40-70% of all species of the world's habitats are indigenous

Grasslands covers 31% of land mass

Experts estimates that we are losing 137 plant, animal and insect species every single day due to rainforest deforestation

Location of Grasslands

Grasslands cover nearly fifty percent of the land surface of the Africa.

Taiga makes up 27% of the world's forest cover

Found throughout the high northern latitudes, between the tundra, and the temperate forest, mostly from 52°N to 66°N, but with considerable regional variation and reaching 70°N in some area.

Location of the Taiga Forest

The American Black Bear is North America's smallest and most common species of bear, and can be found in the Taiga forest of North America.



The Baikal seal is one of the only freshwater seal species in the world.

Baikal is home to more than 2,500 species of plants and animals, 2/3 of which can be found nowhere else in the world.

with Great Lakes in North America and Lake Baikal in Russia, containing 7/8 of this fresh surface water.

0.6% all land surface water like rivers, lakes and ponds

97% of all surface water is in oceans

Largest deserts (mi²)



The saguaro is a large, tree-sized cactus species native to the Sonoran Desert, Sonora Mexico, and part of the San Felipe Desert. They take up to 75 years to develop a side arm, with some specimens living for more than 150 years. Grow anywhere from 15 to 50 feet tall.



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- Usernames: **firstnamelastname151**
- Password: **science (Last 2 of your student number)**

Student Gradespeed Login

- Username: HChr1875
- Password: Naples
- <https://int.eu.ds.dodea.edu/SAM/Default.aspx>

Student Google Drive Logon

- Username: pmar1234@student.dodea.edu (first letter first name, first three letters last name, last 4 of the student ID)
- Password: password1234 with the same numbers that are in their email address. They will have to reset the first time they log in.