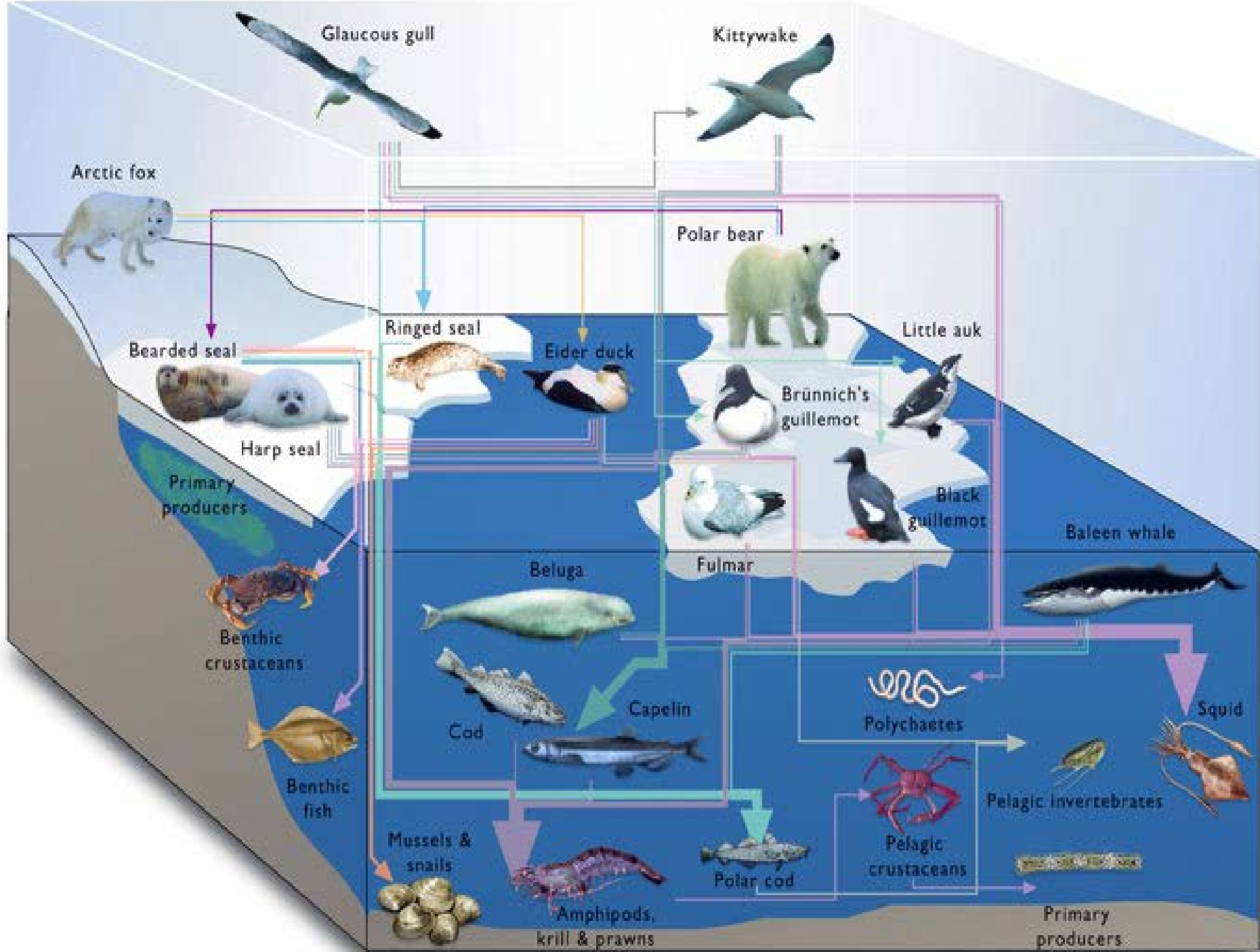# 24-26 February Science Assignments

- **Homework #20 Chapter 13, Section 2 Cycles in Nature due on 27 February.**

- **Cloning Project Presentations 22-26 Feb or until finished.**

- **Ecosystems Vocabulary Assignment on Quizlet.com due 4 March**

- **Ecosystem Vocabulary Test on 7-8 March.**

- **Ecosystem Project on my website due on 21 March.**

THIS MUST BE WHAT HAPPENS AS SOON AS I FINISH EXPLAINING DIRECTIONS

SpanishPlans.org

Glaucous gull

Kittywake

Arctic fox

Polar bear

Little auk

Ringed seal

Eider duck

Bearded seal

Brunnich's guillemot

Harp seal

Black guillemot

Primary producers

Baleen whale

Benthic crustaceans

Beluga

Fulmar

Cod

Capelin

Polychaetes

Squid

Benthic fish

Mussels & snails

Amphipods, krill & prawns

Polar cod

Pelagic crustaceans

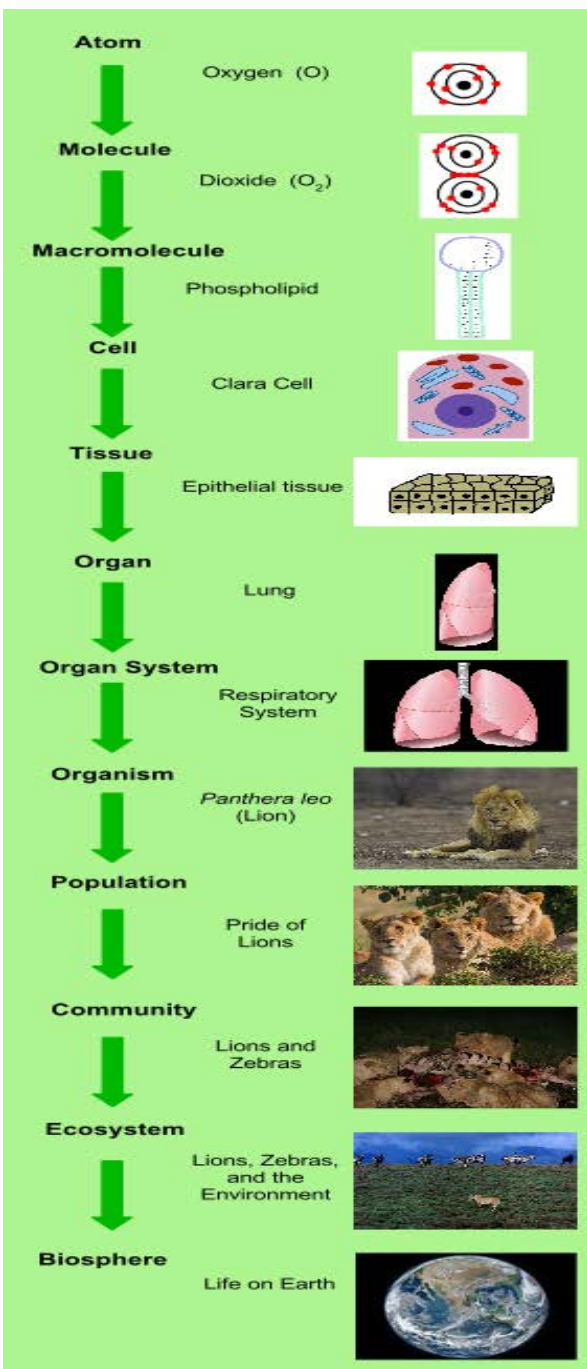Pelagic invertebrates

Primary producers

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

Left column (hierarchy):

Atom — Oxygen (O)

Molecule — Dioxide (O_2)

Macromolecule — Phospholipid

Cell — Clara Cell

Tissue — Epithelial tissue

Organ — Lung

Organ System — Respiratory System

Organism — *Panthera leo* (Lion)

Population — Pride of Lions

Community — Lions and Zebras

Ecosystem — Lions, Zebras, and the Environment

Biosphere — Life on Earth

Right column (table):

| Term	Description	Example
Biosphere	The part of Earth that contains all ecosystems	Biosphere
Ecosystem	Community and its nonliving surroundings	Hawk, snake, bison, prairie dog, grass, stream, rocks, air
Community	Populations that live together in a defined area	Hawk, snake, bison, prairie dog, grass
Population	Group of organisms of one type that live in the same area	Bison herd
Organism	Individual living thing	Bison
Groups of Cells	Tissues, organs, and organ systems	Nervous tissue → Brain → Nervous system
Cells	Smallest functional unit of life	Nerve cell
Molecules	Groups of atoms; smallest unit of most chemical compounds	Water, DNA

BIOMES
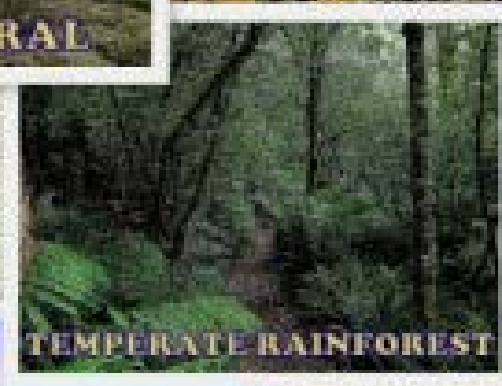
SAVANNAH
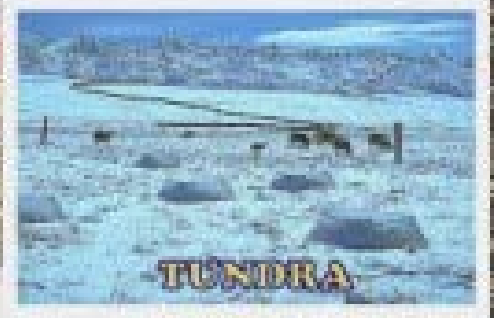
TUNDRA

DESERT
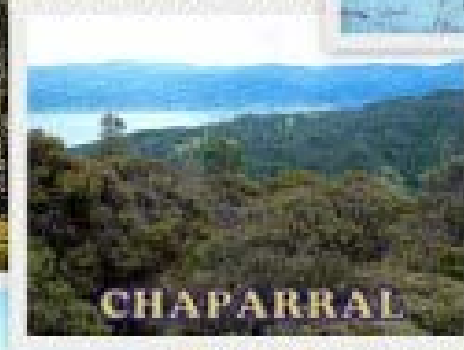
CHAPARRAL

TROPICAL RAINFOREST
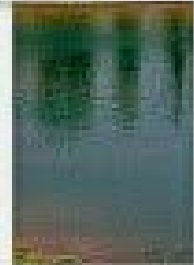
TAIGA

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.

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).

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.

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.

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

2.4% is frozen in glaciers and polar ice caps

97% of all surface water is in oceans

AQUATIC

containing **97%** of the **world's water**

Home to **41%** of all **marine species**

Marine covers **71%** of world's surface

Home to **34%** of all **marine species**

Freshwater covers **0.8%** of aquatic ecosystems

containing **0.009%** of its **total water**

20% of world's oxygen produced in Amazon Rainforest

Rainforest covers **6%** of land mass

Coral Reefs covers **1%** of aquatic ecosystems

500m people depend on coral reefs for food and income

Home to **25%** of all **marine species**

LAND

Home to **13%** of **world's population**

Desert covers **33%** of land masst

Forest covers **30%** of land mass

32m acres of forest are loss each year

Grasslands covers **31%** of land mass

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

Largest deserts (mi²)

Arctic (5,300,000+)
Great Basin (190,000)
Arabian (900,000)
Gobi (500,000)
Sahara (3,320,000+)
Thar (200,000)
Kalahari (360,000)
Great Victoria (250,000)
Patagonian (260,000)
Antarctic (5,339,573)

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

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.

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

Location of the Taiga Forest

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.

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.

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

Over **4,000** species of fish inhabit coral reefs

Principal coral reefs and reef areas

Pulley Ridge
Belize Barrier Reef
Andros, Bahamas Barrier Reef
Red Sea Coral Reef
Maldives
Ghe Raja Ampat is. Great Barrier Reef New Caledonia Barrier Reef

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.

www.quia.com/web

- 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.