

Climatograph Activity

Ecological Problems – Modified by M. Oliphant from R. Young

$$\frac{\quad}{15C} + \frac{\quad}{5T} = \frac{\quad}{20}$$

BACKGROUND INFORMATION

Like we talked about in class, one of the most important factors in defining a biome is the CLIMATE.

Climate is the LONG TERM AVERAGE WEATHER for an area and is mostly based on the TEMPERATURE and the RAIN experienced.

Ecologists create graphs called CLIMATOGRAPHS to help them understand the climate of biomes and communicate that information to other ecologists.

DIRECTIONS

Using the information provided, create a climatograph for each one of the mystery biomes.

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A	Temp	1.1	1.7	6.1	12.2	17.8	22.2	25.0	23.3	20.0	13.9	7.8	2.2
	Precip	8.1	7.6	8.9	8.4	9.2	9.9	11.2	10.2	7.9	7.9	6.4	7.9
B	Temp	25.6	25.6	24.4	25.0	24.4	23.3	23.3	24.4	24.4	25.0	25.6	25.6
	Precip	25.8	24.9	31.0	16.5	25.4	18.8	16.8	11.7	22.1	18.3	21.3	29.2
C	Temp	-3.9	-2.2	1.7	8.9	15.0	20.0	22.8	21.7	16.7	11.1	5.0	-0.6
	Precip	2.3	7.8	2.8	2.8	3.2	5.8	5.3	3.0	3.6	2.8	4.1	3.3
D	Temp	-22.2	-22.8	-21.1	-14.4	-3.9	1.7	5.0	5.0	1.1	-3.9	-10.0	-17.2
	Precip	1.0	1.3	1.8	1.5	1.5	1.3	2.3	2.8	2.8	2.8	2.8	1.3
E	Temp	-0.6	2.2	5.0	10.0	13.3	18.3	23.3	22.2	16.1	10.6	4.4	0.0
	Precip	1.5	1.3	1.3	1.0	1.5	0.8	0.3	0.5	0.8	1.0	0.8	1.5

Temperature (°C) Precipitation (cm)

DISCUSSION QUESTIONS:

/5C

1. What are the factors which determine the climate of a biome?
2. What is a climatograph?
3. Using your climatographs and the information provided below, match your climatograph with the correct biome:

- Biome A = _____
- Biome B = _____
- Biome C = _____
- Biome D = _____
- Biome E = _____

/5T - Please add to each graph.

GENERIC DESCRIPTIONS OF VARIOUS BIOMES

Temperate Deciduous Forest

Precipitation tends to be distributed fairly evenly throughout the year, although this biome can experience large changes in temperature depending on the season.

Taiga

Located usually in the north, the taiga are large conifer (evergreen) forests. Seasons in the taiga are divided into a shorter, wetter, warmer summer; and a longer, colder, drier winter.

Savanna

The warm cousin of a [temperate] grassland, the savannas are also known for low lying vegetation and grasses. Warm to hot year around, the savanna experiences a concentrated period of rain followed by a long period of drought.

Tropical Rain Forest

Usually experiences two distinct seasons – a rainy and a dry season – while remaining warm throughout the year.

Grassland

A biome composed of mostly grasses and low-lying vegetation, the grasslands are known for their large swings in temperature (very hot in the summer, cold in the winter), along with moderate precipitation.

Temperate Rain Forest

The cooler (temperature-wise) cousin of the tropical rain forest. The temperate rain forest experiences lower temperatures, while experiencing higher levels of precipitation.

Desert

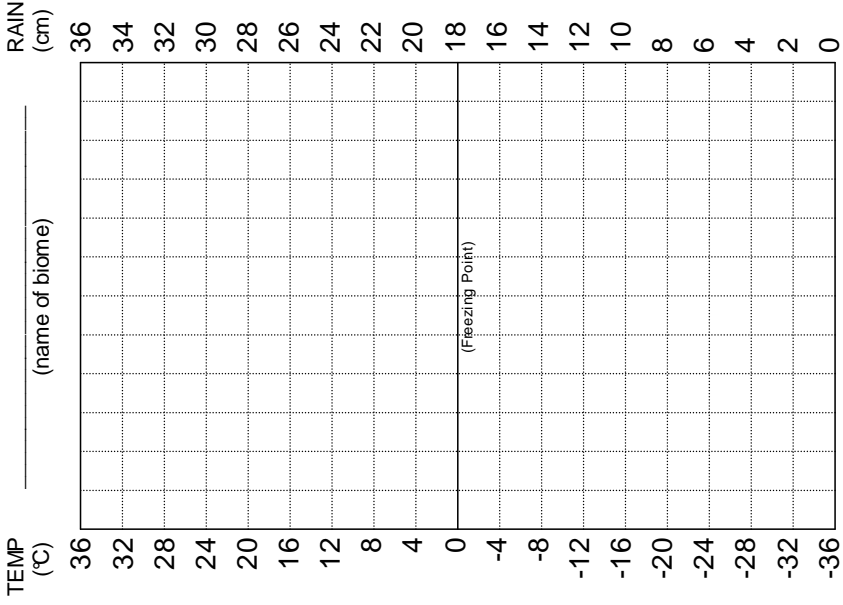
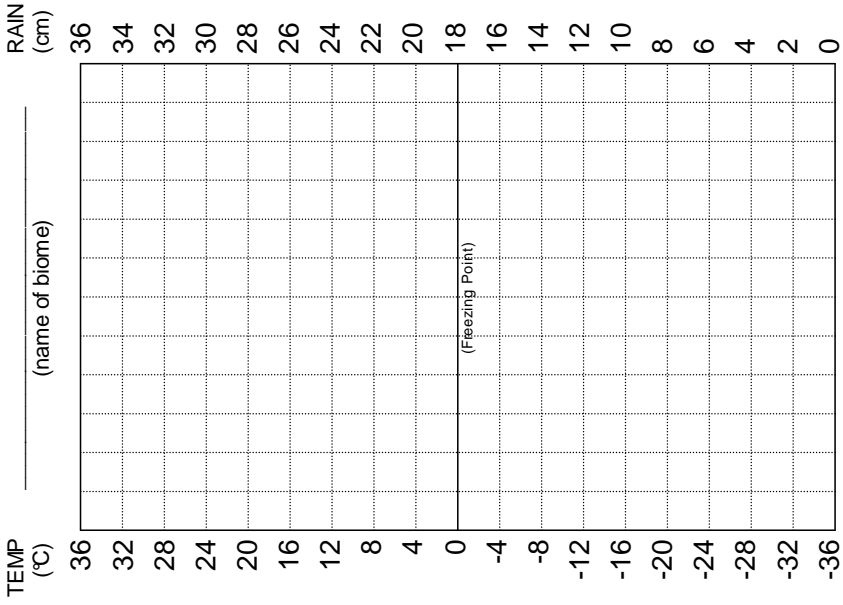
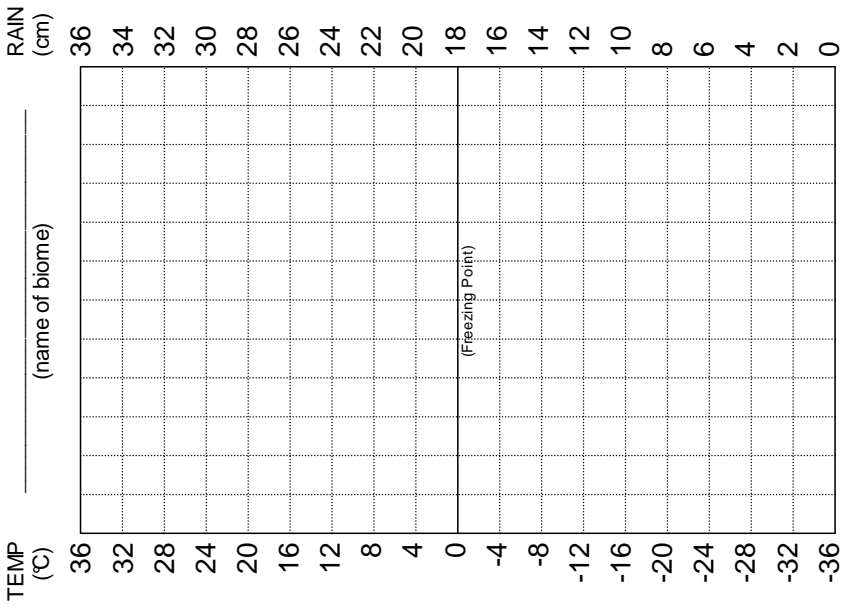
Annual precipitation is low and scattered unevenly throughout year. Most are considered “hot deserts” although a few different “cold deserts” exist around the world.

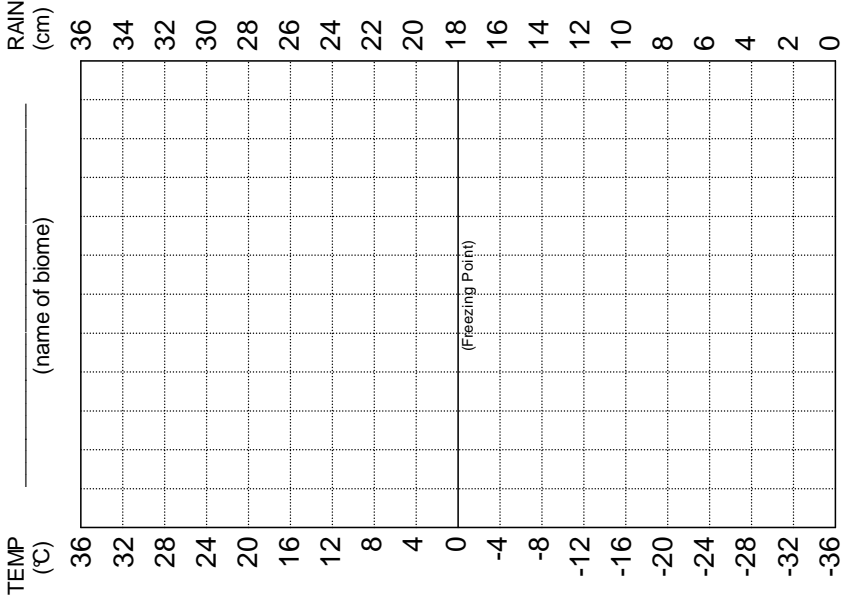
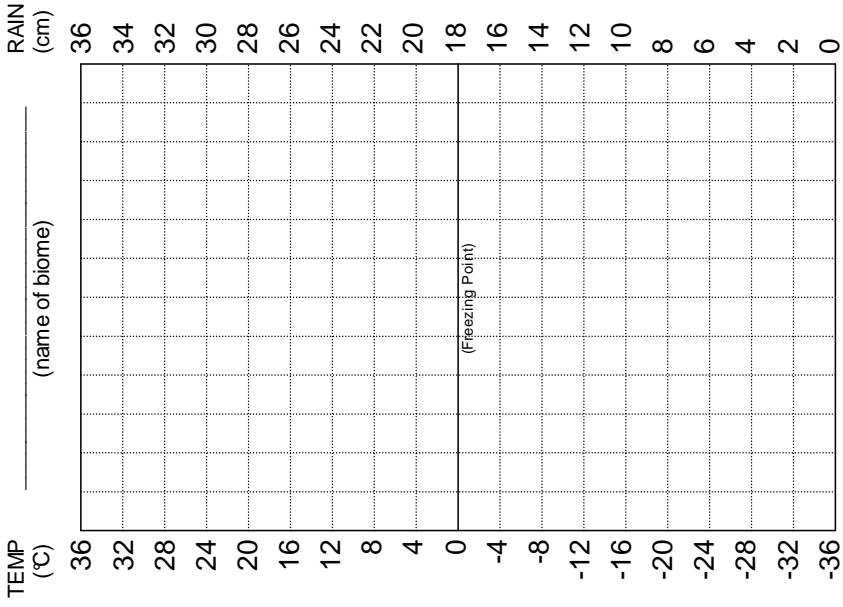
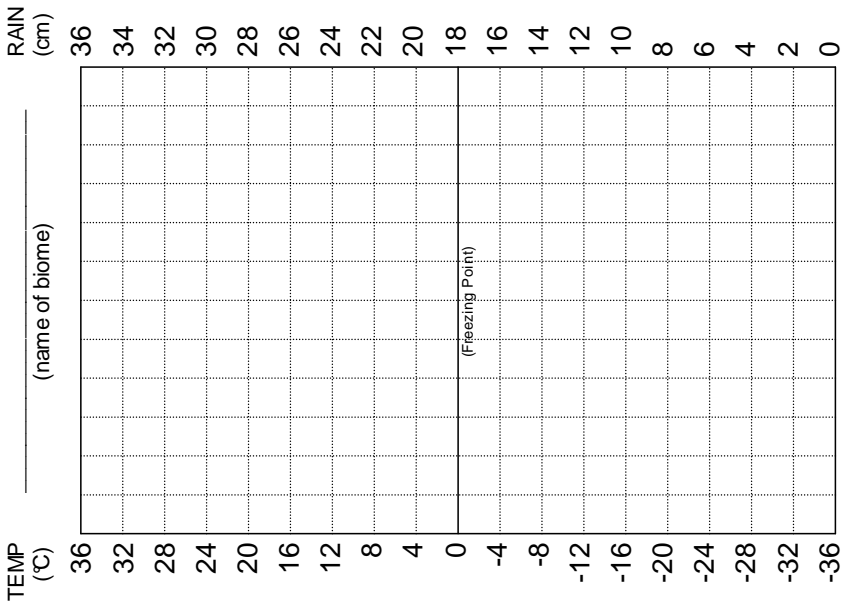
Tundra

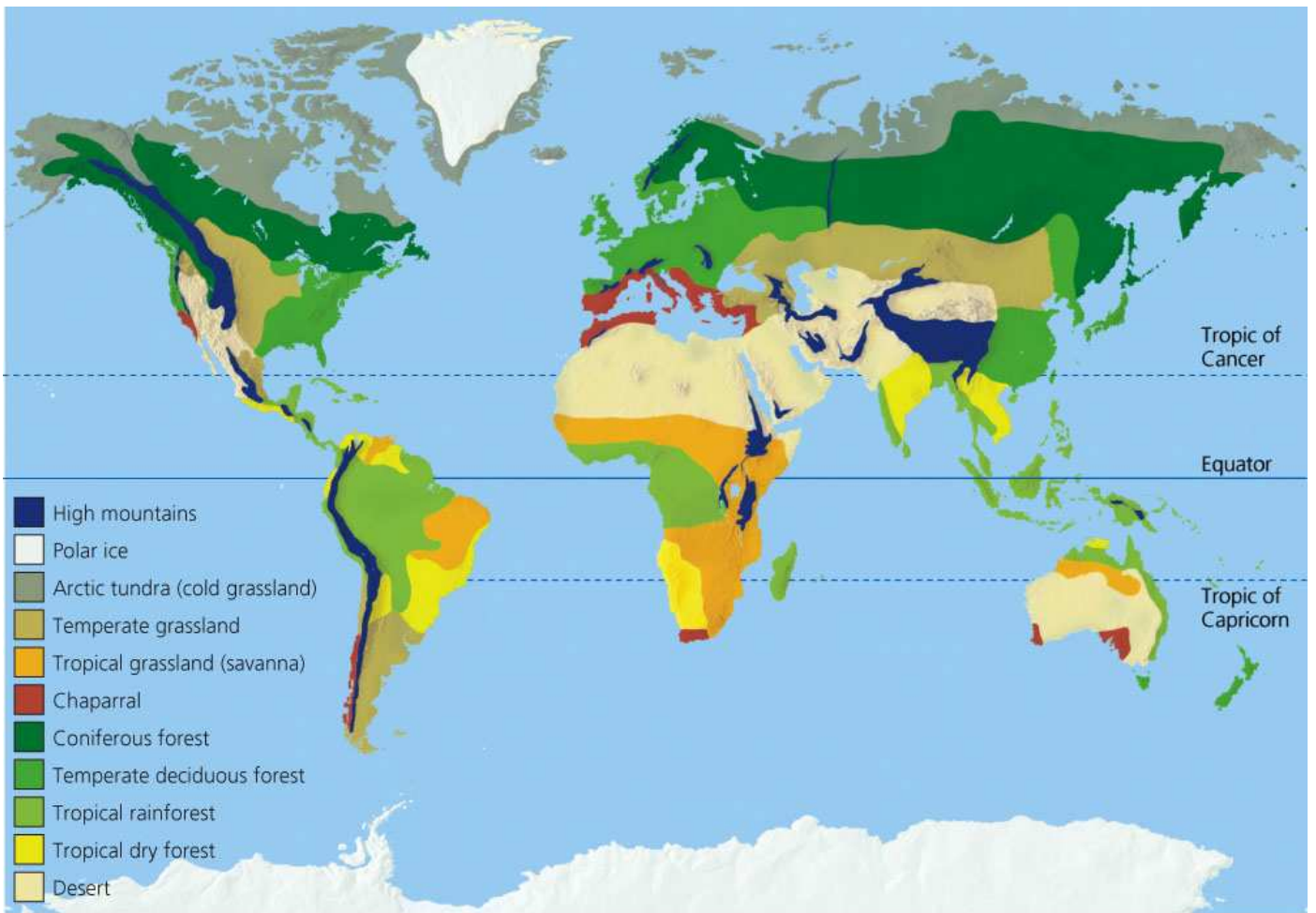
Cold year-around, the soil of the tundra rarely thaws to a great extent. Winters are bitterly cold, and summers are cool. Precipitation is low year-around.

Chaparral

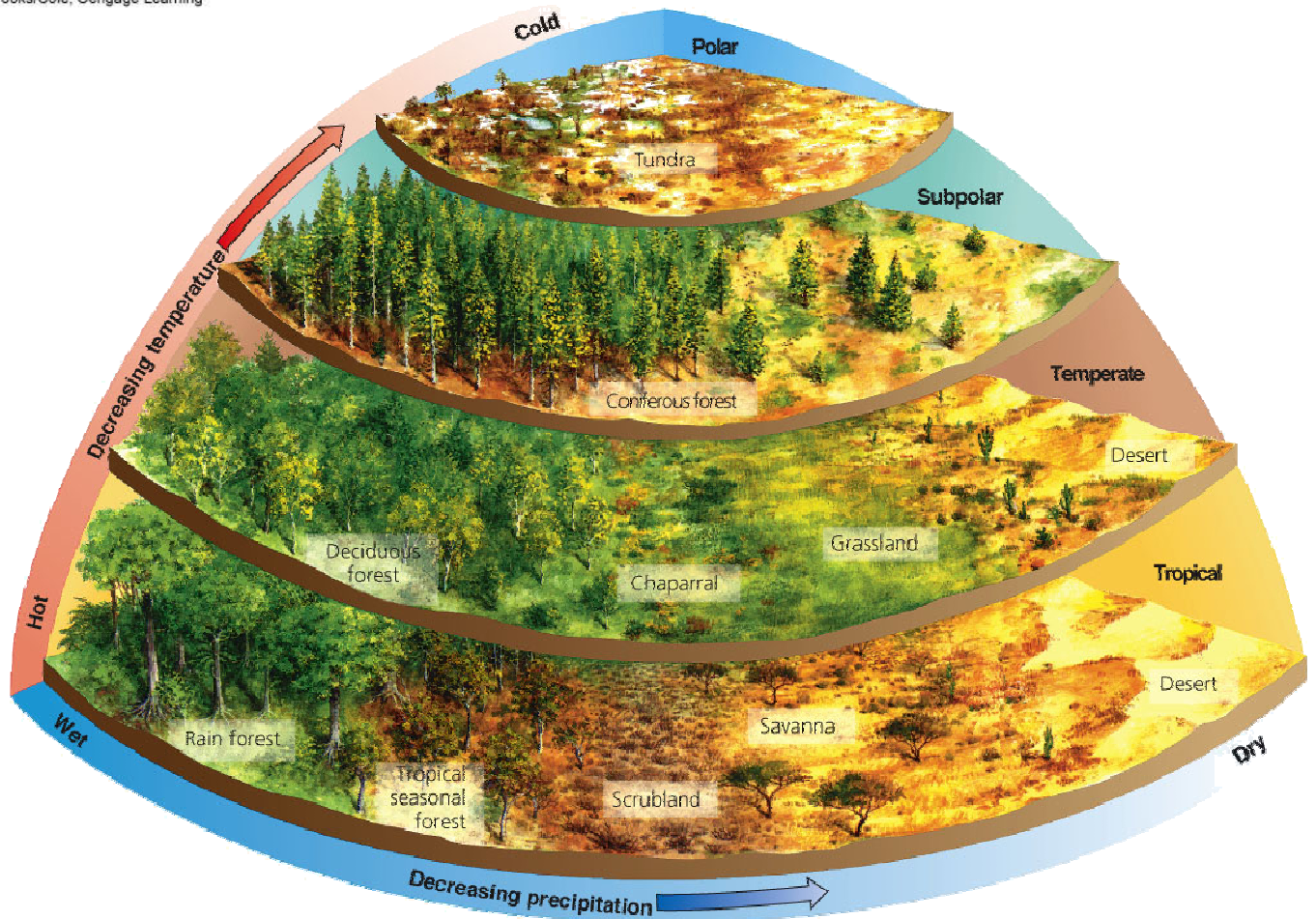
Often referred to as “scrub land,” the chaparral is usually a dry place to live. While summers can be very hot (leading to fires and droughts), winters are usually milder, although still dry.







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