Temperature/Precipitation Biome Activity

Purpose: To construct a graph showing characteristics of various biomes using temperatures and precipitation data from locations around the world.

Materials: Pencil, Precipitation & Temperature data sheet

Procedure:

- Use the temperature and precipitation information from the data sheet to plot points on the graph. Each point should be labeled with the biome description abbreviation.
  TF=tropical rain forest
  CF=coniferous forest
  DF=deciduous forest
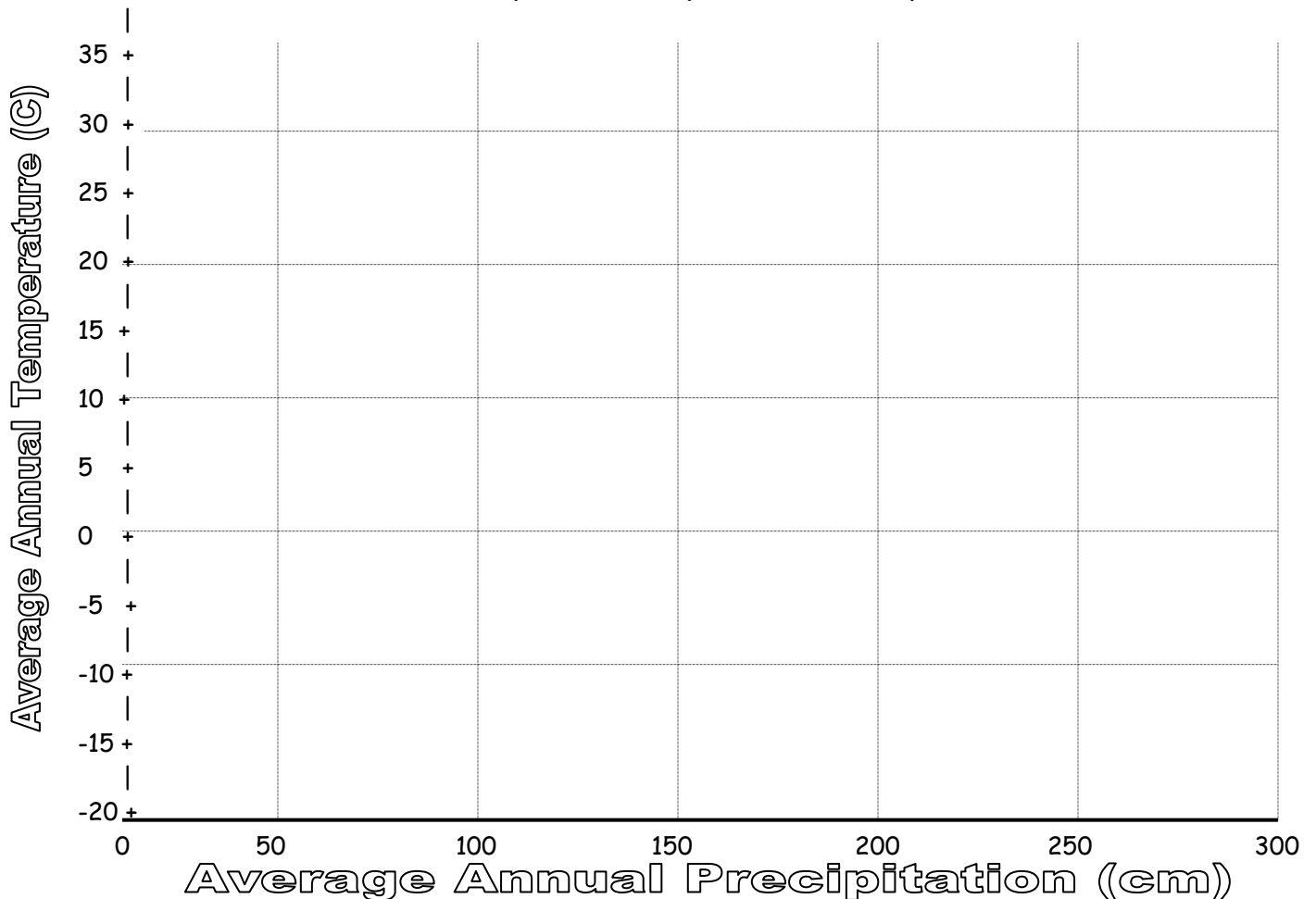 G=grasslands
  T=tundra
  D=desert
  S=savanna
- **Draw a loose circle** around all of the biome description abbreviations of the same type
- Label each enclosure with its correct name
- Answer the application questions

Temperature/Precipitation Biome Graph

Application Questions:

1. Which of the biomes has the broadest set of characteristics? _____How do you know?

   Which of the biomes has the smallest set of characteristics?_____ How do you know?

2. What seems to be the major difference between a deciduous forest and a coniferous forest?
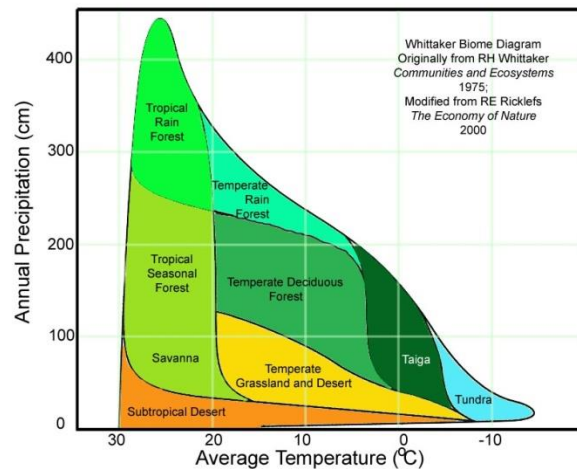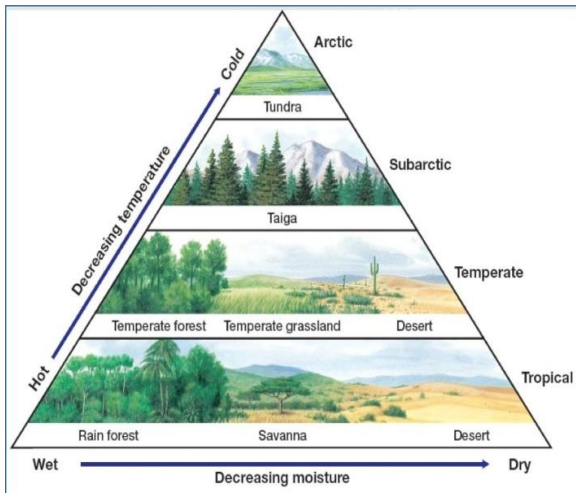
3. What makes it possible for a country (the US for example) to have more than one type of biome within its borders?

4. The lower right hand side of your graph seems to be void of biomes. What reason for this occurrence can you give? Explain.

5. Prickly Pete wants to start a cactus grove in Oregon, where the average temperature is 10C and the average precipitation in 150cm. Would you be willing to invest in this venture? _____Why?

   What type of plant would be more suited to this location?_____

6. What might happen to a coniferous forest and a deciduous forest which reside next to each other on a mountain slope if the average temperature in that locale were to rise 10 degrees C?

7. What does figure A describe happens to vegetation as precipitation decreases?

8. Using figure B describe the relationship of precipitation and temperature.

Precipitation & Temperature data sheet

Location	Biome Abbreviation	Precipitation (cm)	Temperature (C)
Mongolia	CF	200	5
Bolivia	TF	257	30
Chile	D	10	10
Mexico	TF	210	28
Nevada	D	13	25
Alaska	T	15	-12
Canada	T	12	-9
Egypt	D	12	30
Greenland	T	35	-10
Florida	DF	156	17
Cuba	TF	295	29
Kansas	G	40	20
Russia	CF	170	-6
Canada	CF	165	9
Japan	DF	159	20
Africa	S	160	28
Australia	D	10	18
Michigan	DF	110	15
India	TF	250	19
Alps	T	20	-12
Alberta	G	35	0
Iceland	T	20	-15
England	DF	150	15
France	DF	105	14
Kuwait	D	5	19
China	S	95	28
China	D	2	5
Russia	T	10	-17
Peru	DF	60	15
Oregon	DF	170	14
Baja	D	4	31
Panama	TF	295	15
New Zealand	TF	205	15
Texas	G	40	28
Ontario	CF	80	-13
Norway	CF	109	-15
Argentina	S	200	22
South Africa	D	25	23
New York	DF	140	20
Pakistan	TF	210	20
Australia	S	90	20
Russia	CF	45	-6
California	DF	80	16
Turkey	G	20	15
Canada	CF	90	0
North Dakota	G	40	10
South Dakota	G	40	15
Morocco	G	14	15
Russia	G	6	-5
Georgia	DF	125	21
Sweden	CF	198	10
Germany	DF	54	5
Quebec	CF	103	-5
Spain	S	140	25
Libya	D	2	28

Match the correct map and climograph to each biome in the chart below. CHECK YOUR ANSWERS WITH KEY. Once these are correct, describe the temperature and precipitation trends as shown in the climograph.

BIOME	MAP #	GRAPH	TEMPERATURE	PRECIPITATION
CHAPARRAL				
DESERT				
GRASSLAND				
SAVANNA				
TAIGA				
TEMPERATE RAINFOREST				
TEMPERATE SEASONAL				
TROPICAL RAINFOREST				
TUNDRA				

Go to the following Interactive Biome & Climograph Matching Activity. The name of the biome is BELOW the graphs.
https://earthobservatory.nasa.gov/biome/graphmatch_advanced.php

1. Tokyo, Japan is a _____ biome.

2. Lahti, Finland is a _____ biome.

3. Manaue, Brazil is a _____ biome.

4. Nome, Alaska is a _____ biome.

5. Cairo, Egypt is a _____ biome.

6. Christchurch, New Zealand is a _____ biome.

7. Austin, Texas is a _____ biome.

Go to the following interactive site and investigate the three biomes shown via the 360^0 camera experience. Describe what you see in each. https://askabiologist.asu.edu/explore/Virtual-360-Biomes

DESERT	TROPICAL RAINFOREST	TEMPERATE FOREST