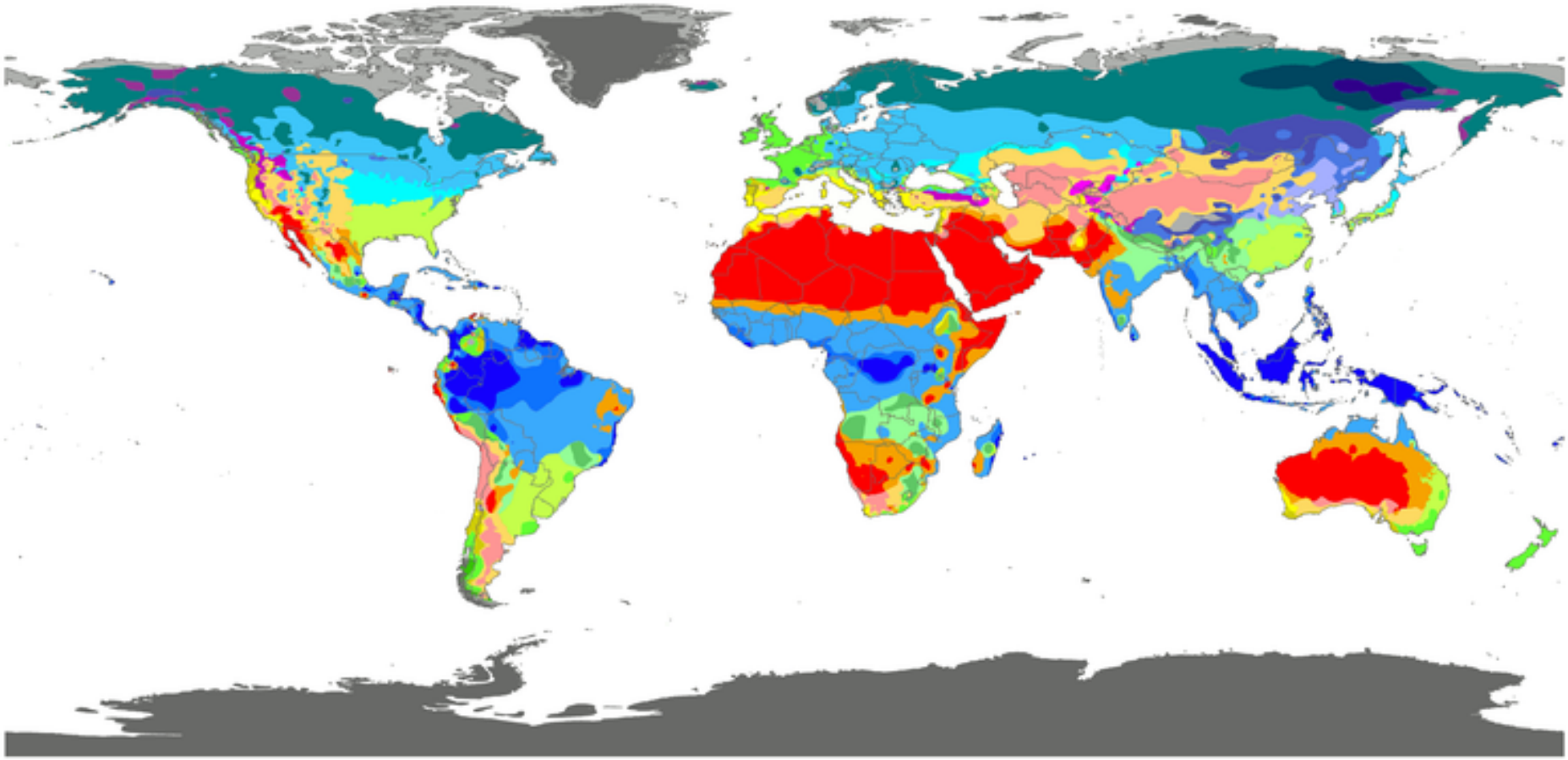
World map of Köppen-Geiger climate classification



THE UNIVERSITY OF MELBOURNE

What do the areas of the same color have in common?

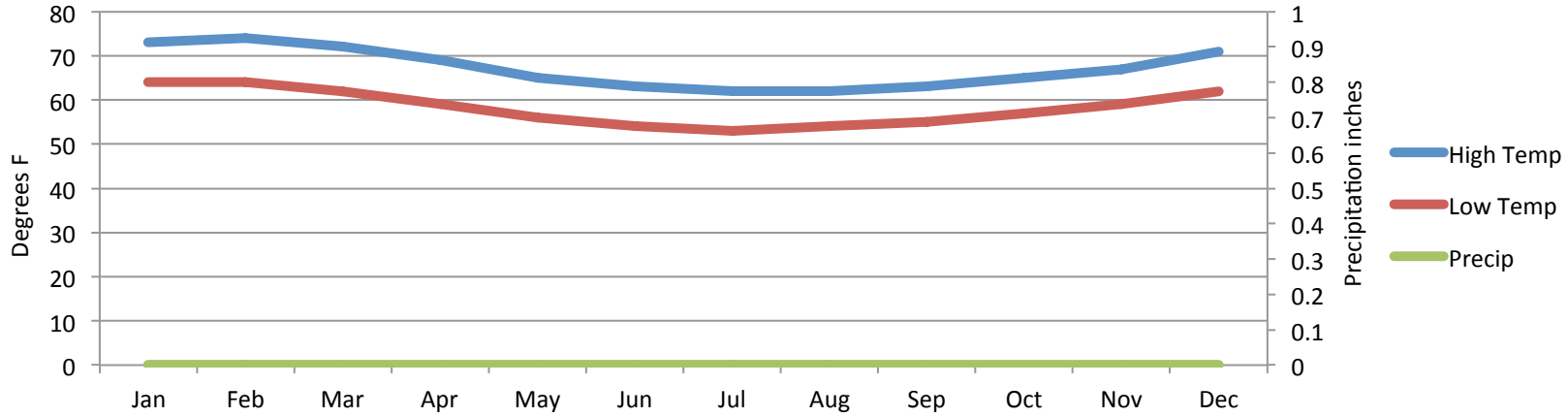
Why?

Station: 1

A. Antofagasta, Chile

Lat, Long
23 S, 70 W

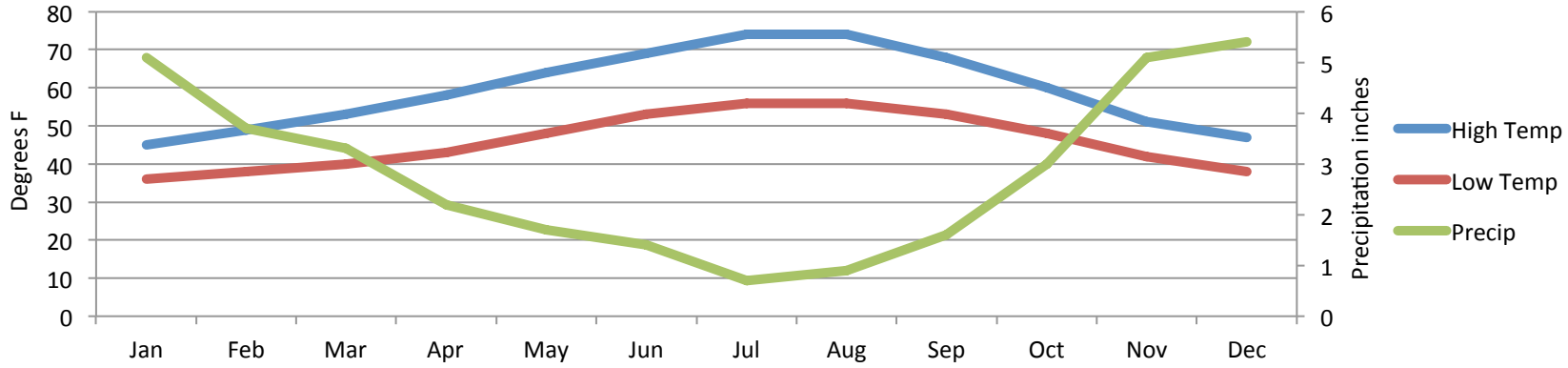
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High Temp	73	74	72	69	65	63	62	62	63	65	67	71
Low Temp	64	64	62	59	56	54	53	54	55	57	59	62
Precip	0	0	0	0	0	0	0	0	0	0	0	0



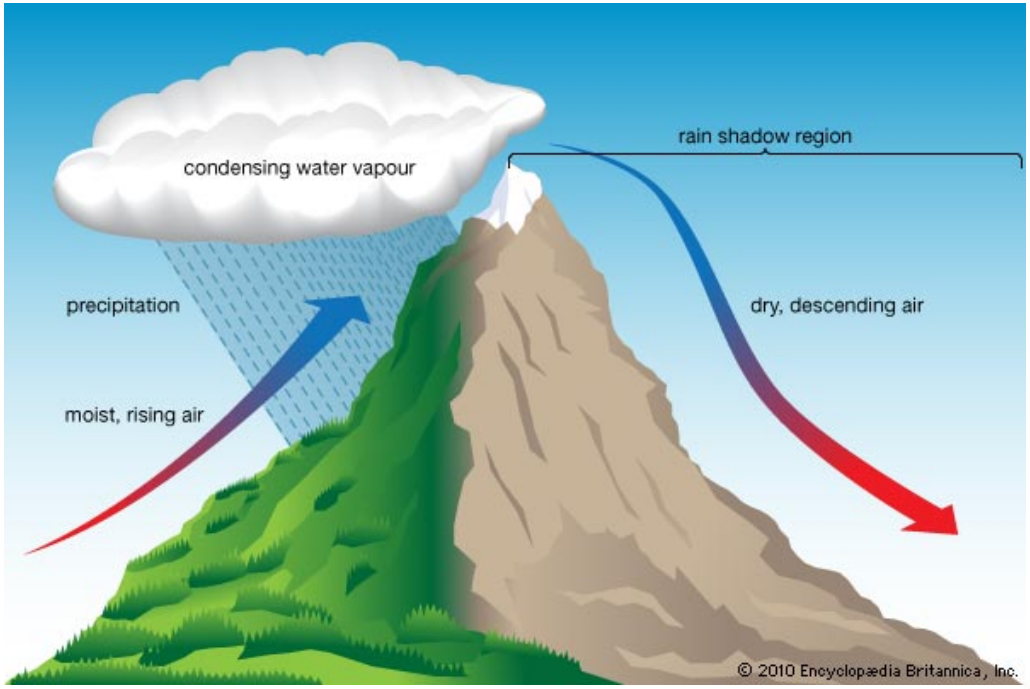
B. Seattle, Washington

Lat, Long
47 N, 122 W

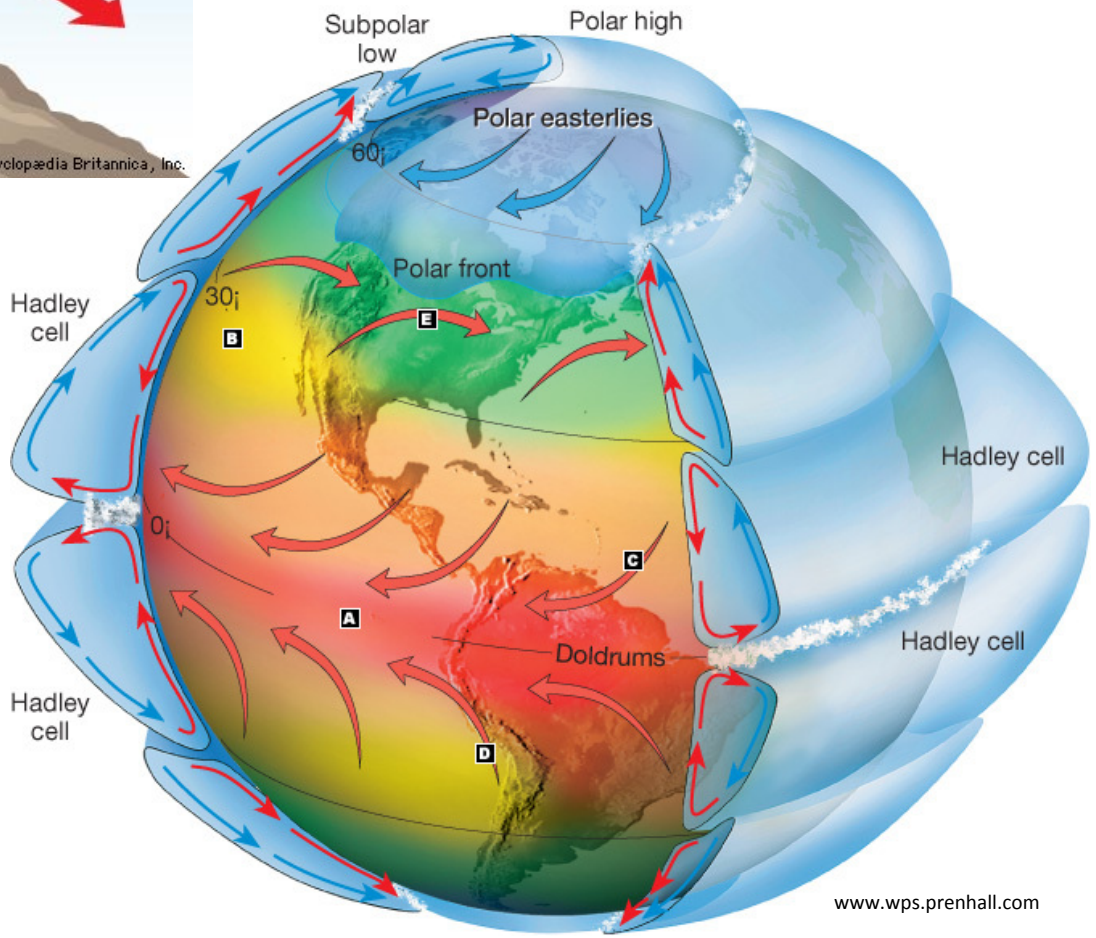
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High Temp	45	49	53	58	64	69	74	74	68	60	51	47
Low Temp	36	38	40	43	48	53	56	56	53	48	42	38
Precip	5.1	3.7	3.3	2.2	1.7	1.4	0.7	0.9	1.6	3	5.1	5.4



Station: 1



Hint: How do the winds pass over the mountains near Seattle and Antofagasta?



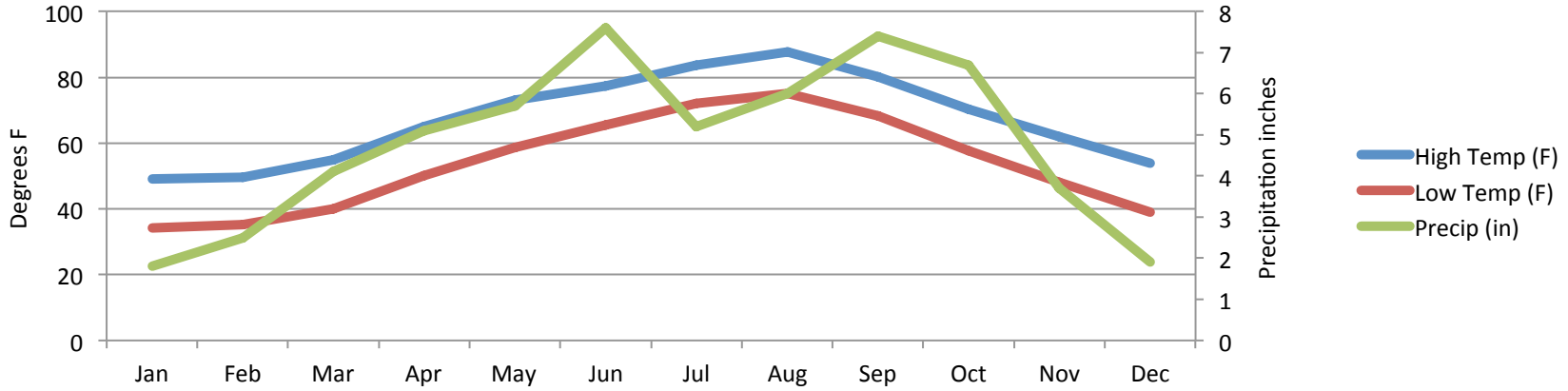
Station: 1
Vancouver
Seattle
UNITED STATES
Chicago
Toronto
Boston
Detroit
New York
Philadelphia
Washington
Atlanta
San Francisco
Los Angeles
Dallas
Houston
Miami
MEXICO
Havana
Mexico City
Port-au-Prince
Santo Domingo
Guatemala
Caracas
VENEZUELA
Bogota
COLOMBIA
ECUADOR
Belém
Manaus
Fortaleza
Recife
Lima
PERU
BRAZIL
Salvador
Brasília
La Paz
BOLIVIA
Belo Horizonte
São Paulo
CHILE
Asunción
Rio de Janeiro
North Atlantic
Hint: This is a topographical map. What does the dark brown color represent?

Station: 2

A. Tokyo, Japan

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High Temp	49.1	49.5	54.9	64.9	73	77.4	83.8	87.6	80.1	70.2	61.9	53.8
Low Temp	34.2	35.1	39.9	50	58.6	65.5	72.1	75.2	68.4	57.6	48	39
Precip	1.8	2.5	4.1	5.1	5.7	7.6	5.2	6	7.4	6.7	3.7	1.9

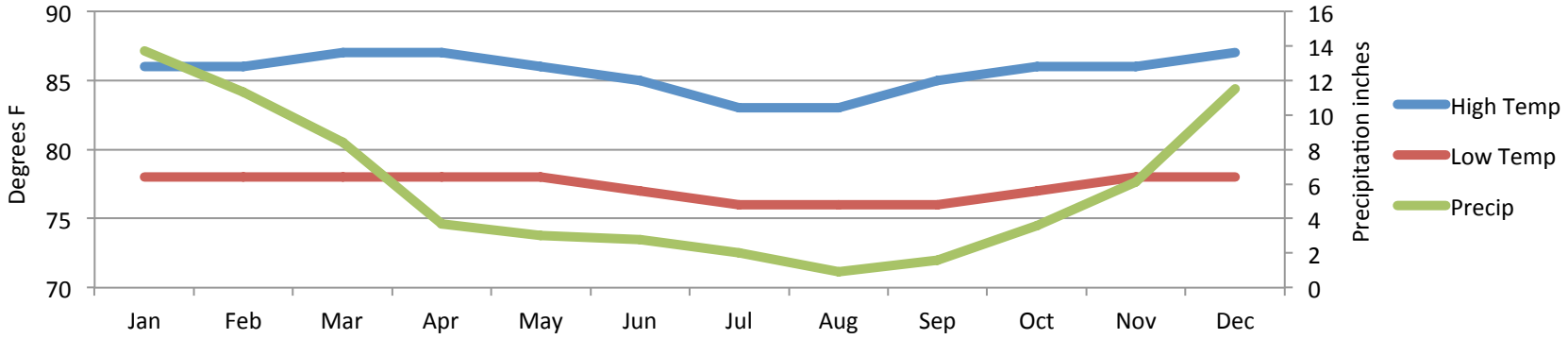
Lat, Long
35 N, 139 E



Lat, Long
8 S, 115 E

B. Bali, Indonesia

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High Temp	86	86	87	87	86	85	83	83	85	86	86	87
Low Temp	78	78	78	78	78	77	76	76	76	77	78	78
Precip	13.7	11.3	8.4	3.7	3	2.8	2	0.9	1.6	3.6	6.1	11.5

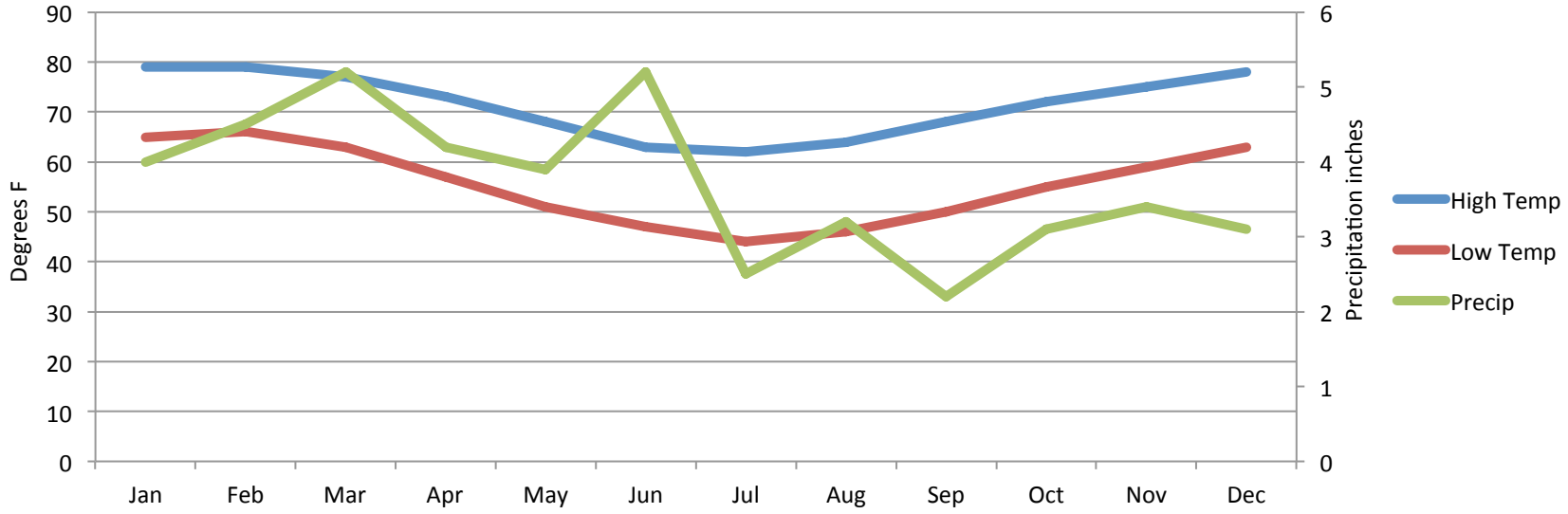


Station: 2

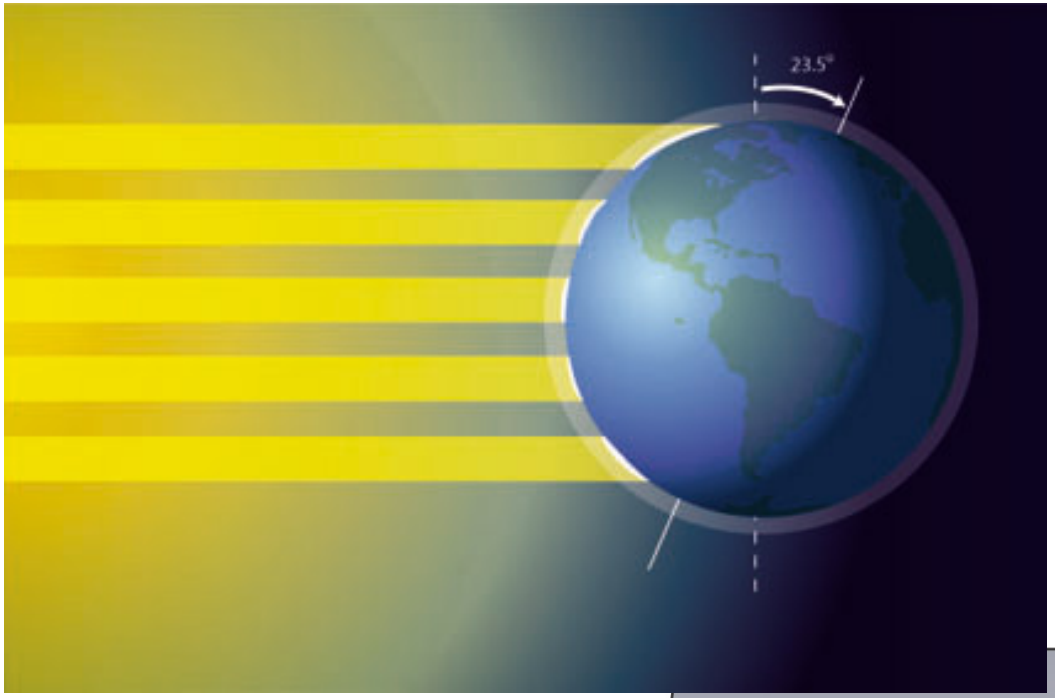
C. Sydney, Australia

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High Temp	79	79	77	73	68	63	62	64	68	72	75	78
Low Temp	65	66	63	57	51	47	44	46	50	55	59	63
Precip	4	4.5	5.2	4.2	3.9	5.2	2.5	3.2	2.2	3.1	3.4	3.1

Lat, Long
33 S, 151 E



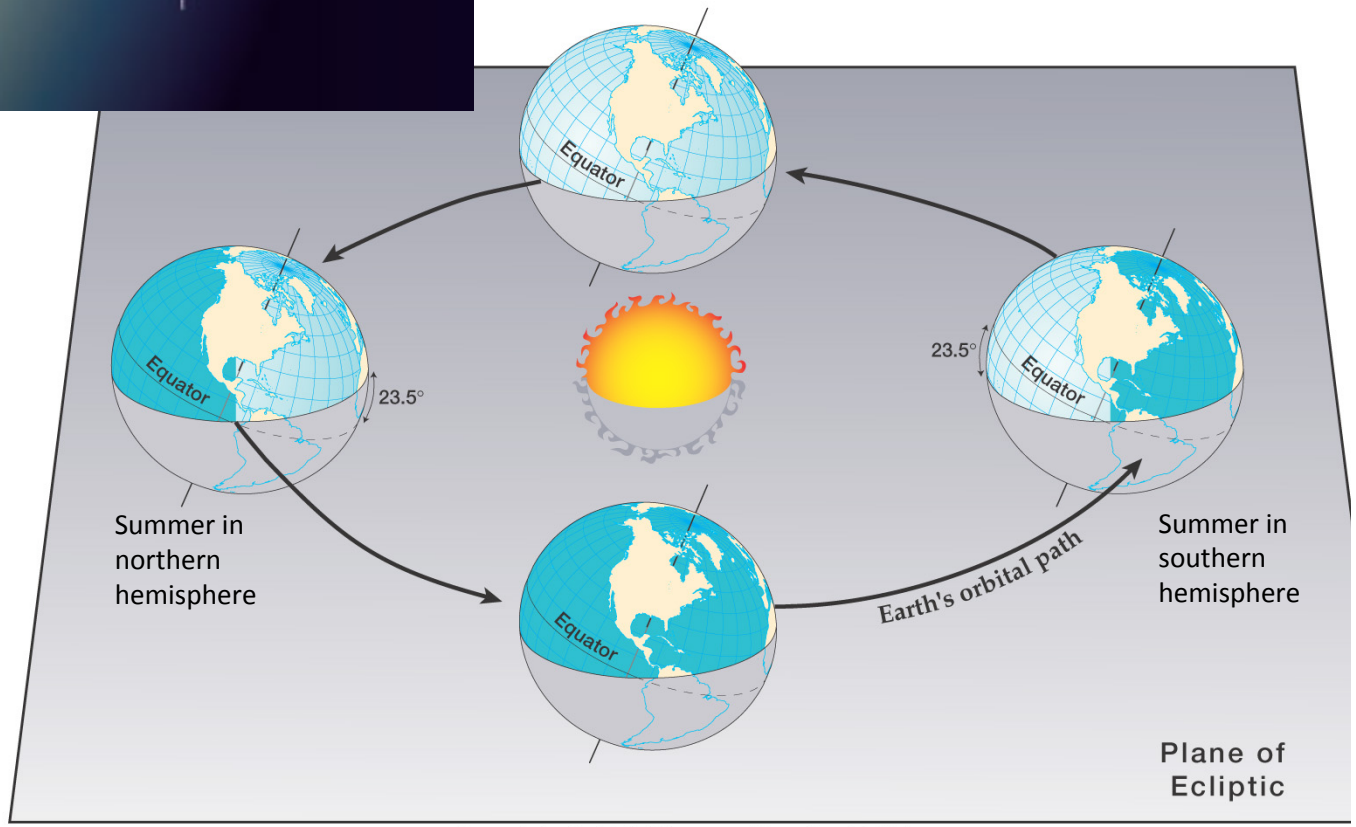
Station: 2



Nature.com

Hint: Direct sunlight is responsible for summer.

Do all places in the world have the same seasons?



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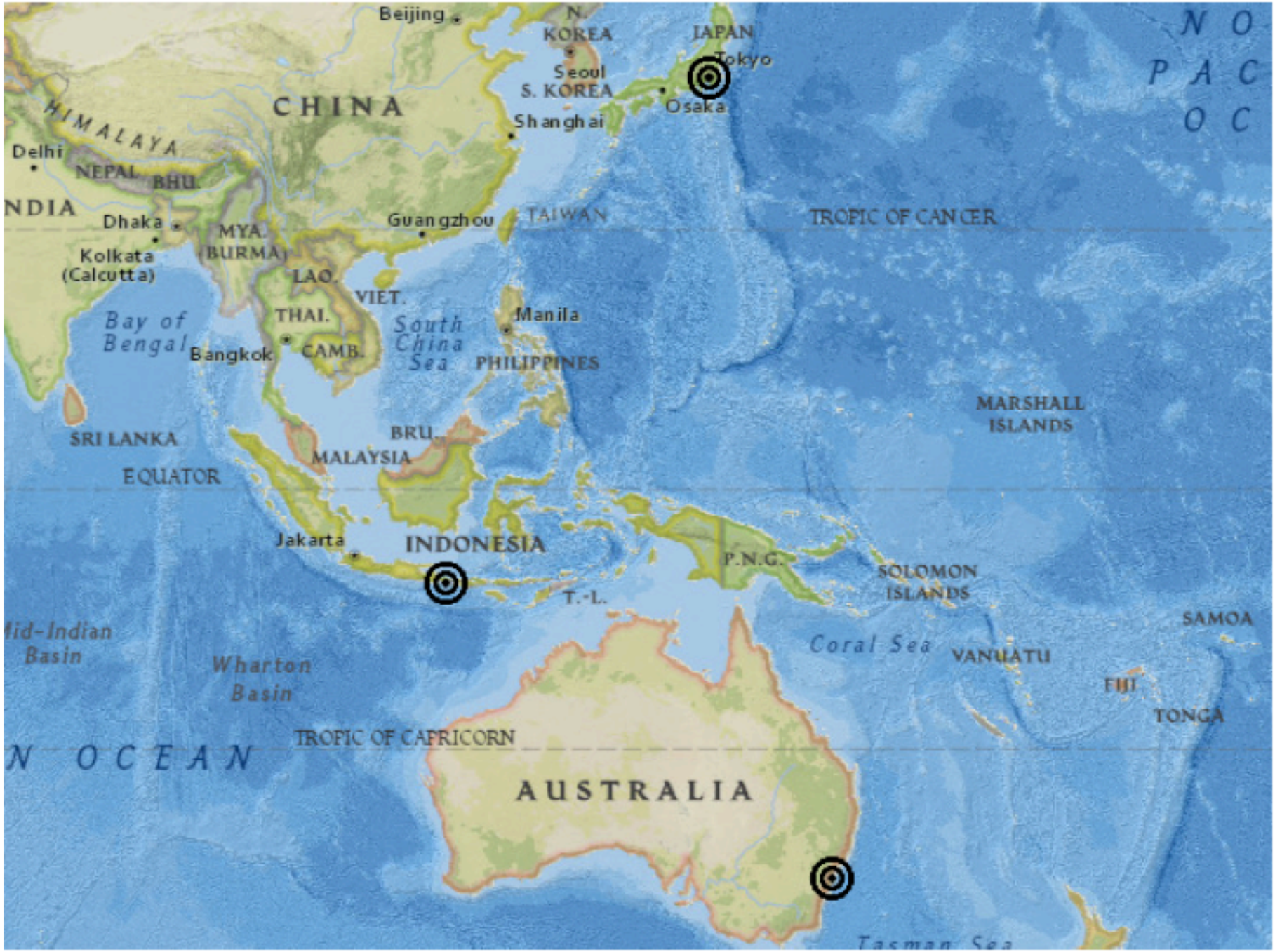
Station: 2

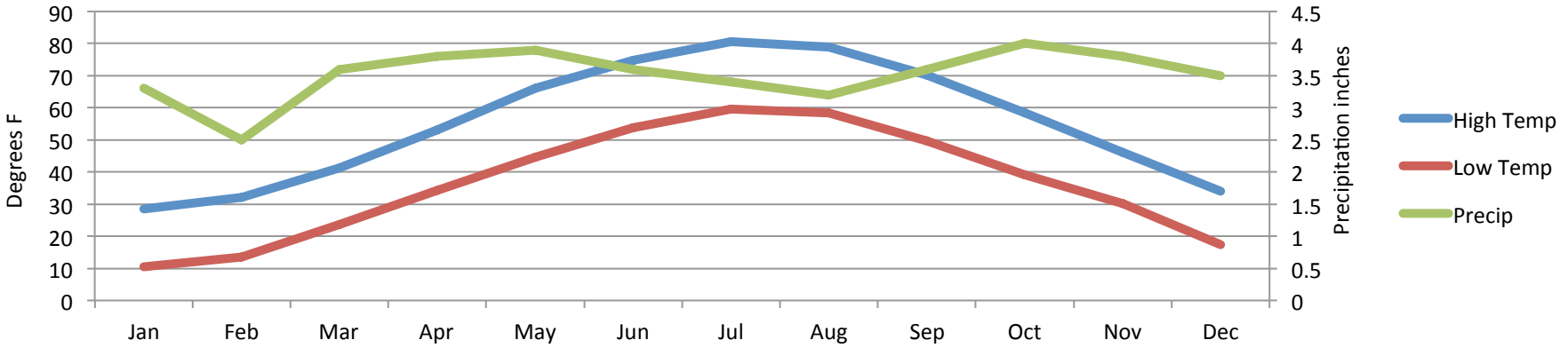

Beijing
N. KOREA
JAPAN
Tokyo
Seoul
S. KOREA
Osaka
CHINA
Shanghai
HIMALAYA
Delhi
NEPAL
BHU.
NDIA
Dhaka
MYA. (BURMA)
Guangzhou
TAIWAN
TROPIC OF CANCER
Kolkata (Calcutta)
LAO.
VIET.
THAI.
Manila
Bay of Bengal
South China Sea
Bangkok
CAMB.
PHILIPPINES
MARSHALL ISLANDS
SRI LANKA
BRU.
MALAYSIA
EQUATOR
Jakarta
INDONESIA
P.N.G.
SOLOMON ISLANDS
T.-L.
SAMOA
Coral Sea
VANUATU
FIJI
TONGA
Wharton Basin
TROPIC OF CAPRICORN
AUSTRALIA
Tasman Sea

A. Bangor, Maine

Station: 3

Lat, Long
44 N, 68 W

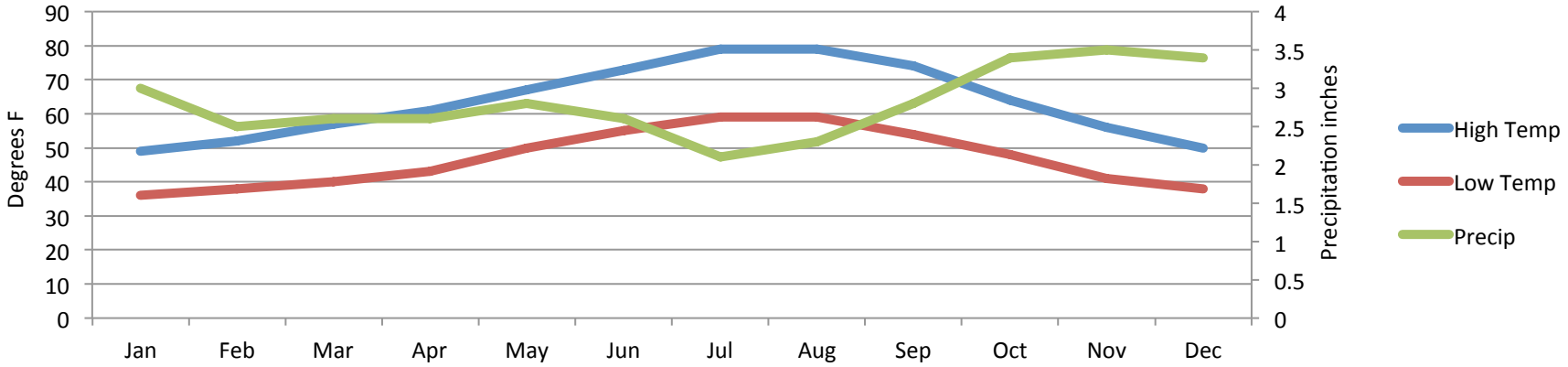
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High Temp	28.5	32.1	41.2	53.1	65.4	74.8	80.5	79	58.4	46	46	34.1
Low Temp	10.5	13.6	23.7	34.3	44.7	53.9	59.7	58.3	49.6	39.2	30.2	17.3
Precip	4.73.3	2.5	3.6	3.8	3.9	3.6	3.4	3.2	3.6	4	3.8	3.5



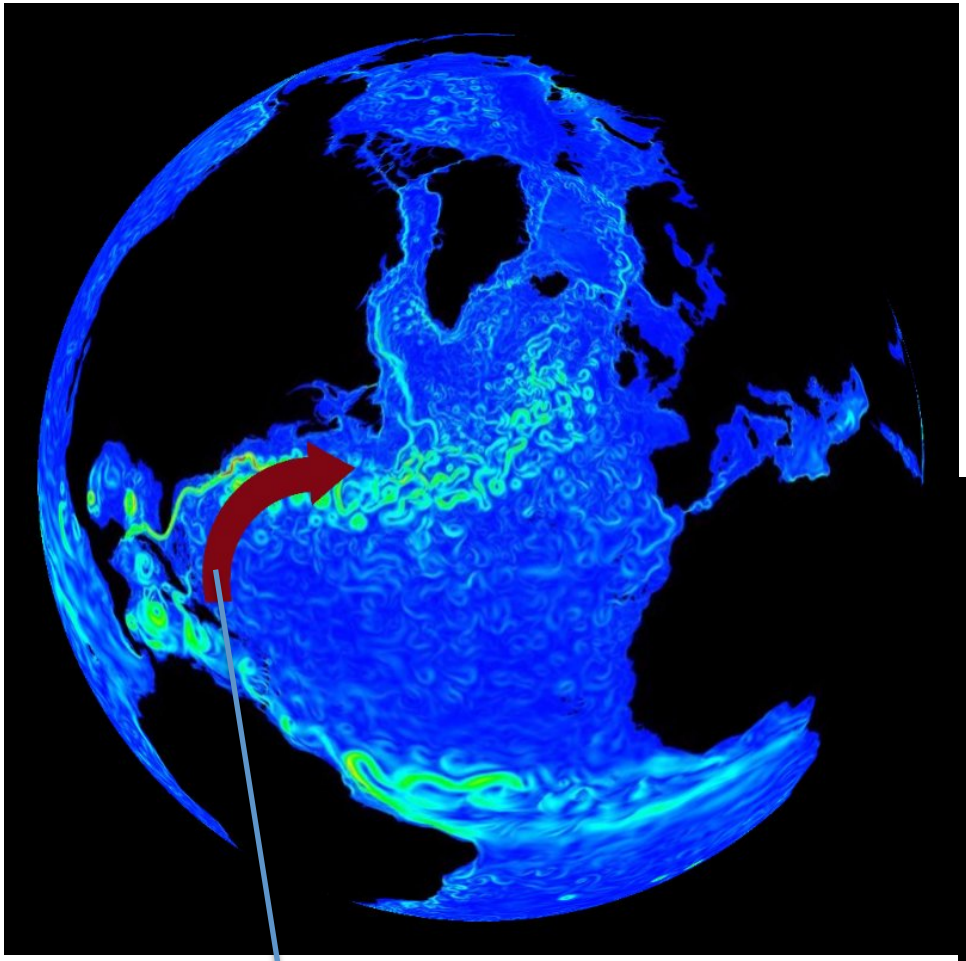
B. Bordeaux, France

Lat, Long
44 N, 0

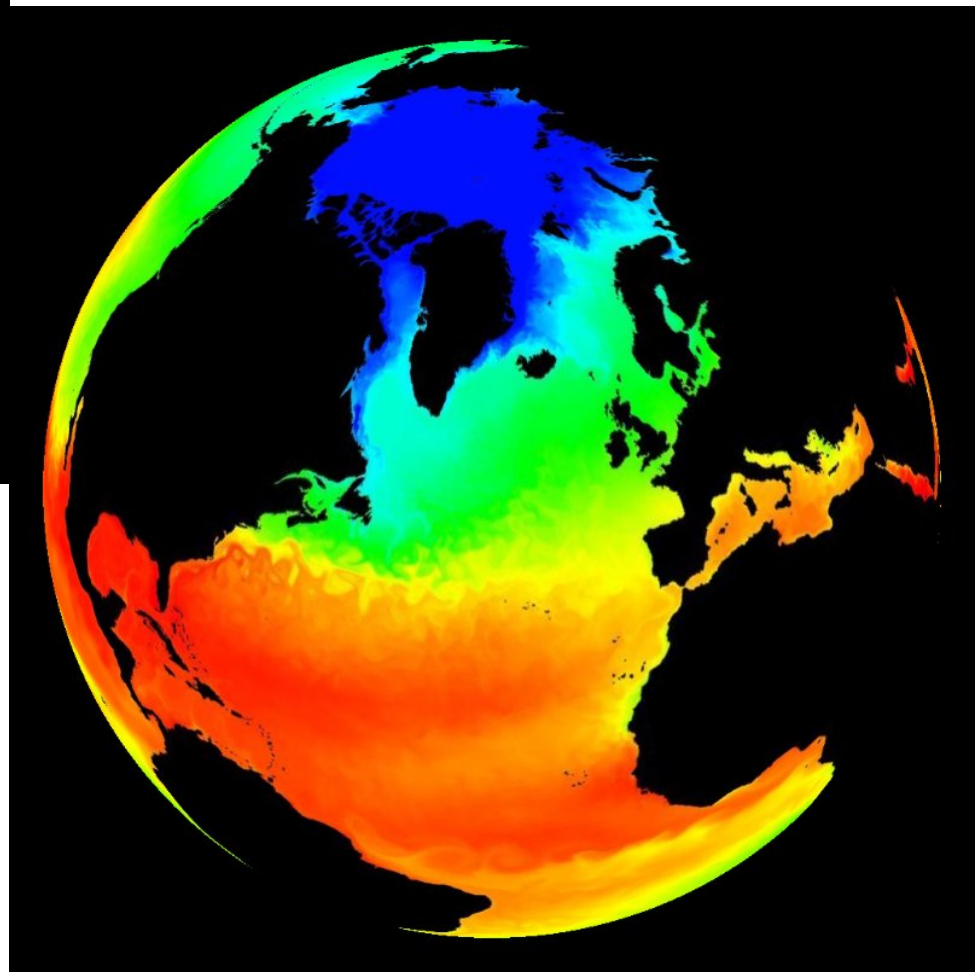
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High Temp	49	52	57	61	67	73	79	79	74	64	56	50
Low Temp	36	38	40	43	50	55	59	59	54	48	41	38
Precip	3	2.5	2.6	2.6	2.8	2.6	2.1	2.3	2.8	3.4	3.5	3.4



Station: 3

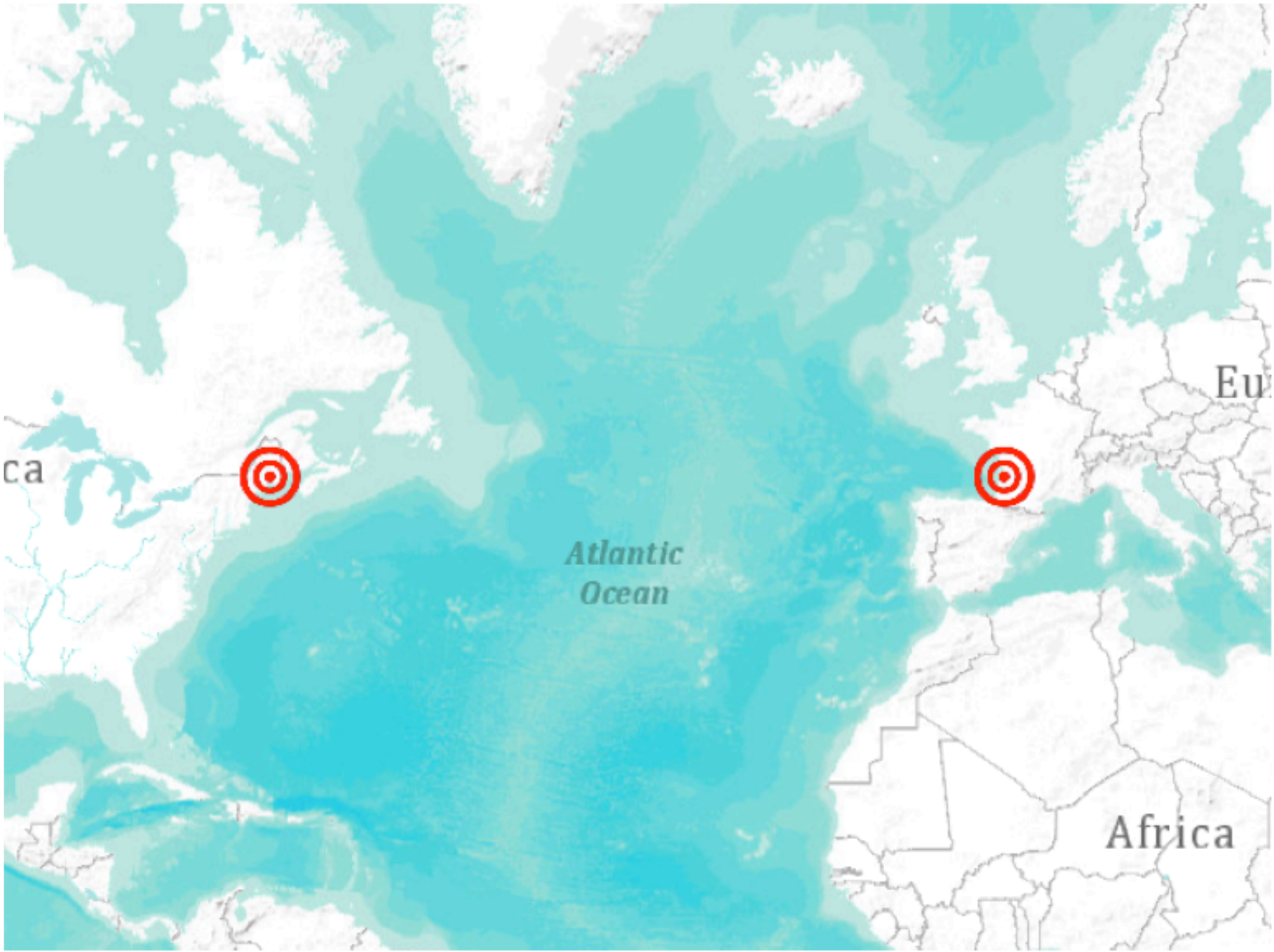


Compare your map and find Bangor, Maine and Bordeaux, France.
Red, orange and yellow depict warmer water than blue and green.



The warm ocean current depicted by the red arrow is called the Gulf Stream. Light blue and yellow detect faster moving water.

Station: 3

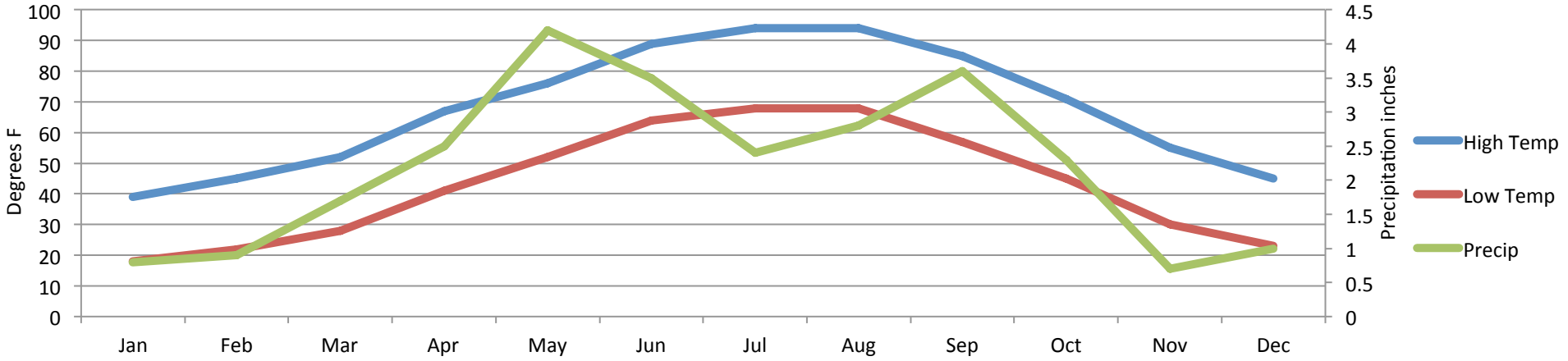


Station: 4

A. Salina, KS

Lat, Long
38 N, 97 W

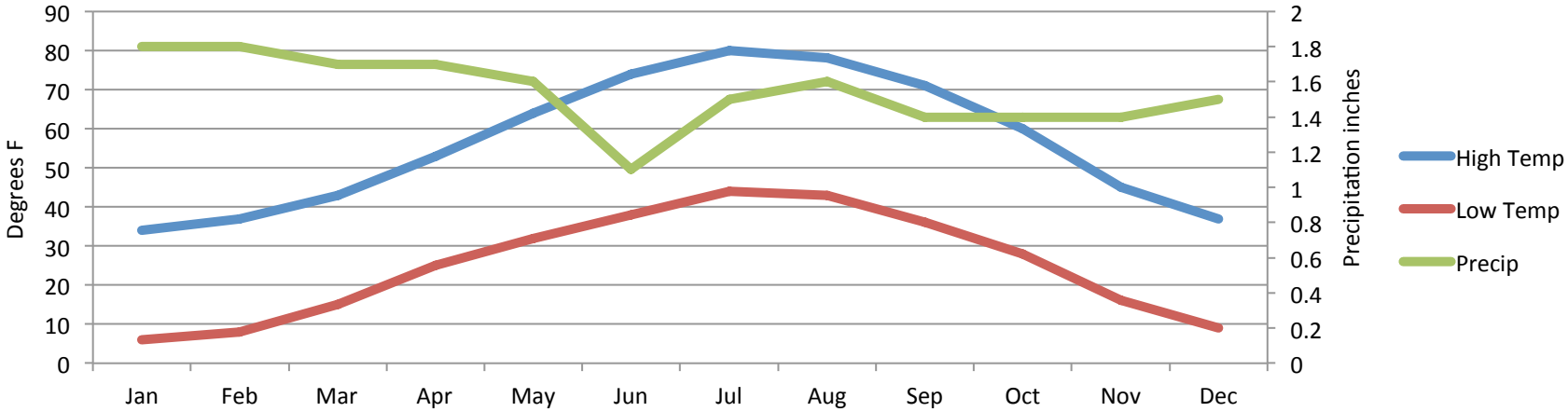
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High Temp	39	45	52	67	76	89	94	94	85	71	55	45
Low Temp	18	22	28	41	52	64	68	68	57	45	30	23
Precip	0.8	0.9	1.7	2.5	4.2	3.5	2.4	2.8	3.6	2.3	0.7	1



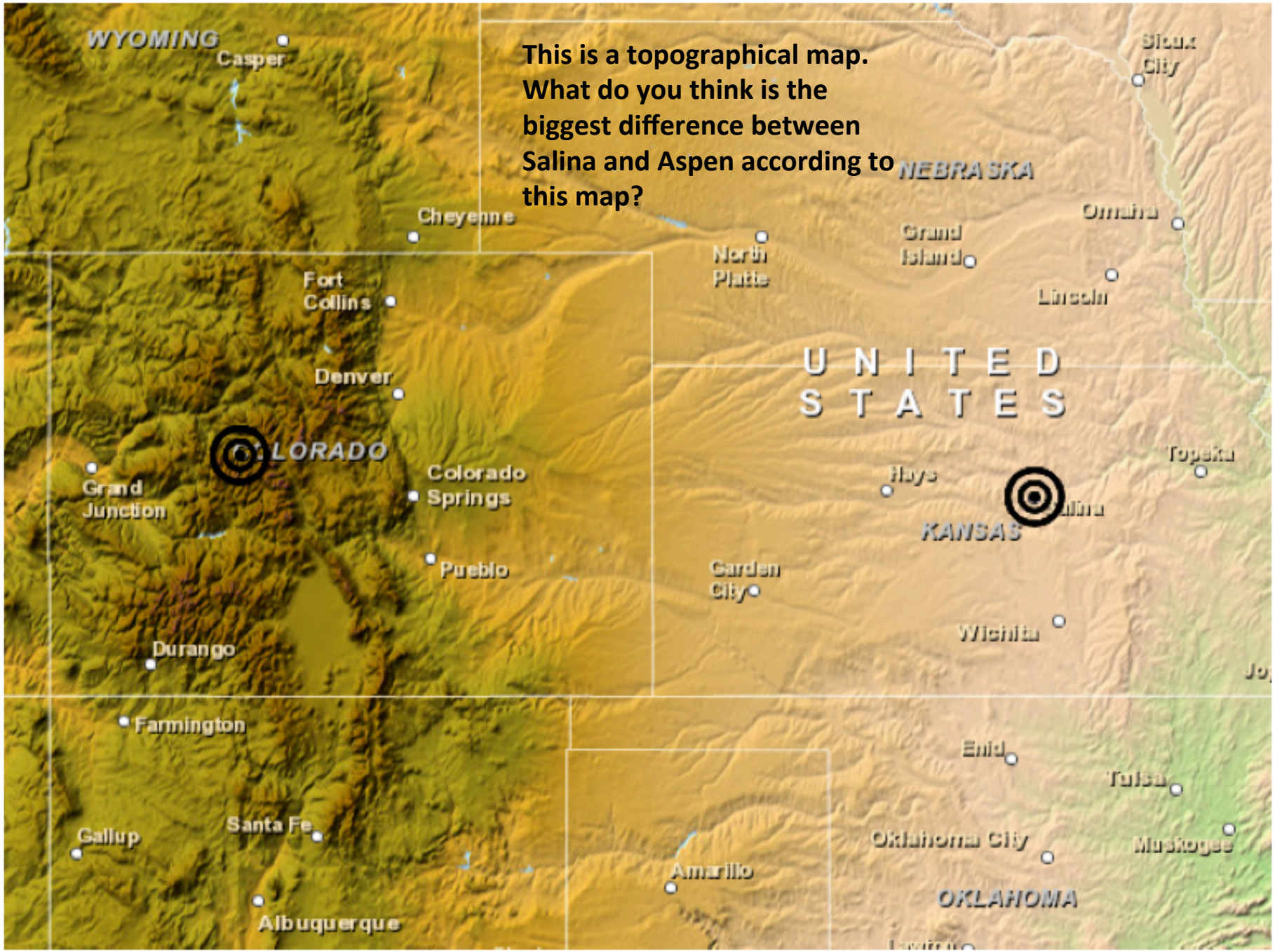
B. Aspen, Colorado

Lat, Long
39 N, 106 W

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High Temp	34	37	43	53	64	74	80	78	71	60	45	37
Low Temp	6	8	15	25	32	38	44	43	36	28	16	9
Precip	1.8	1.8	1.7	1.7	1.6	1.1	1.5	1.6	1.4	1.4	1.4	1.5

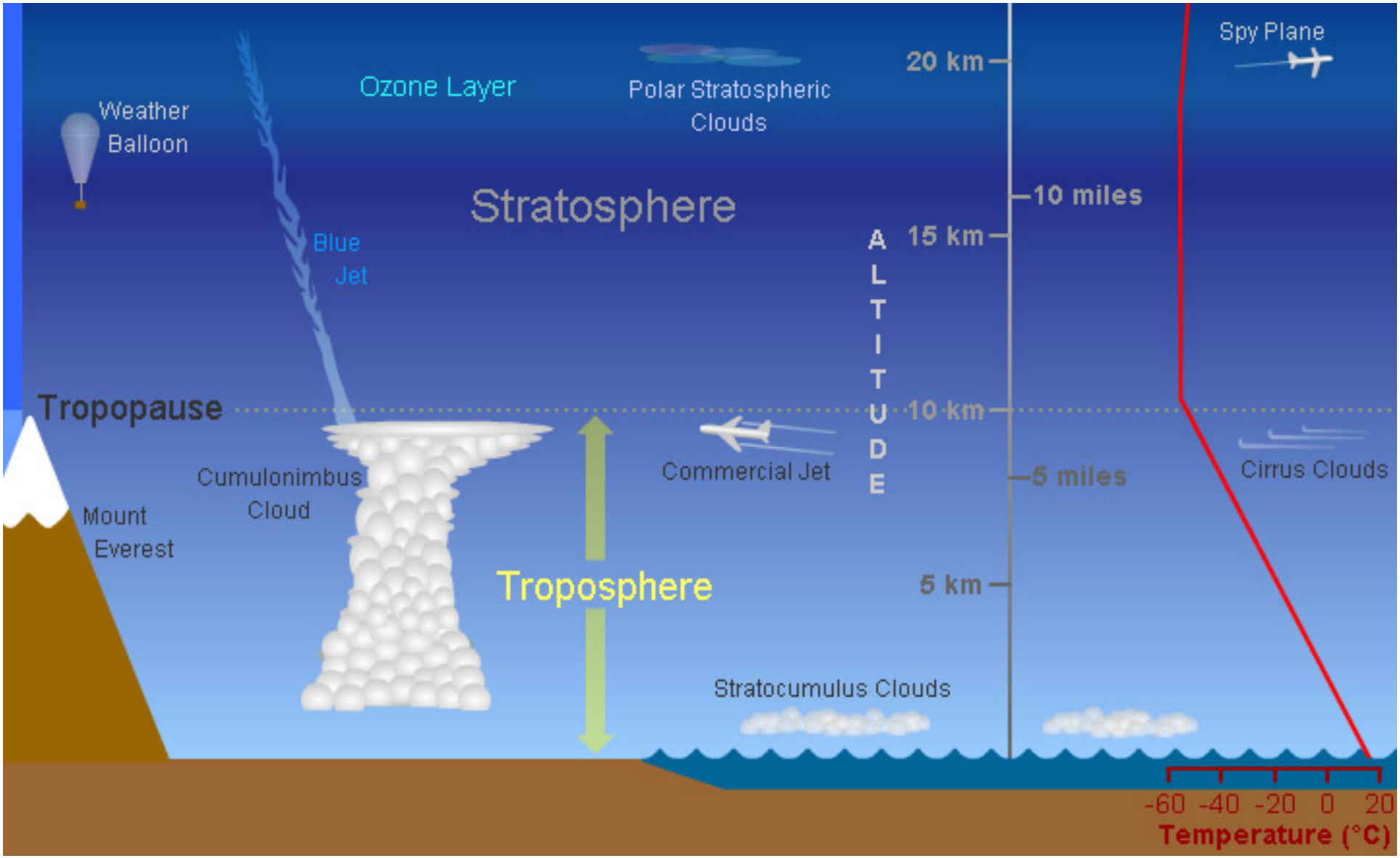


Station: 4


This is a topographical map. What do you think is the biggest difference between Salina and Aspen according to this map?
WYOMING
Casper
Cheyenne
NEBRASKA
Sioux City
Omaha
Grand Island
North Platte
Lincoln
Fort Collins
Denver
UNITED STATES
COLORADO
Grand Junction
Colorado Springs
Pueblo
Durango
Hays
Topeka
KANSAS
Garden City
Wichita
Farmington
Gallup
Santa Fe
Albuquerque
Amarillo
Enid
Tulsa
Oklahoma City
Muskogee
OKLAHOMA

Station: 4

Hint: Pay particular attention to the temperature line. Does it get colder or warmer as you go up?



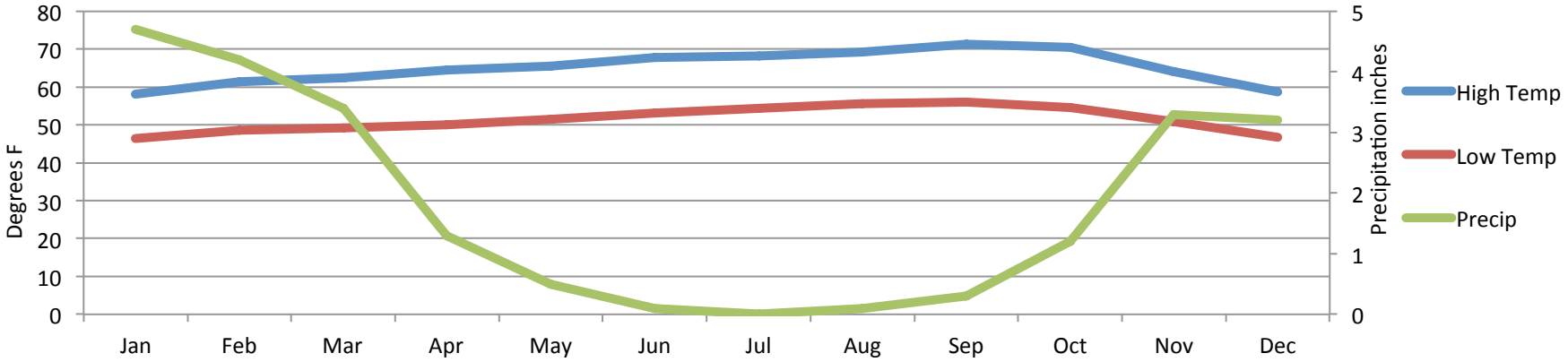
Credit: Randy Russell, UCAR

Station: 5

A. San Francisco, CA

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High Temp	58.1	61.4	62.5	64.5	65.4	67.7	68.2	69.2	71.3	70.4	64.1	58.6
Low Temp	46.4	48.5	49.2	50.1	51.4	53.2	54.4	55.6	56.1	54.6	50.8	46.7
Precip	4.7	4.2	3.4	1.3	0.5	0.1	0	0.1	0.3	1.2	3.3	3.2

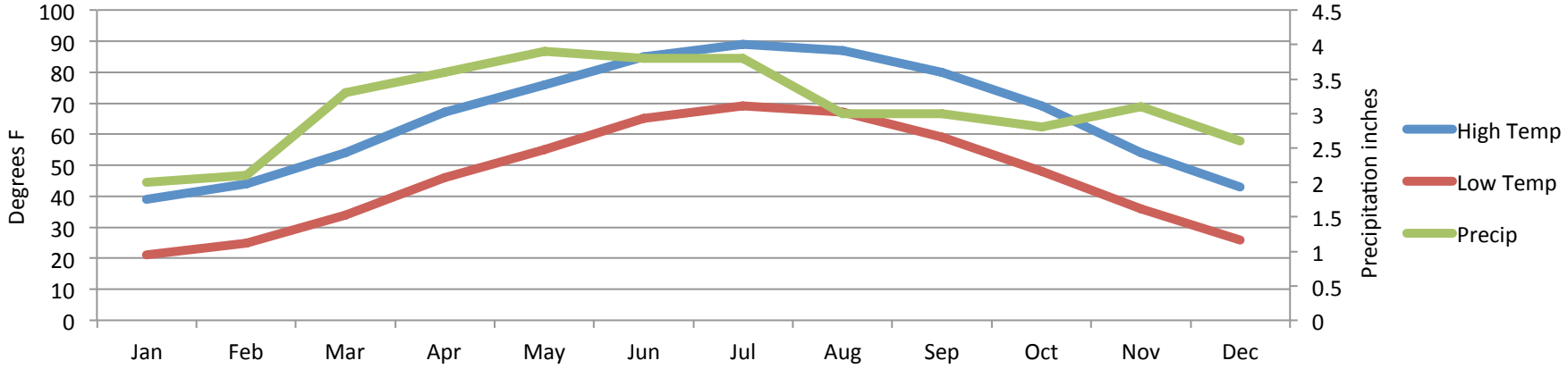
Lat, Long
38 N, 105 W



B. St. Louis, Missouri

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High Temp	39	44	54	67	76	85	89	87	80	69	54	43
Low Temp	21	25	34	46	55	65	69	67	59	48	36	26
Precip	2	2.1	3.3	3.6	3.9	3.8	3.8	3	3	2.8	3.1	2.6

Lat, Long
38 N, 90 W



Station: 5

Print Article

eHow™

Discover the expert in you.

How Do Large Bodies of Water Affect the Climate of Coastal Areas?

By Doug Leenhouts, eHow Contributor

Large bodies of water, such as oceans, gulfs, sounds and large lakes, have a profound effect on the climate of coastal areas. Many meteorologists give two forecasts in a region, one for the 5 miles closest to a shoreline and one for inland areas, because the difference between the expected temperatures and precipitation is so great.

Temperature

Bodies of water have a damping effect on the swing in temperatures of coastal areas. That is, while inland regions can quickly decrease in temperature from the fall to winter seasons, shoreline towns are kept warmer by the water's effect on the air. This is due to water's high heat capacity compared to both air and land. Therefore, shoreline towns will experience warmer winters and cooler summers than inland communities.

Wind

Shoreline communities experience an interesting dynamic between the air over water and the air over land. Air tends to move from cooler areas toward warmer areas, and the sun often dictates whether the land or sea is cooler. During the daytime, the air onshore is warmer than the air over the sea, so the wind blows from the sea to the land. At night, the opposite occurs since the air over the sea is warmer.

Precipitation

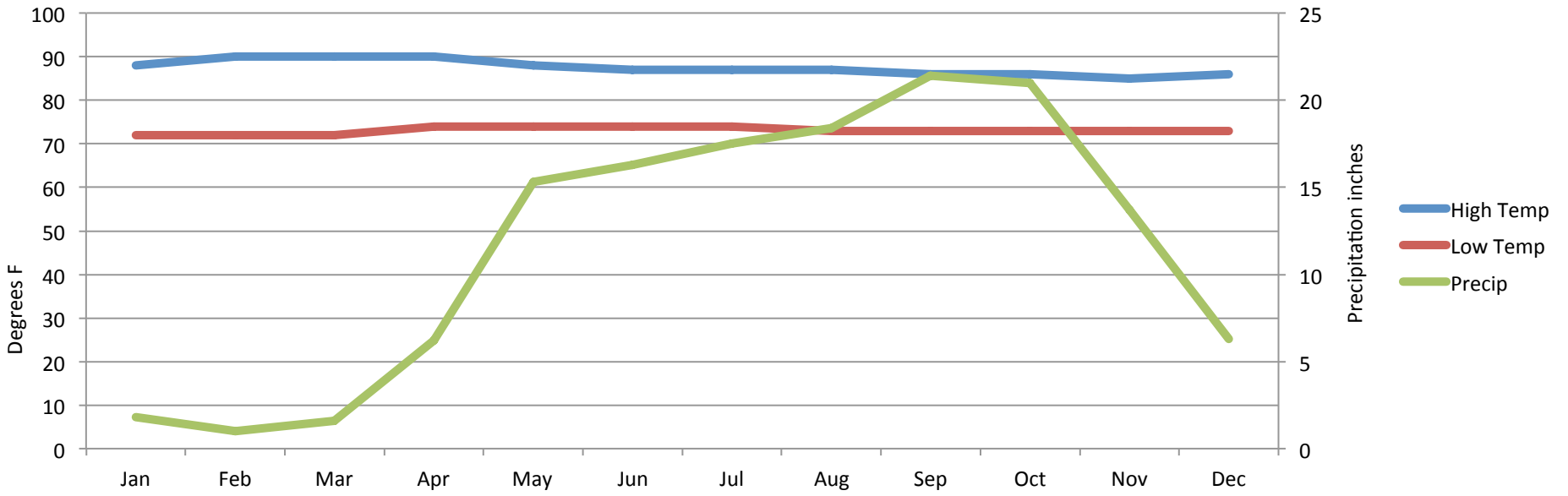
Bodies of water not only affect how much precipitation a shoreline gets, but also what type of precipitation falls. The Gulf of Mexico, for example, brings warm moist air over the Gulf Coast region, which results in thunderstorms, heavy rains, fog and, most notoriously, hurricanes. This severe precipitation occurs when the warmer, moist air collides with a mass of cooler, dry air.

Station: 5

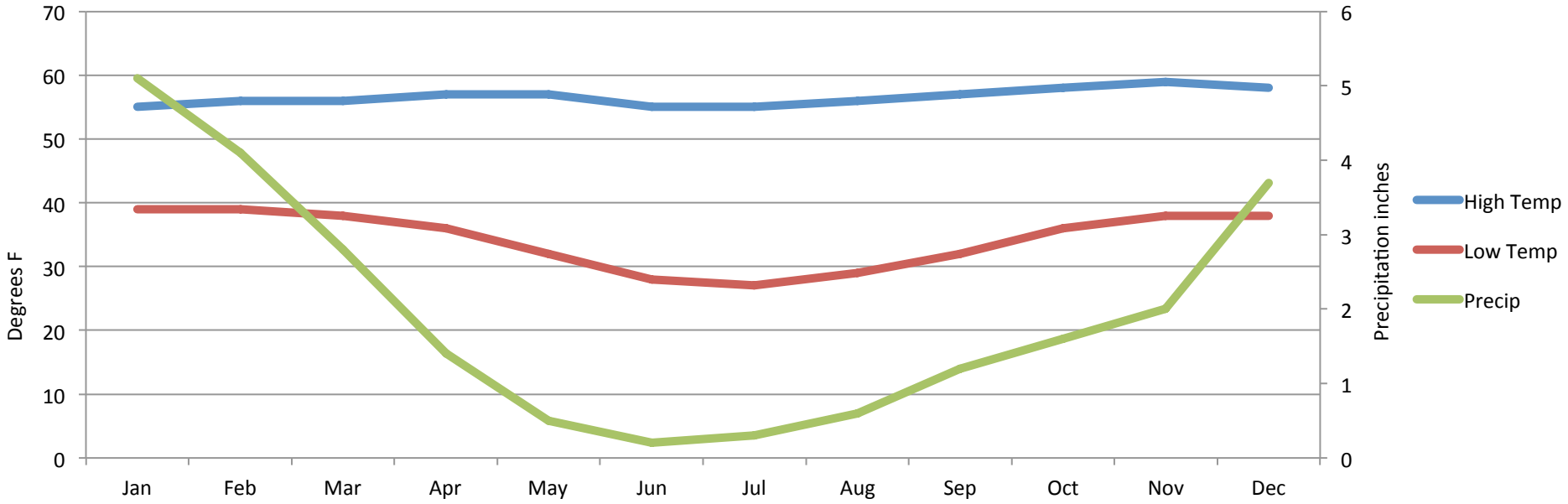
Seattle
Portland
Minneapolis
Ottawa
Montréal
Toronto
Milwaukee
Detroit
Boston
Chicago
Cleveland
Pittsburgh
New York
Salt Lake City
Denver
Kansas City
Columbus
Philadelphia
Sacramento
Cincinnati
Washington, D.C.
Las Vegas
UNITED STATES
Los Angeles
Charlotte
Atlanta
Phoenix
San Diego
El Paso
Dallas
Austin
Houston
San Antonio
Orlando
Tampa
Brownsville
Miami
Monterrey
Gulf of Mexico
BAHAMAS
Mexico Basin
La Habana (Havana)
MEXICO
CUBA
Guadalajara
México City
Puebla
Port-au-Prince
HAITI
JAMAICA
Kingston
BELIZE
GUATEMALA
Guatemala City
HONDURAS
Caribbean Sea
San Salvador
Albatross Plateau
Tegucigalpa
EL SALVADOR
NICARAGUA
Managua
Hatteras Plain
GREAT PLAINS
APPALACHIAN MOUNTAINS
COASTAL PLAIN
GREAT BASIN

Station: 6

Mystery Spot #1:



Mystery Spot #2:



Station: 6

Map: Geology.com