Name: _____ Period: _____ Date: _____

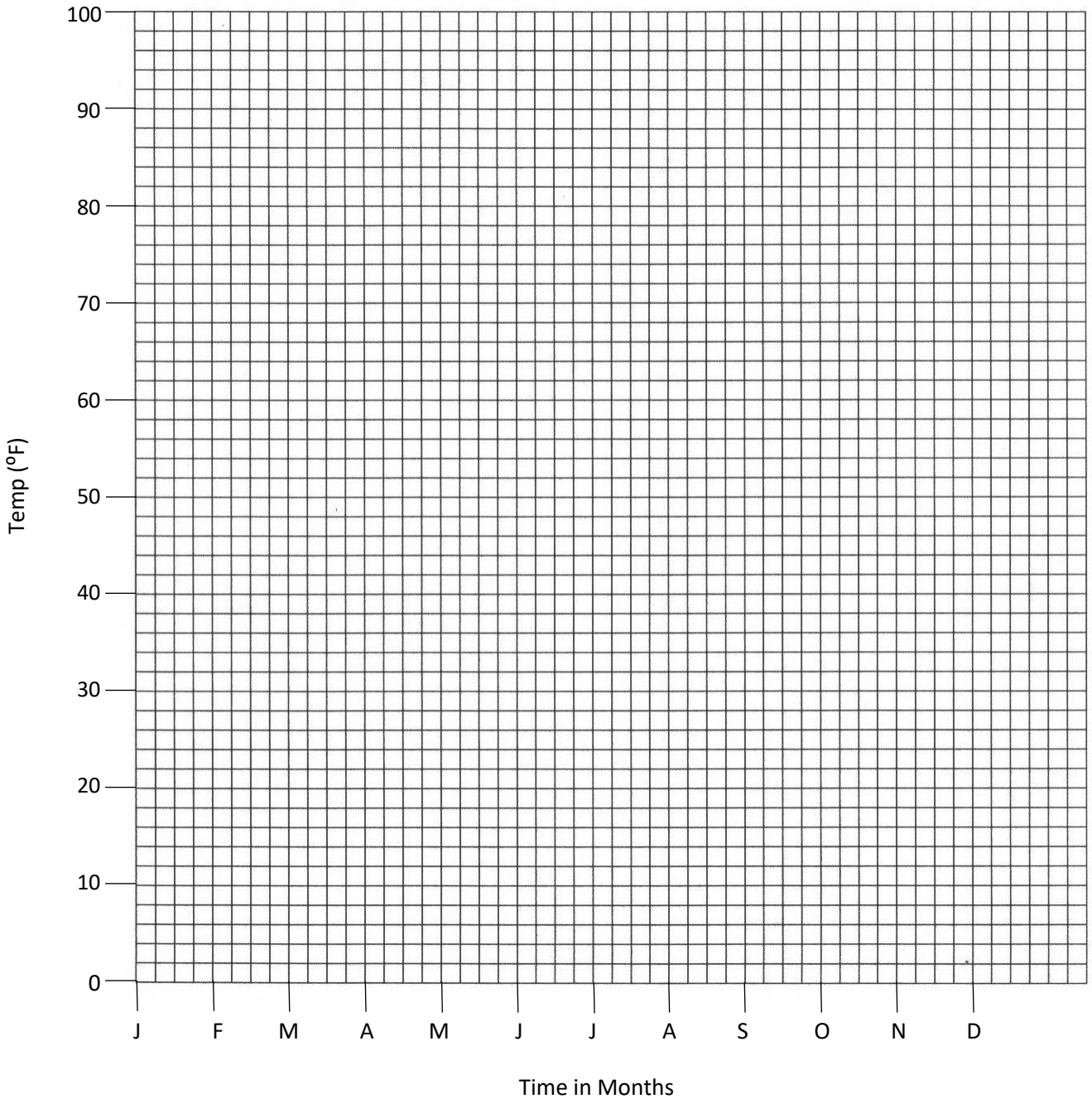
Factors Affecting Climate

Directions: Use the following data table to create a line graph for each city. Make each city a different color – be sure to make a key. Then answer the questions on the back.

Average Monthly Temperatures (°F)

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
New York, NY	32	34	42	53	63	72	77	76	68	59	48	37
Bismarck, ND	9	16	28	43	55	64	71	68	57	46	29	14
Los Angeles, CA	58	60	61	63	66	70	74	75	74	70	63	58
Phoenix, AZ	54	58	62	70	79	88	94	92	86	75	62	54

Average Monthly Temperatures



Analysis Questions: *Answer in complete sentences.*

1) Even if you didn't know these were all cities of the United States, how could you tell from the temperature curves that they were all in the Northern Hemisphere? (*HINT → Look at peak temps.)*

2) Which city has the greatest yearly **temperature range**, and WHY do you think its range is larger than the others?

3) Compare the heating and cooling rates for New York and Bismarck.

4) How does the yearly **temperature range** for Los Angeles compare to that of Phoenix?

5) Considering the fact that Los Angeles and Phoenix are at the same latitude, what can you infer about the angle of insolation at both locations?

6) Considering the intensity of insolation for Los Angeles and Phoenix, explain why there is a difference in the temperature curves for the two cities. *(HINT → Think about their locations.)*

Conclusion: Using the information above and your graph, describe the difference in the annual temperature range between a coastal region and an inland region. Then, name two other factors that can help explain differences in climate between different locations.