Attach into your Science Notebook: Part of next notebook check

Name: _____ **Climate Variability** **Period: _____**

Procedure

1. Shuffle the deck of cards. Black cards represent cooler (- temperatures) global average temperatures for one year and red cards represent warmer (+ temperatures) global average temperatures.
2. Flip 30 cards over and record each one in the first table.The change in temperature for each card is provided. Note: This represents the temperature change from ***normal*** for each individual year over a 30 year period

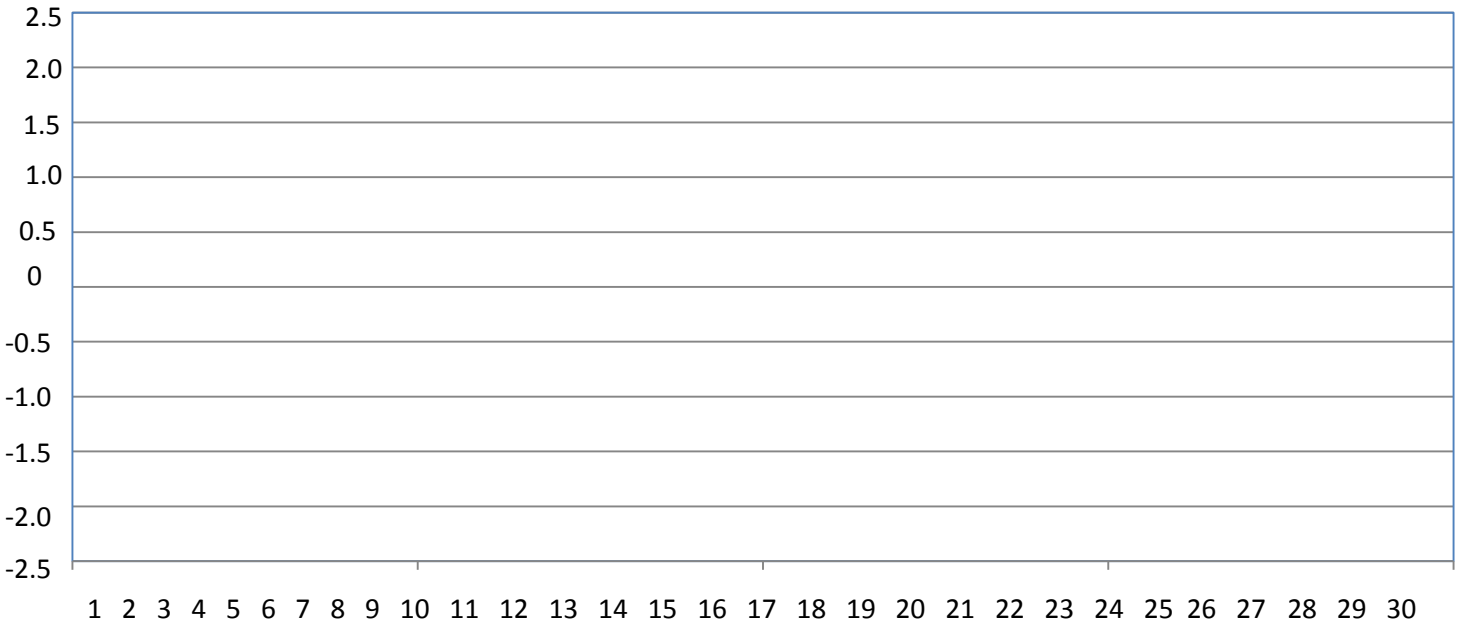
Card Face Value	Temperature Change
Ace	No change
Two through Ten	± 0.2°F through 1.0°F
Jack	± 1.5°F
Queen	± 2.0°F
King	± 2.5°F

Card Year	Card Face Value	Temperature Change
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Card Year	Card Face Value	Temperature Change
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

Card Year	Card Face Value	Temperature Change
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

3. Graph the data from the cards you flipped over. The zero represents the normal temperature. Label your axes and title your graph. X-axis: “Card Year” and Y-axis: “Temperature Change”



Based on: https://www.ucar.edu/learn/1_2_2_9t.htm

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4. Shuffle all of the cards together and remove the first four black cards that are flipped over.
5. Reshuffle the cards (minus the cards that were removed) and repeat steps 1 and 2.Record your values in the table provided.

Card Year	Card Face Value	Temperature Change
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Card Year	Card Face Value	Temperature Change
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

Card Year	Card Face Value	Temperature Change
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

6. Remove 8 black cards from the deck so that 12 black cards are now removed. Reshuffle the deck and repeat steps 1 and 2 once more.

Card Year	Card Face Value	Temperature Change
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Card Year	Card Face Value	Temperature Change
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

Card Year	Card Face Value	Temperature Change
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

7. Graph all data in the graph on page one using a different color or symbol for each data set.

Analysis

1. Define climate.

2. What does removing the black cards represent? (Look at your data)

3. Compare results with another group for your last trial. How come the results/graphs are different? What does each different group represent?

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