







Name _____ Date _____ Class _____

WHERE IS IT WINDY?

Create a wind farm with popsicles and tissue. Make 25 flags in the 3 different styles listed in the chart below. Place them at various positions on your model.

Model Landscape and Wind Farm

1. Place a check under the appropriate angle for each flag in the model landscape.

FLAG	TRIAL 1			TRIAL 2		
						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

2. Were there some flags that never received any wind? If so, where were they located in the landscape?

3. Were there some flags that always received a lot of wind? If so, where were they located in the landscape?

4. Why do you think some flags received a lot of wind and others not as much?

WIND IN THE UNITED STATES

Where are the highest wind speeds in the United States?

Using the elevation map of the U.S., shade the areas that you believe might have the highest wind speeds. In one to two sentences, explain your predictions.

Were your predictions correct?

Compare your predictions to the U.S. Wind Resource Map.

1. Are your predictions similar to the actual wind speeds?

What happens to the wind speed as you go higher in the atmosphere?

2. How do wind speeds change as elevation increases?

3. Why do you think this happens?

4. What role do you think elevation plays in the engineering design of turbines?

Where are the wind farms in the United States?

Compare elevation and wind speed maps with the map of Utility Scale Wind Turbines in United States.

1. What is the wind speed and topography of the wind farm locations in the U.S.?

2. Why do you think these locations were selected as opposed to areas where wind speed is the highest?