



# Wind Power

# STEM Sims

### Lesson 3: Wind Season

An old saying states that “March comes in like a lion,” implying that the weather in the month of March is very dramatic. Are some months more favorable for converting wind power to electricity?

### Doing the Science

1. Start the Wind Power Simulation by clicking on the “Sim” tab.
2. Select the “Make Turbine” button.
3. Set the “Number of Wind Turbines on Farm” to 1 and hit enter on your keyboard.
4. Select Turbine 1 and choose a Tower Height of 100 m and Blade Radius of 40 m.
5. Click on the “Submit” button.
6. Choose “January” from the Calendar menu.
7. Select the “Start” button.
8. After the completion of the run, note and record the “Average Wind Speed” (Avg. mph) in Table 1.
9. Next, click on the “Energy Generated” button at the bottom of the screen.
10. View the graph and estimate the average energy generated for each of the three wind turbines. Record these values in Table 1 below.
11. Repeat steps 6 – 10 for the rest of the months of the year.

**Table 1.**

Month	Avg. mph	Energy Generated (kWh)	Month	Avg. mph	Energy Generated (kWh)
January			July		
February			August		
March			September		
April			October		
May			November		
June			December		

### Do You Understand?

1. Was the average wind speed constant over the course of a year?
  
2. Which months had the highest and lowest wind speeds? Provide a reason for why some months had different wind speeds than other months.