

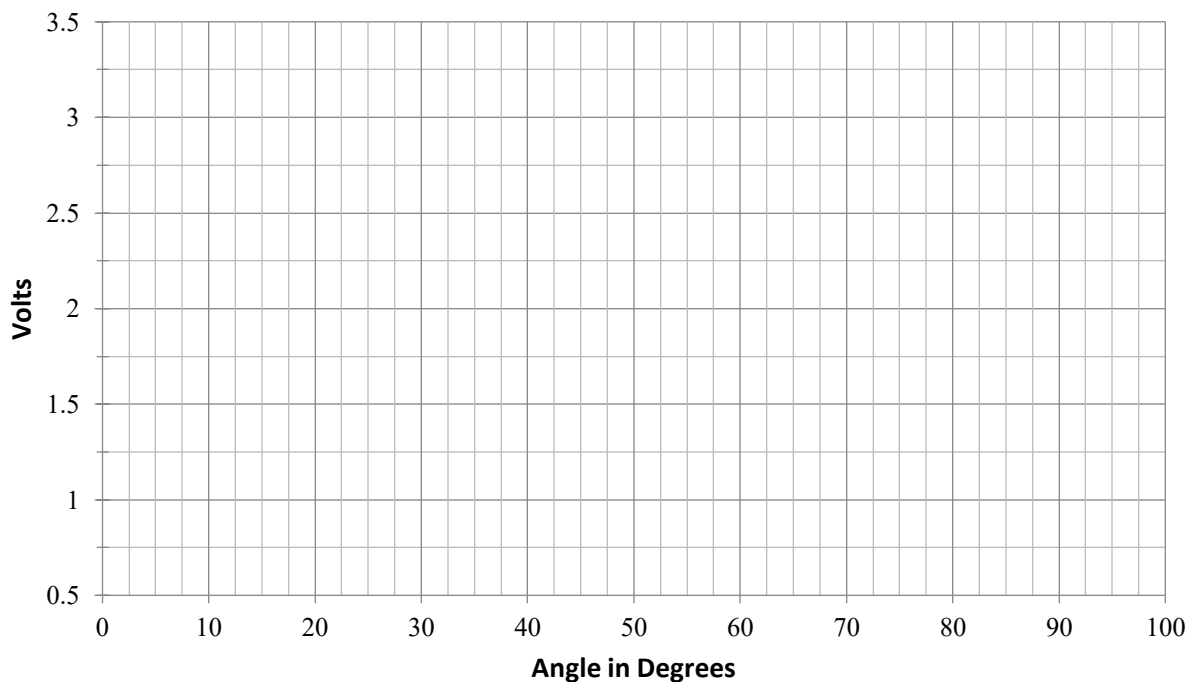
## Solar Energy

### Examining How Angle and Temperature Affect Solar Panels

#### Angle and Output: What is the best angle for solar panel output?

Angle and Output	
Angle (°)	Voltage (Volts)
90	
60	
40	
20	

#### Graph: Angle and Output



#### Engaging in Argument from Evidence

1. Based on what you know about photovoltaic cells, why do you think you got these results?

## Temperature and Output: What is the Optimal Temperature for Solar Panel Output?

Temperature and Output		
Time	Temperature (°C)	Voltage (Volts)
0:00	Room Temp.:	
0:30		
1:00		
1:30		
2:00		
2:30		
3:00		
3:30		
4:00		

### Whole Class Data

Angle and Output: Whole Class	
Group	Angle – Max Voltage (°)
1	
2	
3	
4	
5	
6	

Temperature and Output: Whole Class		
Group	Temp. - Max Voltage (°C)	Temp. - Min Voltage (°C)
1		
2		
3		
4		
5		
6		

### Engaging in Argument from Evidence

- Based on the results of these studies, what recommendations would you give for setting up solar panels to produce the most energy?
- How could growing crops under the solar panels affect the energy produced?