

Here Comes the Sun

Have you ever wondered about the amount of sunlight in different areas of the world and how it compares with the amount of sunlight where you live?

- ?** How does the amount of sunlight differ in different locations?
- Choose five locations: where you live, in northern Canada, in southern Canada, near the equator, and in the southern hemisphere.
 - Choose the type of data you would like to compare: sunrise, sunset, or daylight hours. (Use standard time.)
 - Determine the latitude of each location you have chosen.
 - Research the required data for each location over a period of one year. Decide how many data points you require for each location. Adjust your data for daylight-saving time, if applicable.
 - Graph a scatter plot for each location. Determine the equation of the sinusoidal regression function that models each set of data.
 - State the equation of the midline, the range, and the amplitude of each function.
 - Compare your locations. Can you use your data to compare the climates?
 - Compare your home location with the location in the southern hemisphere. Can you use your data to describe the seasons in the southern hemisphere?



Task Checklist

- ✓ Did you include your data for each location?
- ✓ Did you clearly label each graph?
- ✓ Did you explain each comparison clearly?
- ✓ Did you use appropriate mathematical language?