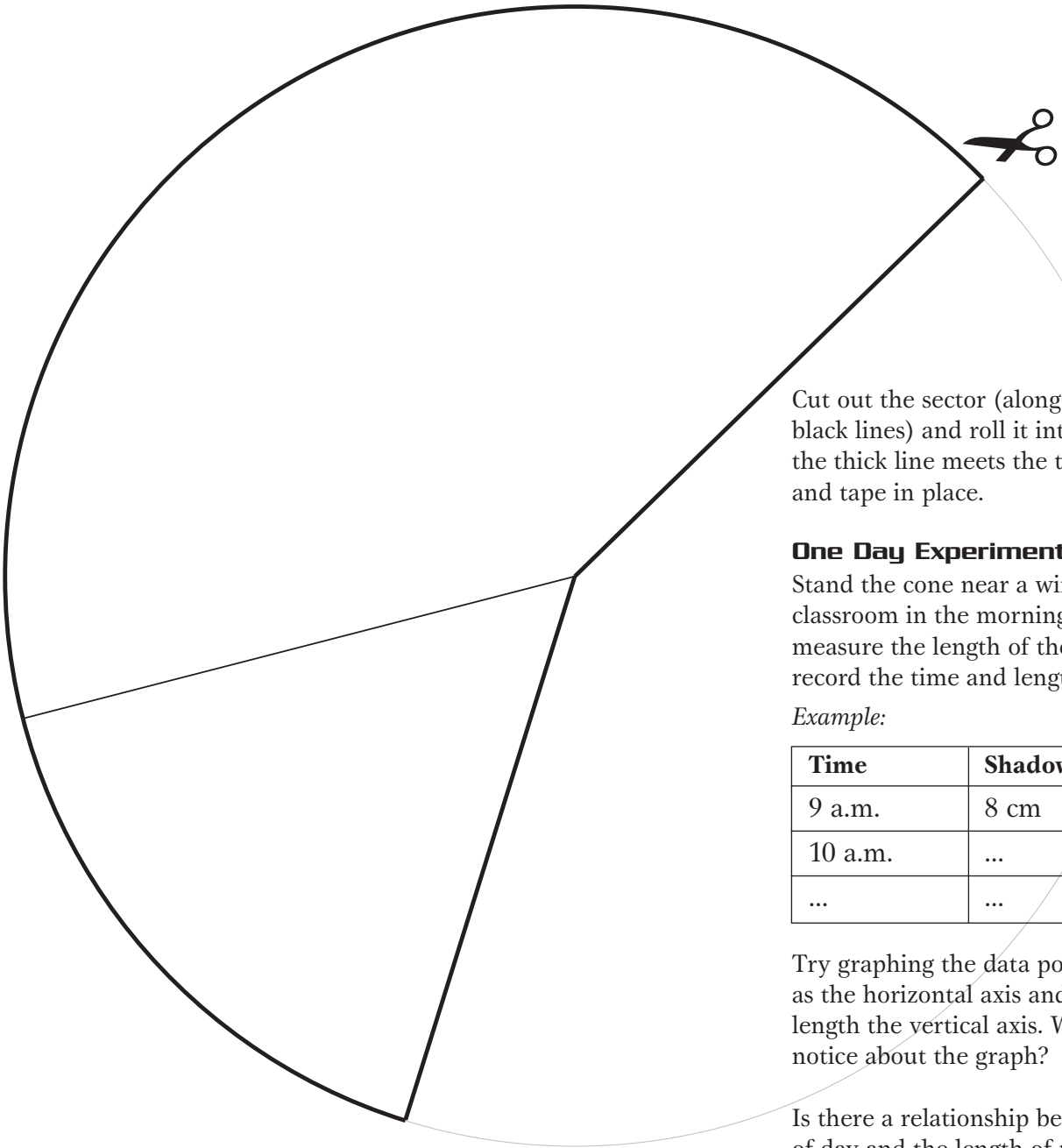
MATHPACKS
integrating math and science learning

Measure My Shadow



Cut out the sector (along the thick black lines) and roll it into a cone until the thick line meets the thin black line and tape in place.

One Day Experiment:

Stand the cone near a window in your classroom in the morning. Each hour measure the length of the shadow and record the time and length in a table.

Example:

Time	Shadow length
9 a.m.	8 cm
10 a.m.	...
...	...

Try graphing the data points using time as the horizontal axis and shadow length the vertical axis. What do you notice about the graph?

Is there a relationship between the time of day and the length of the shadow?

Seasonal Changes Experiment:

Perform the one day experiment again a month or so later.

Are the shadows longer or shorter? Why?