

**“Show Me the Way to Go Home”
Data Log**

Follow these steps to fill out your Data Log:

1. Stand your unsharpened #2 pencil on its unsharpened end outside in the sunlight where you can easily measure its shadow (it may be helpful to work in pairs). For your first measurement, trace the shadow cast by the pencil on either paper or with sidewalk chalk.
2. Record the clock time and the length of the shadow in either English or metric (S.I.) units, as directed by your teacher.
3. Using the conversion formula below, convert from English to S.I. units or from S.I. to English units, as appropriate.
4. When the shadow length is again the same as your first measurement, again trace the shadow and bisect the angle between the two lines you have made – this is true north!

Clock Time	Shadow Length (English)	Shadow Length (S.I.)

Angle between tracings: _____
Angle between initial tracing and true north: _____

Conversions:
 English to S.I.: centimeters = inches x 2.54
 S.I. to English: inches = centimeters / 2.54