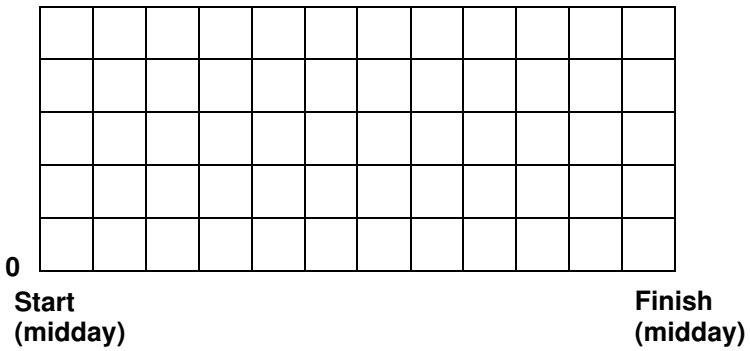
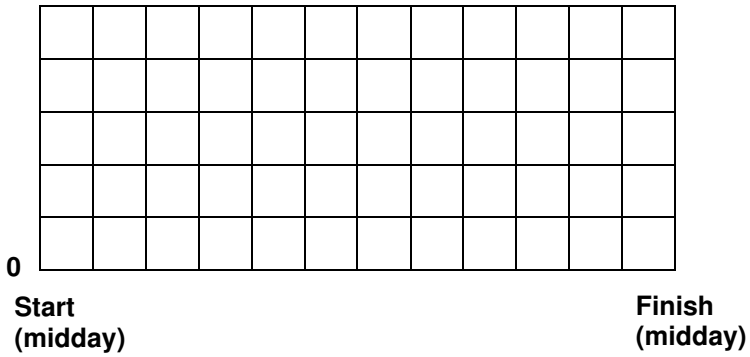
Modelling the Seasons

Aim	To use a datalogger to see how conditions vary at a point on earth as the globe rotates.
Prediction*	Sketch graphs showing the variation in temperature and light levels you would expect to find as the globe slowly rotates near a heat lamp.

Temperature



Light



Apparatus	Globe, heat lamp, light sensor, temperature sensor, datalogger, leads, computer and monitor.

Method*	**Diagram***
1. Fix the light and _____ sensors to the globe, and connect the hardware together. 2. Start the _____. 3. Slowly turn the _____. Make sure it rotates at a constant rate, taking between 1 and 2 minutes to rotate completely. 4. Use the graph (or otherwise) to fill in the results table over the page. 5. Analyse your data.	

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Results*

Time (seconds)	Temp. (°C)	Light (units)
0		
10		
20		
30		
40		
50		
60		
70		
80		
90		
100		
110		
120		

Conclusion*

What do the results suggest?

How did the results compare with your prediction?

How do you think the pattern of your results compares to the variation found on earth? Suggest reasons for any differences.

Evaluation*

Was your experiment suitable for finding out about the variation in conditions involved? What errors were there? How could the experiment have been improved?

