



## Working with abiotic variables - *continued*

### Measuring Aspect and slope

**Slope** is a measurement of the angle or steepness of an area.

**Aspect** is the direction that the slope faces.

Slope and aspect are important factors in an ecosystem because they affect the:

Potential for erosion

Angle and intensity of light as well as the length of the daily period of direct light exposure

Behaviour of bush fires

Effects of prevailing winds - typically hot in summer and cold, dry in winter.

Being a geometric measurement, the unit we use for slope is degrees.

#### **TASK:**

Ecologists measure the slope of an area with an instrument called an inclinometer. [Watch this video](#) to find out how.

Link: <https://vimeo.com/72242873>

### MEASURING SOIL PH

Soil pH is measured using the pH scale between 0 and 14.

0-7 is acidic, 7 is neutral and 7-14 is alkaline.

Most plants do not grow well outside the range of between pH 4.5 - 8.0.

The pH scale has no unit of measurement.

Soil pH is important because it affects a plant's ability to absorb nutrients such as nitrogen, potassium and phosphorus which are essential for that plant's growth and disease resistance.

Soil pH is commonly measured using a saturated paste testing kit.

#### **TASK:**

Watch [this video](#) that explains how to perform the "saturated paste" soil pH test in the field.

Link: <https://vimeo.com/85314011>