

**Activity 2: Comparing invertebrate biodiversity in 2 species of oak tree****AQA GCE Biology : Unit 4; BIOL4; 3.4.1 The dynamic equilibrium of a population is affected by a number of factors****APPROXIMATE TIME: 1.5 HRS**

<b>Lesson</b>	<b>Spec. Ref</b>	<b>Objectives</b>	<b>Teaching activities</b>	<b>Resources</b>
1	3.4.1	<b>1. Describe a method to sample invertebrates</b>  <b>2. Collect valid data</b>  <b>3. Assess the strength of a correlation with statistical analysis</b>	<p>Intro with slides: Going to compare invertebrate (specifically arthropod) biodiversity in 2 species of trees. Pin oak (introduced to UK from China in 1800) and the native oak (been in UK since last ice age, 10,000 years)</p> <p><b>Starter:</b> <i>Students come up with a prediction: which oak species is likely to have greatest biodiversity and a reason why</i></p> <p><b>Main:</b> <b>In class:</b> i) State null hypothesis ii) Discuss methods for sampling biodiversity of a tree and their ethics and accuracy iii) Discuss tree-bashing and control of extraneous variables</p> <p><b>Outside:</b> iv) Lay down sheet v) Shake branches/ bash with broom handle for 2 mins vi) Rest of class catch inverts in sample pots (only need 1 sample of each species), someone could check and release unwanted specimens. Return to classroom with specimen pots.</p> <p><b>In class:</b> vii) Each pair given responsibility for collecting one of the arthropod groups or insect groups, and counting them (use ppt to help) viii) Discuss difficulties of species identification and its importance for this type of study ix) Discuss if there is a difference x) Go through use of stats on powerpoint xi) Students apply stats to their results, following method outlined on powerpoint</p> <p><b>Plenary:</b> Discuss the conclusions of this finding on conservation management for biodiversity</p>	<p>Powerpoint presentation</p> <p>2 white sheets 2 broom handles/ sticks 60 collecting pots, at least calculators chi-squared critical value sheets</p>