

Our programmes cover mandatory material from National 4 and National 5 Biology specifications and are tailored to the level of each group. The variety of habitats at Aigas provides opportunities to measure variations in biodiversity, compare ecosystems, estimate energy flow and observe adaptations in plants and animals.

In all cases, our team will help pupils to use scientific enquiry to plan and carry out their investigation. One programme can be completed in a day including introduction and follow up sessions, or components of two to three can be combined.

Programme	Outline
<b>Freshwater Invertebrates in a Loch and Stream</b>	<i>Are different freshwater invertebrate communities found in still and flowing water?</i> Students will collect, observe and identify invertebrates from Aigas loch and a stream. Differences in the biodiversity of the two ecosystems will be linked to abiotic factors such as flow rate and water quality, while adaptations of individual species will give us clues about their survival. Pyramids of numbers and biomass can demonstrate energy flow within the ecosystems and tie in to discussions about how humans impact biodiversity in freshwater habitats.
<b>Terrestrial Invertebrates</b>	<i>Is there a difference in the diversity of invertebrates found in different habitats?</i> Sweep netting, tree beating and pitfall traps will be used to sample invertebrates in woodland and grassland habitats. Biological keys will be used to identify species, and light intensity, vegetation cover and humidity will be measured. While comparing data from the two environments, pupils will be encouraged to explain how differences in the environments will influence invertebrate distribution and how they have adapted to survive there.
<b>Worm Investigation</b>	<i>Does low intensity agriculture affect the distribution of earthworms?</i> Traditional worm charming techniques will be used to collect worms in fertilised and unfertilised fields. The age and species of each worm will be identified where possible, and vegetation type, soil depth and soil pH will be measured. Students will compare the data from each field and be encouraged to consider how agriculture influences soil health.
<b>Investigating Forests</b>	<i>Do plant and invertebrate communities differ in native and non-native woodland?</i> Students will measure plant and/or invertebrate communities in native pine woods and a plantation forest. Biological keys will be used to identify organisms and abiotic factors such as soil pH, light intensity and humidity can be measured. By comparing the forests, pupils will consider how resource distribution affects niches available to native wildlife
<b>Air Pollution Indicators</b>	<i>How do we measure air pollution?</i> After learning to identify some characteristic lichens, pupils investigate air pollution at the Aigas Estate. We will consider how to take representative samples and record abiotic data such as temperature, windspeed, humidity and aspect. Similar data can then be collected in a developed area such as Beaully or Inverness.