

**Our A Level programmes are designed to give students first-hand experience of natural processes and the skills and knowledge required to study them.**

Our education programme is delivered at our two private nature reserves, Nower Wood and Bay Pond, and led by experienced staff who are first aid trained and DBS checked to give you peace of mind and your students a unique immersive experience. A day runs from 9:30 to 16:00 with a break for your packed lunch and other short breaks throughout the day as necessary. If these timings aren't suitable for your requirements, please don't hesitate to call and we can make the day work for you.

**Choose two of the sessions below to make up your visit, plus one add-on if you wish.**

### Investigations and Data Collection

All of our data collection exercises have appropriate statistical analyses that can be chosen as an Add-On to your day (see below) or these can be completed back at school.

#### Succession and Sampling

Half Day | Nower Wood

Exploring the natural environment, we will find examples of succession in action. Discussion will touch on primary, secondary and deflected succession, the use of indicator species, and the sampling techniques that would be used to study an area undergoing successional change. The students will use an interrupted belt transect to record abiotic conditions and the plant species present. The data the students have collected is then displayed in kite diagrams and discussed.

#### Aquatic Invertebrate Study

Half Day | Nower Wood or Bay Pond

Students will dip one or more ponds, collecting aquatic invertebrates and recording what they find. Abiotic factors such as temperature, depth, pH and turbidity will be measured and how these affect the abundance and distribution of invertebrates will be considered. We will then look more closely at the adaptations of the invertebrates to their aquatic habitat using a video microscope. The data the students have collected is then displayed in bar graphs and discussed.

#### Terrestrial Invertebrate Study

Half Day | Nower Wood

The students will experience a range of sampling techniques for invertebrates in different layers of the woodland i.e. sweep netting, tree beating, and pitfall traps. The students will then collect leaf litter from two areas of woodland and search thoroughly to record all of the invertebrates in their samples. Abiotic factors of the two collection areas are measured and used to describe any differences found in the invertebrate populations. The invertebrates' adaptations are examined in more detail using a video microscope. The data the students have collected is then displayed in bar graphs, and discussed.

#### Case Study Day

Full Day | Nower Wood

This is a full day session. The students will use a variety of sampling techniques to perform a site investigation and gain an overview of the major species and habitat types at Nower Wood. Human impacts on the woodland will be considered, both globally and locally. Woodland management solutions will be discussed, and a brief study on the benefits of coppicing as a management technique for biodiversity will be undertaken.

#### Woodland Comparison

Half Day | Nower Wood

Students survey field layer plants in two woodland areas, one recently coppiced and one not coppiced for around 20 years, to discover how a variation in light levels affect the floral community. Using an XY grid and random numbers to place their quadrats, they record presence/absence or % cover of plant species. Abiotic measurements of light, relative humidity, temperature and soil pH and texture are taken. Adaptations, competition between plants and the presence of indicator species in ancient woodlands can be discussed, as well as management for biodiversity.

#### Ecosystems

Half Day | Nower Wood or Bay Pond

This flexible session can be modified to suit either biologists or geographers. Many aspects of ecology can be covered according to the season, for example: woodland structure and characteristics, succession, woodland management, adaptations and distribution of plants in different habitats, nutrient cycling, seeds, fungi, and factors affecting decomposition.

#### Ecological Sampling Techniques

Half Day | Nower Wood or Bay Pond

Practical experience is the best way to learn both biotic and abiotic sampling techniques. Students can get hands-on experience of transects, quadrats, sweep netting, tree beating, pitfall traps, leaf litter sampling, capture-mark-recapture and small mammal trapping to name just a few. Our abiotic measurements include light, temperature, humidity, soil type, pH and more. Pick and choose the techniques to fit your needs.



## Individual Projects and Core Practicals

Half Day | Nower Wood or Bay Pond

Please contact us if you are interested in undertaking individual projects or specific core practicals.

## Add-ons

You can also choose one of the below add-ons to be incorporated during your day with us:

### Add-on 1: Lincoln Index

Nower Wood or Bay Pond

A capture-mark-release-recapture exercise enables us to estimate the population of woodlice using the Lincoln Index. We will capture in the morning and recapture in the afternoon.

### Add-on 2: Small Mammal Trapping

Nower Wood

The students will set humane Longworth traps at the beginning of the day, ensuring they contain the survival basics (food, water, warmth). At lunchtime, and again at the end of your visit, traps will be checked and any small mammals will be looked at by the group before being released where they were caught.

### Add-on 3: Statistical Analysis

Nower Wood or Bay Pond

We can modify the day to spend longer in the classroom analysing data collected if you would prefer to complete the exercise with us rather than back at school. A range of statistical analyses can be undertaken depending upon the data collected e.g. Mann-Whitney-U; Simpson's Diversity Index and Spearman's Rank.

## Prices & Booking

For visits to our centres, please see representative prices below. There is a room deposit of £50 for half day visits and £100 for a full day visit, and the prices below are per child (there is no charge for accompanying adults).

Nower Wood visits	Per Pupil	Minimum Charge	Adult Ratio
Key Stage 3	£14	£200	1:10
Key Stage 4	£18	£200	1:10
A Level	£23	£200	1:15
Bay Pond visits	Per Pupil	Minimum Charge	Adult Ratio
Key Stage 3	£12	£200	1:10
Key Stage 4	£16	£200	1:10
A Level	£20	£200	1:15

**If you have any questions or would like to make a booking, please get in touch:**

Call: 01372 379509

Email: [education.centres@surreywt.org.uk](mailto:education.centres@surreywt.org.uk)

