

## Osprey Nest Data Handling

### Aims & Objectives

1. Students will practise simple data handling and manipulation;
  - a. Gathering data
  - b. Recording data in a table, with a title, column headings and units
  - c. Using correct units for mass(g), distance(m), energy(kJ)
  - d. Data manipulation to calculate totals, mean (average), distance and energy consumption
2. An iconic bird like the osprey will encourage student interest in what they might perceive as 'boring numbers'. They might also be encouraged to investigate the birds further in other curriculum areas.

### Advance Preparation

1. A ready collected supply of sticks, or a site near the classroom where they can be collected safely. Trees can be hazardous -do not approach on windy days.
2. A sheet of strong base on which to build the nest least 1.2m square. This could be a table or if the nest is to be moved after construction use a square of 6mm ply or MDF
3. Sticks are messy- dustpan and brush. The students will need to wash their hands.
4. Divide the students into groups of 4-6. Each group will need access to a 'weighing machine' or balance able to weigh up to 1000g

## Osprey Nest Data Handling - cont

### Lesson Plan

1. Use the website [www.ospreys.org.uk](http://www.ospreys.org.uk), have a nest picture up on the class screen or computer and ask; 'how many sticks does it take to build this nest'?
2. Talk through the nest, built of sticks, lined with moss. Built on an open site high up in a tree (often dead) or on some sort of open pole. Artificial nest poles are used at Rutland Water, in the USA ospreys have been known to use telegraph poles.
3. Explain to the students that they are going to investigate some of the scientific data behind a nest and its construction.
4. Divide the students into appropriate groups, distribute worksheets and allow them to follow the sheets.
5. Students will possibly need help with the last question. It might be simpler to use the same standardised distance from school to a place they all know. There might also be an issue of distance measured in miles rather than kilometres.
6. The extension is not tightly directed to allow the higher level pupils the challenge to solve these numerical problems. Factors include; mass of bird, wind speed, ambient temperature, time to find suitable sticks.