



## NQ Biology / NQ Environmental Sciences

### Fieldwork Activities

### Health & Safety Guidance

1. SSERC's Materials of Living Origin, Code of Practice, provides necessary reading prior to surveying and collecting living materials from the environment for investigation. Read pages 10-11. [https://www.sserc.org.uk/wp-content/uploads/2018/06/SSERC-Materials\\_of\\_Living\\_Origin\\_Code\\_of\\_Practice.pdf](https://www.sserc.org.uk/wp-content/uploads/2018/06/SSERC-Materials_of_Living_Origin_Code_of_Practice.pdf)
2. Activities involving skin contact with plants must consider the possibility of allergic reaction. Species which are most likely to trigger such responses should be avoided. This is a useful reference guide:

Poisonous plants and fungi in Britain, animal and human poisoning, Marion R. Cooper and Anthony W. Johnson, Stationery Office, 2<sup>nd</sup> edition, 1998, ISBN 0 11 242981 5.

3. Pupils should be reminded that many seeds, fruits and other parts of plants are poisonous if eaten. The default position is to assume that a plant part is toxic or harmful unless one knows for certain that it is safely edible.
4. The site and activities involved in environmental sampling must be chosen carefully. It is wise to plan any visit and evaluate the possibility of contamination. Public spaces may be subject to cat and dog fouling. Worms that infest domesticated animals, such as dogs, can transfer to humans via the infected animal's faeces, potentially resulting in illnesses included hydatid disease and toxocariasis. Good hygiene practices can control the spread of the parasite.
5. Farm animal faeces can be a source of pathogens including *Salmonella*, *Cryptosporidiosis* and *E.coli* (including *E. coli* 1057). Good hygiene practices (covering cuts/grazes, handwashing afterwards, etc) should be adopted and protective clothing such as gloves used where appropriate.
6. Leptospirosis (Weil's disease) is a bacterial infection, typically transmitted via rat urine. Activities that pose higher levels of risk include pond-dipping, mammal-trapping and fieldwork near stream and ponds since these sites may be contaminated by rat urine carrying the bacterium. To control the risk, avoid handling wild animals (gloves can provide some protection from bites and scratches, and thus transmission of the bacterium) and wash hands thoroughly after any such activities. The bacterium can enter the blood via mucous membranes so take care to avoid

touching the face, particularly lips, with wet hands. Cover cuts/grazes with waterproof dressings. Infection can be treated successfully with antibiotics.

7. Lyme disease, a bacterial infection transmitted to humans by ticks, is a particular hazard during fieldwork across ground vegetation in areas of woodland, bracken and long grass. Deer and wild rodents are the typical reservoirs for the bacteria. Control measures centre on avoiding exposure by ensuring skin is covered – wear long sleeves and trousers and inspect skin and clothing for ticks after fieldwork. School trips for fieldwork in several European destinations, including Germany, require specific risk assessment as ticks in these countries can carry a virus causing serious form of encephalitis.
8. Parasites – fieldwork involving small mammals and birds should consider the risk of infestation of organisms with fleas/mites, which could transfer to humans. This includes examination of items such as birds' nests. If such items are brought into school, autoclaving should be used prior to examination and disposal. Owl pellets should, similarly, be treated by autoclaving prior to examination and subsequent disposal due to the possible presence of intestinal parasites.
9. Excursions to farms, zoos or agricultural shows should be fully risk-assessed. The Industry Code of Practice version 3 (updated in March 2021) outlines the practical steps to take to ensure your staff and pupils are safe. Page 8 details the main risks; page 16 provides a good overview of how to control risks. [https://s3-eu-west-1.amazonaws.com/leaf-website/Industry Code of Practice - 2021.pdf](https://s3-eu-west-1.amazonaws.com/leaf-website/Industry_Code_of_Practice_-_2021.pdf)

#### **References:**

SSERC (2018), Materials of Living Origin – Educational Uses: A Code of Practice for Scottish schools and colleges (4<sup>th</sup> edition), p10-11, available here: [https://www.sserc.org.uk/wp-content/uploads/2018/06/SSERC-Materials of Living Origin Code of Practice.pdf](https://www.sserc.org.uk/wp-content/uploads/2018/06/SSERC-Materials_of_Living_Origin_Code_of_Practice.pdf)

The Association for Science Education (2018), Topics in Safety: Living Organisms, Topic 14, available here: <https://www.ase.org.uk/resources/topics-in-safety>