

Ecosystems - Everything's Connected

How is everything on our planet connected together

Year 7-9

Learning Outcomes:

At the end of the session:

- ✓ **All pupils** will be able to link producers, consumers, and decomposers together into complex food webs
- ✓ **Most pupils** will start to recognise the complexity of ecosystems and how changes to one part can have a large impact on other components
- ✓ **Some pupils** will understand that toxins can bioaccumulate and biomagnify

Session Outline:

The session begins by defining ecosystems and different levels of environmental organization (biosphere, organism, etc.). We will then explore the roles of consumers and producers, allowing students to create their own food webs that include various organisms. Next, we will discuss biomass pyramids to illustrate connections between organisms and play "ecosystem tag" to demonstrate energy and nutrient cycling, highlighting the importance of decomposers and the impact of toxins on higher-level animals. We will define bioaccumulation and biomagnification, using examples like historical DDT use in ospreys and current issues with POPs, microplastics, and ocean waste. The session concludes with examples of positive actions to address these problems and what students can do to help.

Please note, no live animals are used in this session.



Curriculum Links

Science:

Relationships in an ecosystem
Photosynthesis

Geography:

Human and physical geography

Citizenship