KS3 Relationships in ecosystems

TEACHER GUIDANCE

KS3 Relationships in ecosystems
Specification Links
England KS3 KS3 Science: Interactions and interdependence: • The interdependence of organisms in an ecosystem, including food webs (key terms carnivore/ herbivore etc. primary, secondary, consumers) energy source from the sun; transfer of energy, primary producers / ph syn. predator/ prey; pyramids of biomass / number • How organisms affect, and are affected by, their environment. Environmental factors e.g. light intensity, temperature, CO_2, O_2 KS3 Science: Genetics and evolution: • The differences between species; 5 kingdoms; vertebrates and invertebrates; classification of vertebrates KS3 Science: Adaptations: • The importance of maintaining biodiversity **Scotland National 3** • Make predictions / generalisations. Select & process information, including calculations, as appropriate. • Apply skills of scientific inquiry and draw upon knowledge and understanding of the key areas of this unit to carry out an experiment/practical investigation. **Northern Ireland KS3** Science: Organisms and Health; Interdependence of plants and animals **Wales KS3** Interdependence of organisms: The interdependence of organisms and their representation as food webs, pyramids of numbers and simple energy-flow diagram

Pre-lesson

This live lesson encourages young people to explore the complex relationships between plants, animals and a freshwater (pond) environment. Pre-lesson activities include:

- **Key term glossary.** A space for students to compile definitions to the key terms they will be exploring during the lesson.
- **Pre-lesson Photosynthesis Task**. Exploring how plants effect the pond ecosystem.
- **Pre-lesson Eutrophication Task**. Hands on activity to look at the effects of nutrient blooms on light and oxygen availability in freshwater.
- **Pre-lesson Species Top Trumps**. Students look at how plants and invertebrates have adapted to survive in the pond environment.
- **Pre-lesson and Live Lesson prediction**s. Students will consider their hypothesis based on the completed tasks and whether these are proven in the live lesson.
- **Pre-lesson questions and additional resources.** Students will consider questions they can submit prior to the live lesson.

The predictions tables and created food webs will be explored during the sessions. Eutrophication will be explored in the pond environment with species caught and identified. Questions submitted before and during the live session will also be answered, there is an activity at the end of this resource booklet to help students formulate questions.

Please visit https://encounteredu.com/cpd for guidance on using these Live Lessons and Teacher Resources during school closures.

During the live lesson

Students should have their hand out ready, completed with the pre-course elements. The predictions tables and created food webs will be explored during the sessions. Eutrophication will be explored in the pond environment with species caught and identified. Questions submitted before and during the live session will also be answered, there is an activity at the end of this resource booklet to help students formulate questions.

Post-lesson webinar

A follow-up webinar for teachers will explore ideas and strategies to continue to support student's learning covering food webs, energy transfer, and pyramids of number.