

## **Teaching Climate Change Youth Social Action through Biology**

Cell biology (KS3 & KS4): Young people can collect materials from outside, such as parts of plants (bark, leaves, stems, petals) and animal hair. They can observe the cellular structure of each through a microscope and identify the features of different types of cells. For example, only plant cells have a cell wall, chloroplasts and a vacuole; palisade cells have extra chloroplasts to help with photosynthesis; root hair cells have a specific shape and structure; different types of meristems in plant stems, roots and leaves. Young people can also soak plant roots in the coloured water and then look through a microscope to observe the root hair cells taking up the water by osmosis.

## **Teaching Climate Change Youth Social Action through Food, Nutrition and Digestion**

The content of a healthy human diet and the consequences of imbalances in the diet.

- Young people can explore environmental issues linked to food production around the world, for example, deforestation to make way for livestock
- Production of methane by cattle
- Droughts leading to crop failures and starvation/famines
- Pesticides causing declines in populations of bees and other important pollinators
- Organic farming leads to improvements in conditions for wildlife

Also, potential solutions to food shortages – such as eating insects or drinking plant-based milk alternatives – and the importance of ensuring that these solutions enable humans to maintain a balanced diet. Links can be made to the food miles of different foods we eat and the environmental benefits of eating locally-grown produce. Links to Healthy Habits - Diet

"Bush Tucker Trial" - Create a creepy crawly menu based on alternative foods. Would you try this? Links to Food Technology.

Materials (KS3): Young people can investigate materials (both natural and human-made) that are used in the built environment, such as wood, types of rock, ceramics, polymers and composites, and their properties that make them suitable for these uses. They could also research new materials being developed, particularly those replacing oil-based plastics.

## **Earth and Atmospheric Science**

Earth and atmospheric science (KS3 & KS4): Young people can identify different types of rock (igneous, sedimentary and metamorphic) in the local built and natural environment, look for signs of weathering and erosion (natural and due to human actions).

## **Role Models**

David Attenborough

Chris Packham

Steve Backshaw

Greta Thunburg