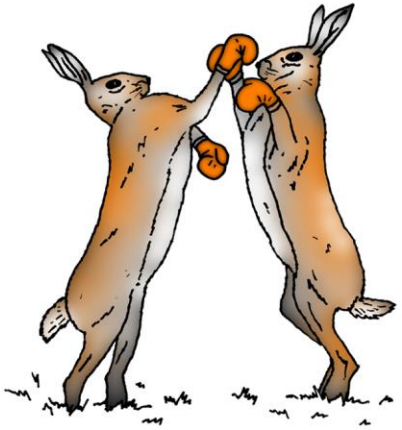
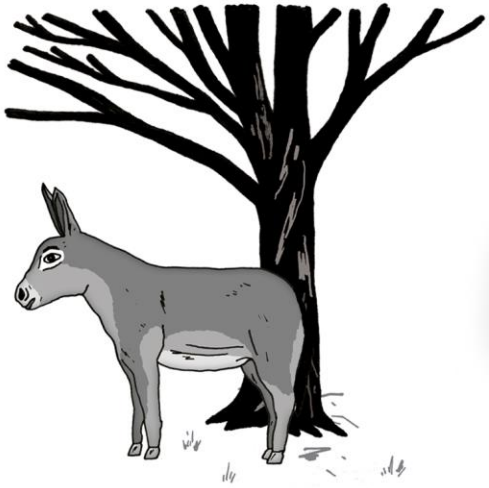
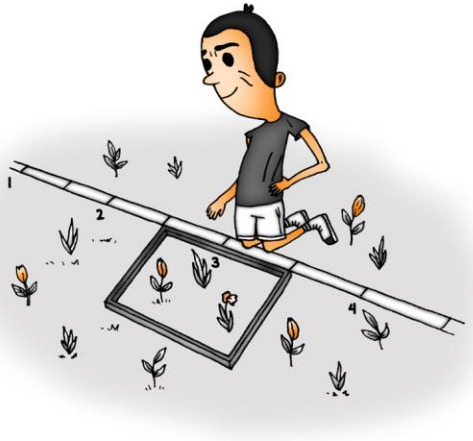


AQA GCSE ECOLOGY THINK IT!





Adaptations, interdependence & competition:

- Describe the importance of interdependence and competition in a named ecosystem.
- Bladder wrack seaweed has air bladders. Why?
- Grey squirrels have driven out native red squirrels from most areas in England. Does it matter? Explain your answer.
- Psychrophiles are examples of extremophiles. Describe their habitat and their challenges?

Organisation of an ecosystem:

- Is random sampling really random when sampling an area with a quadrat to find the abundance of daisies in a field?
- Explain why a stable community undergoes cycles of rising and falling in number of predators and prey.
- Why are compost bins not air tight?
- Lichens are an indicator species. What environmental change do they indicate?
- Research the holly leaf miner. Construct a food chain starting with the holly leaf.

How materials are cycled:

- Are plants actually primary consumers of carbon dioxide?
- How does the ocean carbon cycle compare to the carbon cycle on land?
- Explain how carbon is recycled into new growth in a plant when the leaves fall to the ground.
- Plants take in mineral ions through their roots by active uptake. Are there less minerals in a woodland compared to a patio covered garden?

Role of biotechnology:

- Describe the advantages and disadvantages of genetically modified crops such as Golden Rice.
- Describe how the fungus, *Fusarium* produces large quantities of food.
- Explain how biotechnology and genetic modification have enabled diabetics to receive human insulin to treat their condition.
- What is the solution to the world food shortage? Describe the pros and cons of your ideas. What are the steps needed to implement your solution?

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Biodiversity and the effect of humans:

- A large sum of money is spent annually on preventing organisms becoming extinct. Is this a good use of money? Explain.
- Suggest three reasons why deforestation has caused a reduction in biodiversity.
- Why is a high biodiversity important in ensuring the stability of ecosystems?
- Explain the conflict which exists between the need for cheap compost, food security and the destruction of peat bogs.

Farming and fisheries (biology):

- Research Blue Tongue Virus. Why does this threaten food security? Explain why BTV was not a concern in the UK until recently.
- Evaluate the advantages and disadvantages of intensive modern farming methods.
- Describe two fishing techniques which may promote the recovery of fish stocks.
- How do you feel about antibiotics being used in large amounts in fisheries and farming? Explain your reasoning.

Food Production (biology):

- The increase in demand for palm oil has driven up global food prices. Explain why this has occurred.
- 'Food security is really only an issue for developing countries.' Do you agree with this statement? Explain.
- Compare how a human and a fungus digest food.
- Why can tractors threaten food security?

Trophic levels in an ecosystem (biology):

- Why is the biomass of a secondary consumer population less than the primary consumer population?
- How many apex predators can you name?
- Evaluate the benefits of a vegetarian diet compared to a carnivorous diet in relation to transfer of biomass.
- How would a vegan diet compare to a vegetarian diet in relation to transfer of biomass?