

MAKE ME AN ARTHROPOD 20/12/18

Please work in groups

You will be allocated (by lot) an unknown species of arthropod from a particular feeding group that is found in a named habitat type. For your particular animal you will need to consider:

- How it moves
- How it breathes
- How it senses its environment
- How it catches or finds its food
- How it attracts a mate
- How it reproduces
- How it disperses

You will also need to think about:

- How it defends itself against abiotic and biotic threats
- What limiting factors it might experience in relation to its environment

You will need to produce:

- A model, using the material supplied

Now, design an arthropod that is capable of functioning, surviving and reproducing in one of the following habitats (you will be told which):

- A filter feeder that lives in shallow water at the edge of the sea
- A predator that lives in a hot desert
- A herbivore that lives in a fast running freshwater stream
- A dung feeder that lives on the African savannah
- A carrion feeder that lives on Gotham moor

You have 15 minutes to design your animal.

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Formative exercise

Following lectures on the structure and diversity of arthropods, this exercise is designed to support the following module learning outcomes:

K2. Describe the structure, life histories, range and diversity of living organisms

S1. Apply scientific principles and methodologies to the solution of problems

Students are asked to think about the structure and adaptations of a fictional (but realistic) species in a habitat they have been allocated by lot, and design an animal to match the requirements.

S6. Work independently and as part of a team

There are normally 3 people in each team. They have to internally allocate tasks such as data searching, poster construction and model making. They also need to agree a leader to present the findings, although the whole team should be able to answer questions. This session concentrates only on the model.

The supervisor observes the process, gives time warnings, but no detailed assistance.

Materials required per group (est. 8 groups):

Felt tip pens (black blue, green, red)

Scissors

Plasticine (assorted colours)

Cocktail sticks (12)

Coloured mapping or drawing pins 8

Petri dish (for small pieces)

Sheet of thin card for model mount (min 20x20cm)