Biology - Key Stage 4

# Cloning

**Mrs Gibbs** 



## Independent task

1) Cloning is when genetically \_\_\_\_\_

Plants are cloned to protect rare species from \_\_\_\_\_ They are also cloned to produce crops with desirable characteristics such as:

1) Animals are cloned to produce cattle with desirable characteristics such as:

Animals could also be cloned for use in \_\_\_\_\_\_



# **Cloning in plants**

1. What are the two ways a plant can be cloned?

1. Suggest why a gardener may choose to clone her plants instead of produce more using seeds

Hint: seeds are produced sexually



### Independent task

- 1) E\_\_\_\_\_t \_\_\_\_ involves s\_\_\_\_\_ apart cells from a developing embryo before they become s\_\_\_\_\_. The identical embryos are then t\_\_\_\_\_ into h\_\_\_\_\_ mothers.
- 2) An advantage of embryo transplants over selective breeding is that:



# Put the steps of adult cell cloning in order

- An electric shock stimulates the egg cell to divide into an embryo
- The nucleus is removed from an unfertilised egg cell
- The embryo is inserted into the womb of an adult female
- The nucleus from an adult body cell is inserted into the empty egg cell



