

Walking Talking Mark

GCSE Biology (Legacy Specification)

Cloning Techniques Question

This is a narrated Walking Talking Mark slideshow.
It will run automatically when you press start slideshow
from the beginning.

**NB: Some of the QWC style questions have more marks than 6 available
this is to allow for students to see all of the possible marking points.**

This resource is strictly for the use of member schools for as long as they remain members of The PiXL Club. It may not be copied, sold nor transferred to a third party or used by the school after membership ceases. Until such time it may be freely used within the member school.

All opinions and contributions are those of the authors. The contents of this resource are not connected with nor endorsed by any other company, organisation or institution.

Commissioned by The PiXL Club Ltd. February 2016

There are many mammals that are in danger of becoming extinct. Adult cell cloning is a technique that can be used by scientists to help prevent the extinction of these rare mammals.

Giant Panda



Tibetan Antelope



South China Tiger



White-Flag Dolphin



a. QWC: Describe the cloning technique.

(6 marks)

b. Evaluate the cloning technique.

(2 marks)

a. QWC: Describe the cloning technique. (6 marks)

Adult cell cloning is where the nucleus is removed from an unfertilised egg cell (enucleation). The nucleus from an adult body cell of the rare mammal, is then inserted into the egg cell. An electric shock then causes the egg cell to begin to divide to form embryo cells that is implanted into a host mother.

b. Evaluate the cloning technique. (2 marks)

The original mammal may not have the best characteristics for the species. In adult cell cloning there is limited genetic variation between the generations that may lead to risk of extinction due to disease.

