



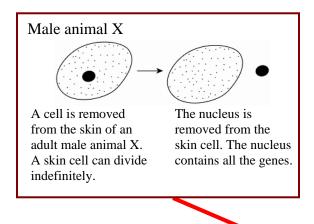


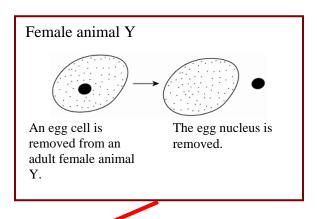
CHAPTER 3: HEREDITY AND VARIATION



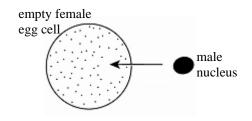
The Process of Cloning

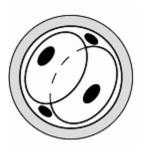
Cloning is the process of making an exact copy of an animal or a plant from one cell of the animal or plant. In this way the original organism and the clone are exactly the same. The basic steps in cloning are illustrated below.





The nucleus from the male cell is replaced inside the empty egg cell.



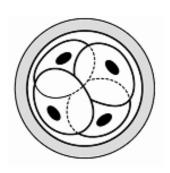


The egg cell with a new nucleus is allowed to grow and divide in a petri dish containing a nutrient solution.

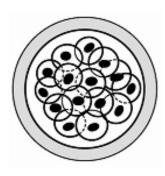
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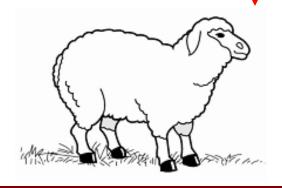
On day 2, an embryo with four cells is formed.



On day 5, the cell (blastocyst) is transferred and implanted into the uterus of another female animal.



The embryo develops into a foetus.



The foetus grows and develops into a genetic copy of the male animal X.







The first cloned animal was a sheep, named Dolly.

Cloning of human beings!

Many scientists believe the cloning of human beings cannot be done safely. The danger is that the clones may develop into abnormal individuals.

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