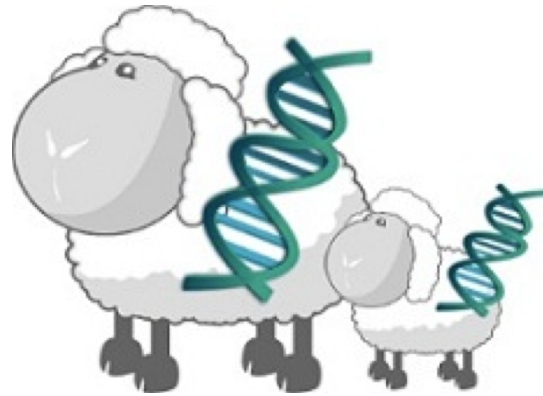


Web Lesson: Cloning

Learn.Genetics at <http://learn.genetics.utah.edu/> -- > Under the "Cell Biology" Menu, Click on "Cloning"

Browse the articles at the site to find the answers to the following questions.



Click and Clone

1. List all the materials needed to clone a mouse.

2. Place the following steps in the correct order.

_____ Stimulate cell division

_____ Deliver baby

_____ Remove and discard the nucleus from the egg cell

_____ Isolate donor cells from egg donor and germ cell donor

_____ Transfer the somatic cell nucleus into the egg cell

_____ Implant embryo into a surrogate mother

3. Explain how the nucleus is removed from the donor egg:

4. What color with the cloned mouse be? _____ What is the name of this mouse?

Is it Cloning or Not?

For each of the following scenarios, indicate YES (it is cloning) or NO (it is not cloning)

1. _____ Sperm taken from a mole goat is combined with a female's egg in a petri dish. The resulting embryo is implanted into the female's uterus to develop
2. _____ A sheep embryo, composed of 16 cells, is removed from the mother's uterus and separated into individual cells. Each cell is allowed to multiply, creating 16 separate embryos, which are then implanted in different female sheep to develop to maturity.
3. _____ A cow with many desirable traits is stimulated with hormones to produce a number of egg cells. Each of these eggs is fertilized and implanted into a surrogate mother.
4. _____ In vitro fertilization
5. _____ Cell nuclei from an extinct woolly mammoth are placed into enucleated cow cells.