

## Cloning the Basics

Activity 1: <http://learn.genetics.utah.edu/content/cloning/clickandclone/>

We will do this activity together in class. If you are at home, Flash Player will not work on your chromebook... If you cannot get it to work, you can skip the questions in activity 1.

List all 6 steps in the "click and clone" procedures:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

7. What color was the cloned mouse?

8. In the real mouse cloning experiment, what was the name of the first born survivor?

Activity 2: <https://learn.genetics.utah.edu/content/cloning/whatiscloning/>

1. \_\_\_\_\_ is the creating of an organism that is an exact genetic copy of another.
2. You might not believe it, but there are human clones among us right now. They weren't makes in a lab though: they're \_\_\_\_\_, created naturally.
3. \_\_\_\_\_ is the relatively low-tech version of cloning. As the name suggests, this technology mimics the natural process of creating identical twins.
4. Artificial embryo twinning uses the same approach, but it occurs in a \_\_\_\_\_ instead of the mother;s body.
5. Somatic cell nuclear transfer was the method used to create \_\_\_\_\_.
6. A \_\_\_\_\_ is any cell in the body other than the two types of reproductive cells, sperm, and egg.
7. It;s the difference in our \_\_\_\_\_ that make each of us unique.
8. To make Dolly, researchers isolated a \_\_\_\_\_ from an adult female sheep. Next, they \_\_\_\_\_ the nucleus from that cell to an egg cell from which the nucleus had been removed. After a couple of chemical tweaks, the egg cell, with its nucleus, was behaving just like a freshly fertilized \_\_\_\_\_. It developed into an \_\_\_\_\_, which was implanted into a \_\_\_\_\_ and carried to term.
9. \_\_\_\_\_ (give me the name) was the first ever mammal to be cloned from an adult somatic cell.
10. What do natural fertilization and SCNT both make?
11. What is the difference between fertilization and SCNT?
12. How is cloning an organism different from "cloning a gene"?

Play this game: [https://educationalgames.nobelprize.org/educational/medicine/dna\\_double\\_helix/](https://educationalgames.nobelprize.org/educational/medicine/dna_double_helix/)