

**Lesson Outline****LESSON 2*****Asexual Reproduction*****A. What is asexual reproduction?**

1. In \_\_\_\_\_, one parent organism produces offspring without meiosis and fertilization.
2. Because the offspring of asexual reproduction inherit all their DNA from one parent, they are genetically \_\_\_\_\_ to each other and their parent.

**B. Types of Asexual Reproduction**

1. Cell division in prokaryotes is known as \_\_\_\_\_.
2. During fission, DNA is \_\_\_\_\_ and the cell splits to form two identical offspring. The original cell no longer exists.
3. Many unicellular \_\_\_\_\_ reproduce by mitotic cell division. In this type of asexual reproduction, an organism forms two offspring through mitosis and \_\_\_\_\_.
4. In \_\_\_\_\_, a new organism grows on the body of its parent by mitosis and cell division. When the bud becomes \_\_\_\_\_ enough, it can break from the parent and live on its own.
5. \_\_\_\_\_ occurs when an offspring grows from a piece of its parent.
  - a. Sea stars, sea urchins, sea cucumbers, and planarians can \_\_\_\_\_ through regeneration.
  - b. Many animals can \_\_\_\_\_ damaged or lost body parts. This is not reproduction; \_\_\_\_\_ are not produced.
6. \_\_\_\_\_ is a form of asexual reproduction in which offspring grow from a part of a parent plant.
7. \_\_\_\_\_ is a type of asexual reproduction developed by scientists and performed in laboratories. It produces \_\_\_\_\_ individuals from a cell or from a cluster of cells taken from a multicellular organism.
8. Using a cloning method called \_\_\_\_\_, plant growers and scientists can use a meristem to make a copy of a plant with desirable traits.
9. Because all of a clone's \_\_\_\_\_ come from one parent, the clone is a genetic copy of its parent.

## Lesson Outline continued

10. Asexual reproduction enables organisms to reproduce without a(n) \_\_\_\_\_.
11. Asexual reproduction also enables some organisms to rapidly produce a large number of \_\_\_\_\_.
12. Asexual reproduction produces offspring that are genetically identical to each other and to their \_\_\_\_\_. This results in minimal genetic \_\_\_\_\_ within a population.
13. Genetic variation is important because it can give organisms a better chance of \_\_\_\_\_ if the environment changes.
14. Genetic changes, called \_\_\_\_\_, can occur and then be passed to offspring; this can affect the offspring's ability to survive.