Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period \_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_

**I CAN** explain and describe how animal & plant cells produce more cells.

Cell Division: Mitosis and Cytokinesis Video Guide

[Cell Division: MITOSIS and CYTOKINESIS](http://media.soesd.k12.or.us/htbin/wwform/187?TEXT=R70021806-70029336-/CA/WWI770.HTM) (L110358,DX) IM 2004 Digitized Video 20 min.

**Lesson One: The Three Types of Cell Division**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is one type of cell division. There are two other types: meiosis and binary fission.

2. Mitosis is how multicellular organisms \_\_\_\_\_\_\_\_\_\_\_\_and develop and how new

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are created.

**Lesson Two: The Cell Cycle**

3. The first three phases, G1, S and G2, together are called \_\_\_\_\_\_\_\_\_\_\_\_\_.

4. The S phase of interphase completes when it has \_\_\_\_\_\_\_identical copies of each of its

chromosomes.

**Lesson Three: Mitosis and Cytokinesis**

5. Mitosis is divided into \_\_\_\_\_\_\_\_ sub-phases: \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

6. Prophase: Each compact chromosome consists of two identical copies attached at a central point. These two identical copies are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. This attachment point is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

8. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_disintegrates.

9. The second phase of mitosis is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

10. The third phase of mitosis is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. The fourth and final phase of mitosis is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. The final physical division is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. The result is two daughter cells each with its own nucleus with \_\_\_\_\_\_\_\_\_\_\_\_\_chromosomes.

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**I CAN** explain and describe how animal & plant cells produce more cells.

Period \_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_

Cell Division: Mitosis and Cytokinesis Video Guide

**Lesson One: The Three Types of Cell Division**

1. **Mitosis** is one type of cell division. There are two other types: meiosis and

binary fission.

2. Mitosis is how multi-cellular organisms **grow** and develop and how new

**body cells** are created.

**Lesson Two: The Cell Cycle**

3. The first three phases, G1, S and G2, together are called **interphase**.

4. The S phase of interphase completes when it has **two** identical copies of each of its

chromosomes.

*Skip Review on video—go to 9:20*

**Lesson Three: Mitosis and Cytokinesis**

5. Mitosis is divided into **four** sub phases: **prophase, metaphase, anaphase, and telophase**.

6. Prophase: Each compact chromosome consists of two identical copies attached at a central point. These two identical copies are called **sister chromatids**.

7. This attachment point is called the **centromere**.

8. The **nuclear envelope** disintegrates. (note—fibers grow toward chromatids)

9. The second phase of mitosis is **metaphase**. *(note attach at kinetochords)*

10. The third phase of mitosis is **anaphase**.

11. The fourth and final phase of mitosis is **telophase**.

12. The final physical division-STAGE-- is called **cytokinesis**. *(note-cleveage furrow)*

13. The result is two daughter cells each with its own nucleus with **identical** chromosomes.

*(note-cell plate made with vesicles)*