

Lesson 3
How do Cells Reproduce?
Guide Questions

How organisms Grow

Guide questions and Critical Thinking (page 76-77)

- 1) Draw and explain the steps of the cell division on page 76.
- 2) How do living things grow larger?
- 3) When a **body cell** divides, how many new cells does it produce?
- 4) What happens to cells as they continue to divide and multiply as an organism is formed?
- 5) What happen within a fertilized egg from the time it is a single cell to the time it forms tissues?
- 6) If an organism has one million cells when it is one month old, did its cells divide one million time?

Mitosis

Guide questions and Critical Thinking (page 78-79)

1. What has to happen before a cell can divide?
2. What must happen before the paired chromosomes enter the cytoplasm of the cell?
3. How many chromosomes will the two new cells have?
4. How do the chromosomes divide between the two new cell?
5. In which parts of the plant is growth occuring most rapidly?

Meiosis

Guide questions and Critical Thinking (page 80-81)

1. How does a number of chromosomes in a reproductive cells compare with the number of chromosomes in body cells of the same organism?
2. How does meiosis make four cells with 23 chromosomes from one cell with 46 chromosomes?
3. How do the stages of meiosis differ from those of mitosis?
4. How are the stages of mitosis and meiosis alike?

Critical thinking

5. How many times during the process of meiosis do chromosomes duplicated themselves?
6. Why are chromosomes only duplicated once?
7. Why do the four reproductive cells formed contain only half of the DNA an organism need?

Genetic Variations in Organisms

Guide Questions (page 82)

1. What is the difference in the offspring produced by asexual reproduction compared with the offspring produced by sexual reproduction?
2. Which part of meiosis makes it possible for offspring to vary?

Review for Test

Lesson: [How Do Cells Reproduce?](#)

- 1) Read and study Lesson 3.
- 2) Read and study Guide Questions on the notebook.
- 3) Put in order the steps of the Cell Division.
- 4) Draw the Mitosis Stages.
- 5) Put in order the Mitosis Stages.