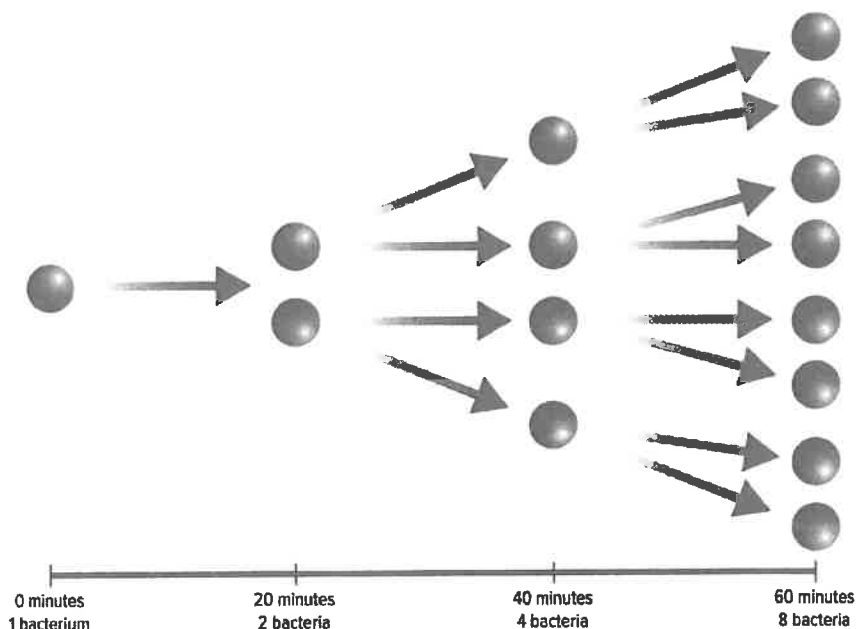


**Binary Fission**

Use with textbook pages 22-23.

Use the diagram showing the reproduction of bacterial cells to answer questions 1 to 5.



1. What type of asexual reproduction is shown above? \_\_\_\_\_
2. Bacteria double every 20 minutes under favourable conditions. Complete the following table to display the reproduction data shown in the diagram.

| Time (min) | Number of Bacterial Cells |
|------------|---------------------------|
| 0          | 1                         |
| 20         |                           |
| 40         |                           |
| 60 (1 h)   |                           |
| 80         |                           |
| 100        |                           |
| 120 (2 h)  |                           |
| 140        |                           |
| 160        |                           |
| 180 (3 h)  |                           |

Name \_\_\_\_\_

Date \_\_\_\_\_

**Processing and  
Analyzing**

**Topic 1.2**

3. Use the table on the previous page to graph the data for the first 120 minutes. What variable would go on the  $x$ -axis? What variable would go on the  $y$ -axis?

---

---

|  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |

4. Describe how the graph represents the growth of the bacterial population.

---

---

5. Based on the reproduction rate, how many bacterial cells would you expect after

a) 12 hours? \_\_\_\_\_

b) 24 hours? \_\_\_\_\_