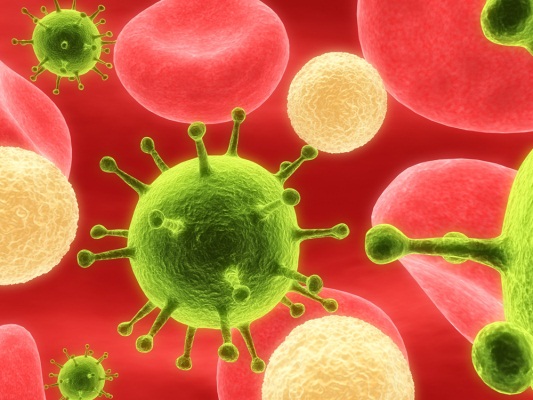
**Bacteria are Everywhere! Activity –   
Post-Assessment Bacteria Survey – Answers**

**Directions**

Please answer the following questions to the best of your ability, using your knowledge of bacteria and their growth.

1. Name three factors that bacteria need for their growth.
   1. **water**
   2. **nutrients**
   3. **air/oxygen**
2. Do bacteria reproduce sexually or asexually? Circle one.
3. How long does it take for a bacterial population to double in size?
4. 1 minute
5. 20 minutes
6. 4 hours
7. 1 day
8. What temperature is the best for bacterial growth?
   1. 15 ⁰C (59 ⁰F)
   2. 25 ⁰C (77 ⁰F)
   3. 37 ⁰C (98.6 ⁰F)
   4. 45 ⁰C (113 ⁰F)

The following three questions are true or false questions. Circle your answer choice.

1. Bacteria only grow in darkness. T F
2. Bacteria are eukaryotes. T F
3. Bacteria are unicellular organisms. T F
4. Name one reason why scientists would want to grow bacteria in the lab.

**Scientists are interested in growing bacteria in the lab:**

**1.) To study cell growth and communication, and**

**2.) To use the bacteria’s cellular machinery to grow valuable molecules like proteins.**

1. Name two methods that scientists use to count bacteria or monitor their growth.
2. **Optically monitor cell growth by shining light through cells being grown in liquid medium to see how much light is scattered. More scattered light indicates more cells in the solution.**

**2.) Using photographic techniques, one can determine how much of a solid surface (i.e., Petri dish) is covered by bacteria and quantify the growth.**

1. Did you enjoy the bacterial growth experiment? Why or why not?

**Answers will vary.**

1. Is there anything you would have liked to do differently in the bacterial growth experiment?

**Answers will vary.**

1. What did you learn about bacteria?

**Answers will vary; no right or wrong answer.**