Name: _____ Date: _____ Class: _____

Life-Cycle Assessment Post-Quiz

1. What is a life cycle?

2. Name the three main parts of a life cycle assessment (LCA).

   A. _____

   B. _____

   C. _____

3. Name three main life-cycle stages that cover “cradle to grave.”

4. Which life-cycle stage includes recycling?

5. For each photogaph below, identify its life-cycle stage.

_____ _____ _____ _____

6. Why is it important for engineers to use the LCA when designing products? (Include at least two reasons in your answer.)

7. You are making a batch of cupcakes. The recipe calls for 120 ml of milk. If it takes 50 kJ of energy to make 10 ml of milk, how much energy is needed to make 120 ml of milk? (Show your work.)

   Hint: 10 ml milk needs 50 kJ of energy

   Energy needed to make 120 ml of milk: _____

8. In the same recipe, you need 2.5 ml vanilla. For every 1 ml of vanilla produced, 4 g CO_{2e} are emitted to the atmosphere. How much CO_{2e} is emitted for 2.5 ml? (Show your work.)

   Hint: 1 ml vanilla emits 4 g CO_{2e}

   Emissions for 2.5 ml of vanilla: _____