Name_____Date_____

DNA Isolation Lab—Strawberry

1. Procedures for isolation

- **Obtain a Strawberry.**
- **Place the strawberry in a ziplock bag and add 10 mL of 0.9% NaCl.**
- **Pulverize the strawberry, in the bag, for about 2 minutes.**
- **Add 1 mL of detergent such as *Lemon Fresh Joy, Dawn or Woolite*.**
- **Continue pulverizing for 2 minutes.**
- **Filter the solutions through several layers of cheesecloth into a clean 50 mL glass beaker (It may be necessary at this point to add an additional 5-10 mL of 0.9% NaCl in order to have enough liquid to filter).**
- **Tilt the beaker and gently add an equal volume of ice-cold *ethanol* down the inside of the beaker.**
- **A stringy, white precipitate containing DNA will form along the interface between the two solutions.**
- **Place a wooden skewer upright in the center of the beaker and gently spool the DNA by gently turning the skewer continuously in the same directions.**
- **The collected DNA sample may be stored in a small container with a small amount of the 0.9% NaCl solution.**

Discussion Questions:

1. **What organelle originally held the sticky white precipitate?**

2. **If you had "molecular vision" and could see the molecules that make up the stingy white precipitate,**
   a. **what elements would you see in it?_____**
   b. **what subunit would you see in it?_____**
   c. **what sugar would you see?_____**
   d. **what possible bases could you see?_____**

3. **How is the structure of DNA related to its function?**

4. **Through what process do cells like those found in plants make more DNA?**

BONUS (10 pts – Use the AP Biology Textbooks!)) Label the replication fork shown below: