Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I CAN describe the basic structure of the DNA molecule.

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_P. \_\_\_

**DNA EXTRACTION LAB**

**PROCEDURE**:

Fill in the **Observation during the experiment.**

Fill in the **Scientific Info after you have cleaned up** – look at your Pre-Lab

|  |  |
| --- | --- |
| 1. Collect saliva (no mucus) in the  cup. You will need at least 10 ml. | Observation: The spit looks like:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Scientific Info: In the saliva are\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 2. Add a very SMALL scoop of salt to  your cup (use scoopula) and  SWIRL until all the salt is dissolved. | Observation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Scientific Info:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 3. Add 2 drops of liquid soap and  SWIRL until well mixed.  4. Let the mixture sit for **5** minutes. | Observation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Scientific Info:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 5. Pour the mixture into the test tube,  up to the first line (apx. ¼ full). | **TEACHER CHECKPOINT!**  **Get teacher signature BEFORE moving on:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **teacher signature** |
| 6. The teacher will add a very small  scoop of enzymes (meat tenderizer)  to the test tube after signing your  check-point.  7. Stir **GENTLY** with **WOODEN**  **STICK**.  Be careful! If you stir too hard,  you’ll break up the DNA, making it  harder to see. | Observation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Scientific Info:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 8. **TILT** your test tube.  9. **SLOWLY** pour rubbing (isopropyl)  alcohol into your test tube up to the  second line (apx. half full)> | Observations:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Scientific Info:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 10. Alcohol is less dense than water, so  it floats on top.  Look for clumps of white stringy stuff where the water and alcohol layers meet. | **TEACHER CHECKPOINT!**  **Get teacher signature BEFORE moving on:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **teacher signature** |
| 11. DNA is a long, stringy molecule.  The salt that you added in step #1  helps it stick together.  Observe the clumps of tangled DNA molecules! | My DNA looks like:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 12. You can use a wooden stick or paper  clip to collect your DNA **AND** place  it in an Eppendorf tube and close  the lid tightly.    13. You can thread a piece of string  through the Eppendorf tube and  wear your DNA as a necklace. |  |
| 14. Clean up your station.   * Rinse test tube and beaker with clean water. * Then dip and rinse in the bleach solution.   Make sure your station looks just like it did when you first sat down at this lab. | **TEACHER CHECKPOINT!**  **Get teacher signature BEFORE leaving class:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **teacher signature** |