B. PCR Reaction

1. Label a tube containing a Ready-to-Go PCR bead with your initials.

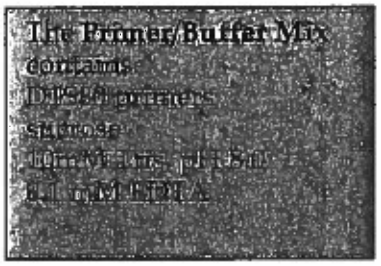
Add the following to the tube being careful not to touch the bead with your pipet tip as it may stick:

- 22.5μl of the Primer/Buffer Mix (blue tube)
- 2.5μl of your cheek-cell DNA

note: the bead will begin to dissolve in the liquid

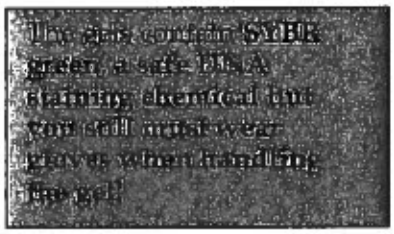
2. Pipet the mixture up and down to mix the DNA and the buffer. Keep the tubes on ice.

3. When everyone's tubes are ready, the TF will pulse down the contents of all of the tubes and place them in the PCR thermocycler and begin the program. The program lasts over an hour.



4. When the program is finished, retrieve your reaction tube and keep it on ice.

C. Gel Electrophoresis



1. Your group will be given a 2% agarose gel with 12 sample wells.

2. Carefully remove the gel comb.

3. You may be asked to add 2μl of orange PCR loading dye to your PCR sample before loading it on the gel.

4. Keep track of whose sample is loaded into which well. Load 20 μl of each PCR reaction into each well. Gently depress the pipettor button to **slowly** expel the sample into the appropriate well. Reserve lane 7 for running a 20μl sample of marker DNA.

5. Run the gel at 70 V (volts) for 30 min.
The proper timing of the run is essential to prevent overheating, which will damage your gel as well as the apparatus. Stop the gel and notify your TF that you have finished. Your TF will photograph it for you. (The gel pictures will be sent to your teacher.)

Use the space below for notes on mistakes and/or adjustments in your procedure: