Gel Electrophoresis:

1. Prepare gel box for gel electrophoresis:
    a. Grab a gel box.
    b. Tape ends of gel box as needed to prevent spillage.
    c. Fill gel box with 1x TAE up to where it very thinly layers over the gel. Make sure the wells are at the anode end.
2. Make agarose gel.
    a. Add .8 g of agarose powder to a sterile flask.
    b. Add 80 mL of 1X TAE to flask.
    c. Microwave bottle for 1 minute, then 2 30-second increments, stir in between increments. Heat and stir as needed until solution is clear.
    d. Let solution cool until the flask is manageable to touch without a glove.
    e. Grab a gel tray and insert a comb into gel tray. Then pour agarose into gel tray.
3. Make and prepare "master mix" for gel electrophoresis:
    a. Grab the number of tubes corresponding to the number of samples being tested, plus one for the ladder. Label tubes.
    b. Use this formula and multiply it by the number of samples plus the positive and negative control to create the mix:
        i. Water- 5 μL
        ii. PCR Product/Ladder- 5 μL
        iii. Loading Dye- 2 μL
4. Perform gel electrophoresis
    a. Insert 12 μL of ladder mix into first well.
    b. Insert 12 μL of the PCR product mix into all of the other wells.
    c. Slide the lid on, plug gel box into power supply. Run at ~130- V for 1.5 hours.
5. Once gel finishes running, remove the gel from gel box and gel tray, and gently dry excess liquid with a paper towel.
6. Visualize gel using a UV gel imager. Take as many images of gel as necessary to analyze band lengths.
7. Once images have been captured and saved, gel can be disposed of in proper waste.