DNA Electrophoresis

Goal	To separate DNA fragments according to their size
Materials	• DNA samples • Appropriate DNA ladder • 6X loading dye • Pipette tips • Agarose • Microwave • Erlenmeyer flask • Graduated Cylinder • 1X TAE buffer • Gel box • Gel casting tray • Ethidium bromide • UV gel imager • Staining container
Procedure	1. Meaure 30 mL of 1X TAE buffer and put in Erlenmeyer flask 2. Weight 0.24g of agarose 3. Add to TAE buffer in Erlenmeyer flask 4. Microwave flask to dissolve agarose. Swirl around to ensure that all agarose has been dissolved 5. Pour melted agarose into gel casting tray and carefully insert the comb. Let the gel sit for 20 minutes. After, carefully remove the comb from gel 6. Place gel into gel box with wells nearest the black electrode 7. Add 1X TAE buffer to gel box. Pour enough buffer so there is approximately 1cm of buffer overtop of gel 8. Prepare desired samples for loading. Add 6X loading dye to each sample 9. Load the ladder and desired samples into each well

	10. Close lid for gel box and make sure to match electrodes properly 11. Turn on power and run at 80V. Run until DNA samples have run to an appropriate location on gel 12. Remove gel, put in staining container and fill with 1X TAE buffer until staining is needed 13. To stain, add 2 μL of ethidium bromide to buffer in staining container. Gently swirl container to mix ethidium bromide. Let gel stain sit for around 20 minutes 14. Carefully remove gel from staining container and place onto an appropriate platform 15. Turn on UV light and visualize/analyze gel