

4. Genomics questions

- Why was a complete digest with a restriction enzyme not used to make a genomic library to sequence the genome?

A complete digest to make a genomic library would not generate overlapping fragments, thus it is not useful to assemble DNA sequence.

- In a DNA sequencing reaction, what happens to the length of the products made by DNA polymerase if the concentration of ddT is extremely low and the concentration of dTTP is extremely high? What if the concentration of dTTP is extremely low and the concentration of ddTTP extremely high?

If ddT is low and dTTP is high, then the products will all be very long, and a sequence of all bases will not be recovered.

If ddT is high and dTTP is low, then the products will all be very short, and a sequence of all bases will not be recovered.

- c. **You must do this with at least one other person.** Do a search on the web for genome sequences. Any genome sequence.
 - a. Cite two web sites you found useful
 - b. Site one interesting detail you found and one interesting detail your partner found about a genome.
 - c. Write down your partner's name.