

AP Biology Restriction Enzyme Worksheet 12-10-07

[http://www.phschool.com/science/biology\\_place/biocoach/red/intro.html](http://www.phschool.com/science/biology_place/biocoach/red/intro.html)

1. Explain what a restriction enzyme is and what it does.
  2. Describe what a restriction fragment is and how they are formed.
  3. Give 2 reasons why restriction fragments are important in gene technology.
  4. Explain what a restriction site is.
  5. Draw a picture of the 3 ways restriction enzymes cleave fragments of DNA.
  6. Explain what an Eppendorf tube is.
  7. Give the 4 substances needed to do a restriction enzyme reaction.
  8. At what temperature must this reaction take place and for how long?
  9. What is the purpose of gel electrophoresis?
  10. Briefly explain how the gel is made for this process.
  11. What is the purpose of the buffer placed on top of the gel?
  12. What 2 substances are added to the DNA in order to be able to track it?
  13. Which way does the DNA move once the power is turned on?
  14. Explain why the shortest fragments of DNA move the farthest in the gel.
- \*\*Go through concept 4 until you understand it.....it is critical to the lab we will do Friday. We will go over it in class but you need to grasp the basics before we do ☺**