

#ref #ret

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## 1 | Prompt

1. Read through this brief article (Links to an external site.) about the process of gel electrophoresis.
  2. Read the next lab protocol (lab 3 gel electrophoresis (Links to an external site.)) and note any questions you have so that you can ask them in class before we start.
  3. **Submit brief responses to the following:**
    - (a) What is the specific feature of DNA that causes it to move toward the positively charged side of the gel-running apparatus?
    - (b) Shorter DNA fragments travel farther along the gel than longer DNA fragments. Why is this?
    - (c) When you analyze your specific PCR product using gel electrophoresis, what do you expect to see in the final image of the stained gel (assume your PCR reaction was successful)?
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## 2 | Responses

1. **What is the specific feature of DNA that causes it to move toward the positively charged side of the gel-running apparatus?**
  - (a) DNA fragments are negatively charged. Thus, they move toward the positive charge.
2. **Shorter DNA fragments travel farther along the gel than longer DNA fragments. Why is this?**
  - (a) DNA fragments have the same amount of charge regardless of their mass. Thus, the fragments with less mass are more greatly effected.
3. **\*When you analyze your specific PCR product using gel electrophoresis, what do you expect to see in the final image of the stained gel (assume your PCR reaction was successful)?\***
  - (a) I would expect to see a band, or a lot more DNA, in the bp length section of the segment that was multiplied with the PCR reaction.

## 3 | CW:

1. Move through the gel electrophoresis interactive tutorial (enjoy the goofy sound effects).
2. Using one or more sound sources, extend your learning about a specific aspect of gel electrophoresis that interests you (e.g. physical properties of agarose, movement of biomolecules through agarose, staining DNA, DNA size standard ladders, invention of the technique, automation, alternative applications of electrophoresis, or another topic of your choosing).
3. **Write and submit** a brief (1 paragraph) summary of what you've learned and include links to your sources.

The rabbit hole begins.. [https://en.wikipedia.org/wiki/Gel\\_electrophoresis?scrlybrkr=940ae169](https://en.wikipedia.org/wiki/Gel_electrophoresis?scrlybrkr=940ae169)  
<https://www.google.com/search?client=opera&q=agarose&sourceid=opera&ie=UTF-8&oe=UTF-8> <https://en.wikipedia.org/wiki/Agar> [https://en.wikipedia.org/wiki/Agarose\\_gel\\_electrophoresis](https://en.wikipedia.org/wiki/Agarose_gel_electrophoresis)