Electricity and Magnets

1. What is electricity again?
2. What is a magnet?
3. Magnets can be either naturally occurring, or man-made. What are the 4 naturally occurring magnetic metals?
4. If I am making a man-made magnet, what must it be made out of?
5. All magnets have 2 poles: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. If a magnet is cut into 2 parts, each piece will still have:
7. At this point, we know that like charges repel and opposite charges attract each other. Why do magnets attract or repel each other?
8. What is a magnetic field?
9. What do electric currents produce?
10. What is an electromagnet?
11. What are 4 things that you can do to increase the strength of an electromagnet? Explain why each one will increase the strength:
12. Explain 2 reasons why an electromagnet is so useful:
13. Electric motors change \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy by
14. Generators change \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy by
15. How does an electric current produce a magnetic field?
16. How are generators and electric motors related?