

ELECTRICAL AND MAGNETIC POTENTIAL ENERGY

When something has potential energy, it has the potential to move or change something. This is true of objects with electrical and magnetic fields. If the objects involved are “going against their nature,” that means that it requires more energy to get them to that state, therefore having more stored up energy that can be used to move or change objects.

It gets a little confusing when the objects repel or attract. Fill in the information below to help you with these ideas.



Glue this side into your notebook



Electrical	Magnetic
<p>repel (_____ charges) = more potential energy when _____</p>	<p>repel (_____ poles) = more potential energy when _____</p>
<p>Circle the correct distance and put the proper charges inside the circles.</p> <p>close ○ ○</p> <p>○ far ○</p>	<p>Circle the correct distance and put the proper poles inside the magnets.</p> <p>close □ □</p> <p>□ far □</p>
<p>attract (_____ charges) = more potential energy when _____</p>	<p>attract (_____ poles) = more potential energy when _____</p>
<p>Circle the correct distance and put the proper charges inside the circles.</p> <p>close ○ ○</p> <p>○ far ○</p>	<p>Circle the correct distance and put the proper poles inside the magnets.</p> <p>close □ □</p> <p>□ far □</p>

PRACTICE

1. Draw a picture of two magnets that are opposite poles and have LOW potential energy.
2. Draw a picture of two magnets that are same poles and have LOW potential energy.
3. Draw a picture of two magnets that are opposite poles and have HIGH potential energy.
4. Draw a picture of two magnets that are same poles and have HIGH potential energy.
5. Draw a picture of two charged particles that are opposite charges and have LOW potential energy.
6. Draw a picture of two charged particles that are same charges and have LOW potential energy.
7. Draw a picture of two charged particles that are opposite charges and have HIGH potential energy.
8. Draw a picture of two charged particles that are same charges and have HIGH potential energy.
9. What kind of potential energy do you see here for both the springs (elastic potential energy) and the charged particles?

