

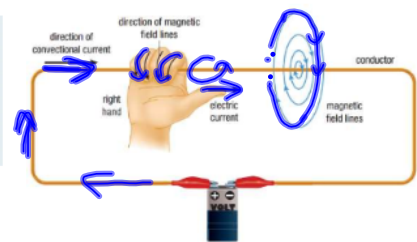
SPH3U 12.2 Oersted's Discovery

1. Oersted's principle

Oersted's principle:	When current runs through a straight conductor, it creates a circular magnetic field around it.
Right-hand rule:	tells you what direction the magnetic field goes in.

Right-Hand Rule for a Straight Conductor

If your right thumb is pointing in the direction of conventional current, and you curl your fingers forward, your curled fingers point in the direction of the magnetic field lines.



Current into /out of page:	\otimes = current moving away (back of an arrow) \odot = current moving toward you. (tip of an arrow).
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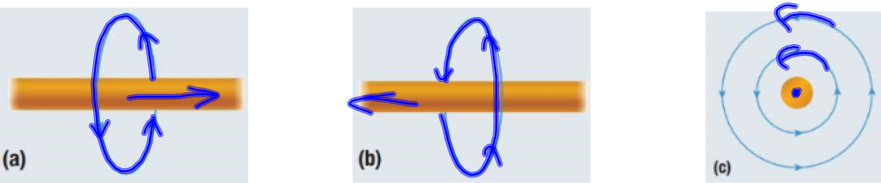


Conventional current:	Current flows from + to - (which isn't true - blame Ben Franklin).
Electron flow model:	current flows from - to + (electrons). (more correct, but requires left-hand rule instead of right-hand, which we don't do).

Draw the magnetic field for each diagram.



Draw the direction of the conventional current for each diagram.



Homework: page 556: #1-2, 5, 7