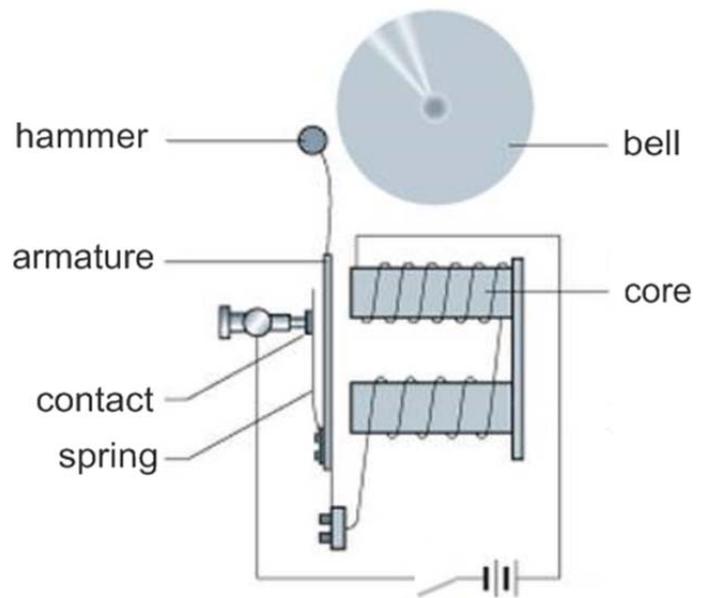


## The Electric Bell

1. An electromagnet needs a coil of wire and a current to work. Add a label to the diagram showing the coil of wire.
2. Electromagnets can be made stronger by winding the wire around a core. What material should be used for the core of this electromagnet, and why?



3. How else could the electromagnet be made stronger?

4. When the electromagnet becomes magnetized, the armature is attracted to the electromagnet. What material should the armature be made from?

5. When the switch at the bottom of the diagram is closed a cycle occurs in the bell. Number the steps below to show the order they happen in.

1. switch is closed

armature is attracted to electromagnet

current stops flowing

electromagnet becomes magnetized

armature springs back to original position

current flows in circuit

armature no longer attracted to electromagnet

hammer hits bell

circuit is broken

10. circuit is completed again (return to step 2 until switch is opened)