Induced EMF

As you work through the steps in the lab procedure, record your experimental values and the results on this worksheet. Use the exact values you record for your data to make later calculations.

Calibrating the Galvanometer

When current flows into the red jack on the galvanometer, the needle deflects in which direction?

When current flows into the black jack on the galvanometer, the needle deflects in which direction?

Induced EMF: South Pole

Record your prediction for which direction the needle will deflect as the south pole is inserted into the coil.

Rapidly insert the south pole of the electromagnet into the coil and record the direction the needle of the galvanometer deflects.

Record your prediction for the needle deflection if the south pole of the electromagnet is held at rest inside the pick-up coil.

Insert the south pole of the electromagnet into the coil and hold it stationary. Note the needle deflection when the electromagnet isn't moving and record your experimental results.

Record your prediction for the needle deflection if the south pole of the electromagnet is pulled rapidly out of the coil.

Pull the south pole of the electromagnet rapidly out of the coil. Note the direction the needle of the galvanometer deflects and record your experimental results.

Induced EMF: North Pole

Record your prediction for which direction the needle will deflect as the north pole is inserted into the coil.

Rapidly insert the north pole of the electromagnet into the coil and record the direction the needle of the galvanometer deflects.

Record your prediction for the needle deflection if the north pole of the electromagnet is held at rest inside the pick-up coil.

Insert the north pole of the electromagnet into the coil and hold it stationary. Note the needle deflection when the electromagnet isn't moving and record your experimental results.

Record your prediction for the needle deflection if the north pole of the electromagnet is pulled rapidly out of the coil.

Pull the north pole of the electromagnet rapidly out of the coil. Note the direction the needle of the galvanometer deflects and record your experimental results.