

Building a Simple Generator – Task

Name: _____ Date: _____

Construct the generator out of cardboard or use an empty cardboard paper roll. Follow the instructions outlined by the teacher and the basic diagram below.

Test your generator, *take a picture of it from various angles* as well as a *short video showing how it works with voice-over explaining Faraday's Law of Electromagnetic Induction*.

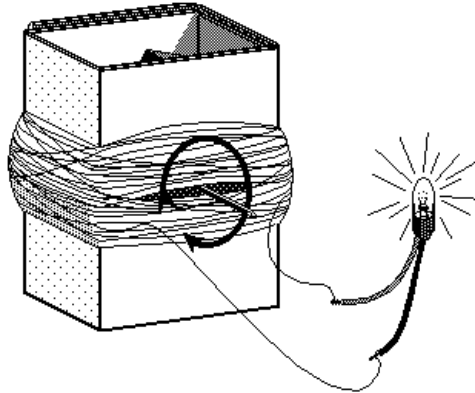


Figure 3: simple electric generator

QUESTIONS FOR THOUGHT AND INVESTIGATION

1. State Faraday's Law of Electromagnetic Induction.

2. What affect would spinning the magnets slow or fast have on the brightness (intensity) of the light bulb? Try this.

3. What affect would you expect if you used less or more turns of copper wire on the brightness of the light bulb? Try this.
4. What affect would you expect if you used weaker or stronger magnets on the brightness of the light bulb? Explain your reasoning.
5. Why is it necessary to use coated copper wire? (i.e. why can you not use bare copper wire?)

REFERENCES

The construction of this generator has been adapted from <http://amasci.com/amateur/coilgen.html>