

Electronic Paper Message Activity

Summary

In this hands-on activity, students explore the electronic paper technology by spelling out words using positive and negative charges on a graph paper grid.

Time Required 30 minutes

Group Size 1

Expendable Cost per Group \$0 (common classroom and household items)

Materials List

Each student needs:

- Half a sheet of graph paper
- Pencil or pen

Procedure

Tell the students to imagine that they are electrical engineers who have been asked to show how to write a word using electronic paper. Each graph paper square represents an electrode that can be assigned either a positive or negative charge. Imagine that on top of each electrode is a particle of electronic ink. Assign words (to spell out) from the lesson vocabulary list or use other electricity-related terms such as charge, electric, negative or positive. Students can choose to use either type of “ink” technology. What is the pattern of positively- and negatively-charged electrodes that would spell the word?

For example, the word “plus” would be created with Gyricon beads as shown below. The plus and minus signs would be the opposite if E Ink capsules were used.

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References

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