

MATH EXTENSION—PROBLEM OF THE WEEK

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Investigation 1: Energy and Circuits

The students in a class had a question:

Do all brands of batteries last the same length of time, or do some kinds keep on going after the others have run out of energy?

The students decided to do an experiment. They agreed they should use brand new C-cells for their test. Here is a list of the C-cells they got.

- 3 Charger industrial-strength C-cells
- 3 E-Z Volt alkaline C-cells
- 3 Amp-Champ alkaline C-cells

The students connected each cell to a motor and let it run every day while they were in class. They disconnected the motors every afternoon just before they went home. They kept track of the number of hours each motor ran. Here are the results they recorded.

Kind of C-cell	#1	#2	#3
Charger	30 hours	25 hours	20 hours
E-Z Volt	30 hours	40 hours	35 hours
Amp-Champ	25 hours	40 hours	40 hours

1. Based on these data, which brand of cell would you buy?

(Show your math here.)

2. Explain why you chose that brand.
