Terrific Telegraphs!

How electric circuits made fast long-distance communication possible

More people around the world have cell phones than ever had land-lines

HEALTH

More People Have Cell Phones Than Toilets, U.N. Study Shows

Out of the world's estimated 7 billion people, 6 billion have access to mobile phones. Only 4.5 billion have access to working toilets

By Yue Wang | March 25, 2013 | 27 Comments

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On the eve of World Water Day last week, the U.N. offered a sobering statistic: according to its recent study, more people on earth have access to cell phones than toilets.

Out of the world's estimated 7 billion people, 6 billion have access to mobile phones. Far fewer — only 4.5 billion people — have access to working toilets. Of the 2.5 billion who don't have proper sanitation, 1.1 billion defecate in the open, according to the study.

There are officially more mobile devices than people in the world

The world is home to 7.2 billion gadgets, and they're multiplying five times faster than we are

Zachary Davies Boren | @zdboren | Tuesday 7 October 2014 | 1 comment

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SCIENCE NORTH SCIENCE NORD

"The great advantage [the telephone] possesses over every other form of electrical apparatus consists in the fact that it requires no skill to operate the instrument."
~**Alexander Graham Bell, 1878**

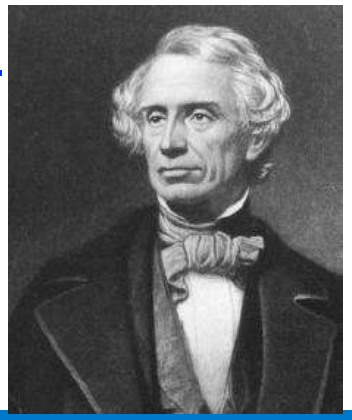
Let's look at an 'electrical apparatus' that takes a lot more skill to use

The Telegraph

- Go to http://www.history.com/topics/inventions/telegraph
- Watch the video then read the article below. Use the article to answer the questions on your 'What's a Telegraph Anyway?' handout.

Morse Code

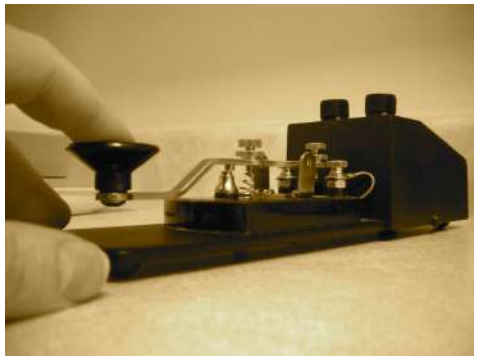
- Invented in 1836 by Samuel Morse, Joseph Henry, and Alfred Vail
- Letters represented by a combination of short and long pulses
- https://www.youtube.com/watch?v=_J8YcQETyTw



Samuel Morse

Morse Code

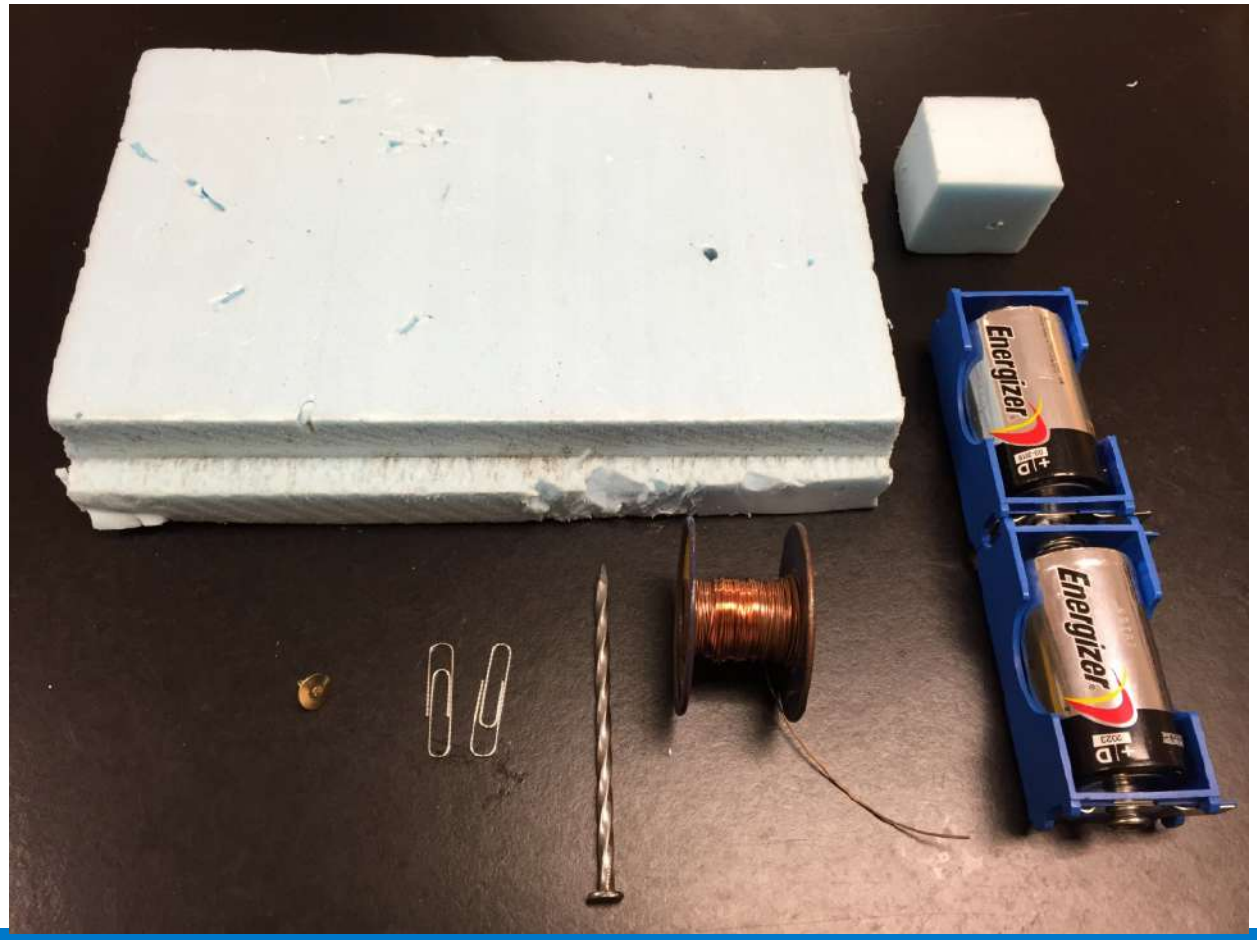
- Telegraph operators used an electric circuit to send Morse Code messages over long distances.
- https://www.youtube.com/watch?v=UWKsgDqa9T8



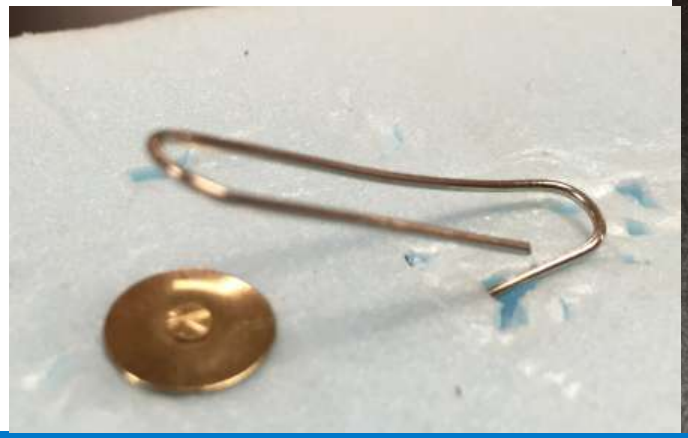
Write your name in Morse Code

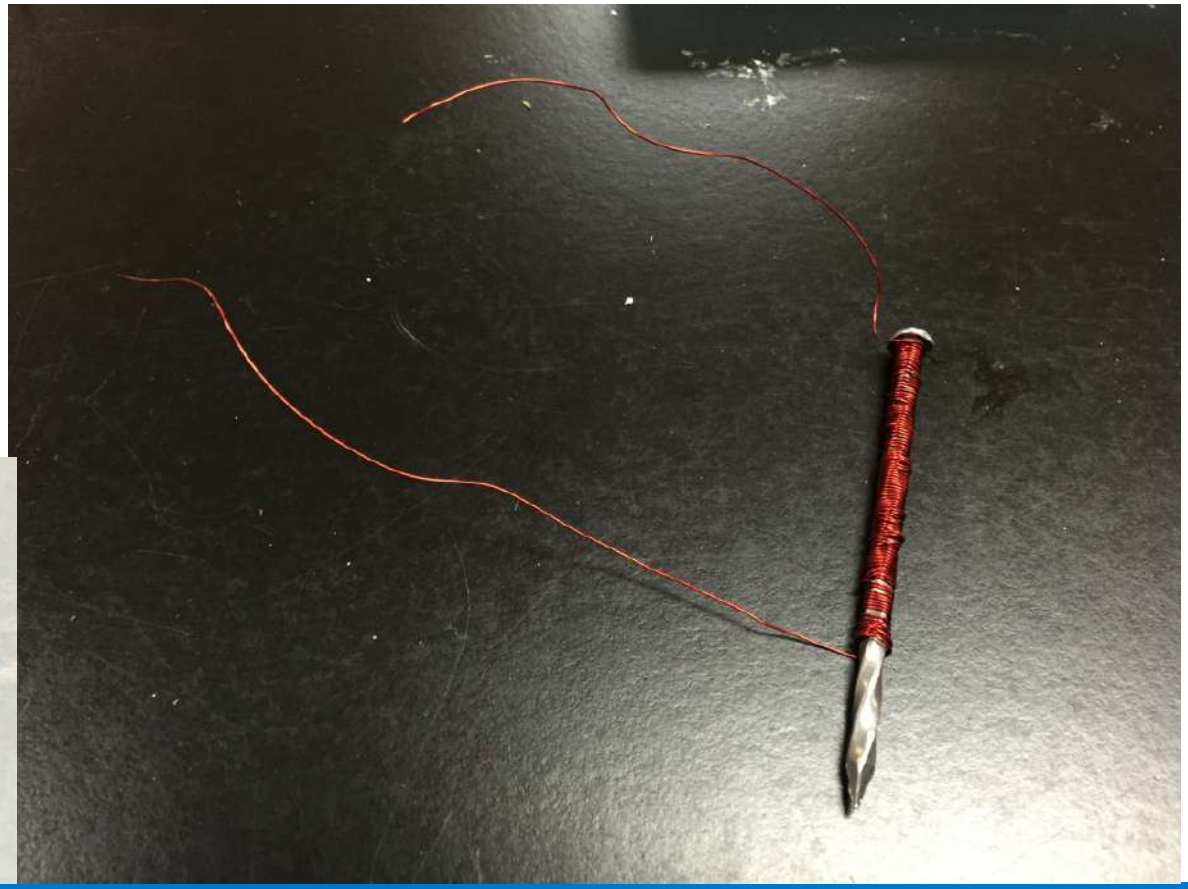
A . –	J . – – –	S . . .	2 . . – – –
B – . . .	K – . –	T –	3 . . . – –
C – . – .	L . – . .	U . . –	4 . . . . –
D – . .	M – –	V . . . –	5 . . . . .
E .	N – .	W . – –	6 – . . . .
F . . – .	O – – –	X – . . –	7 – – . . .
G – – .	P . – – .	Y – . – –	8 – – – . .
H	Q – – . –	Z – – . .	9 – – – – .
I . .	R . – .	1 . – – – –	0 – – – – –

Making a Telegraph - Materials

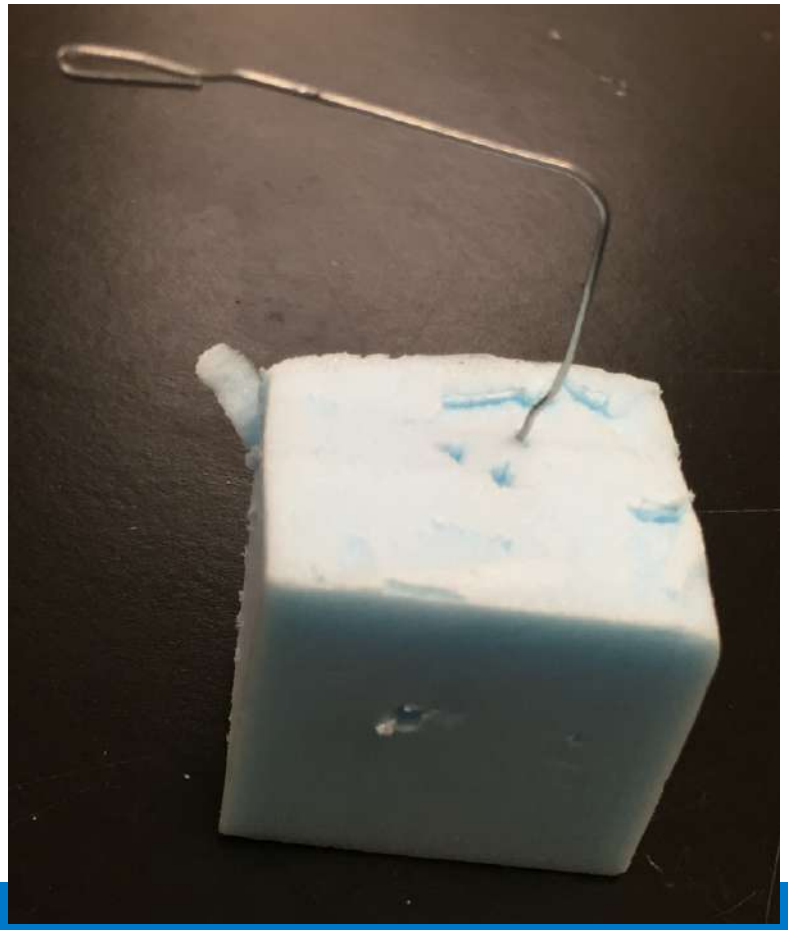


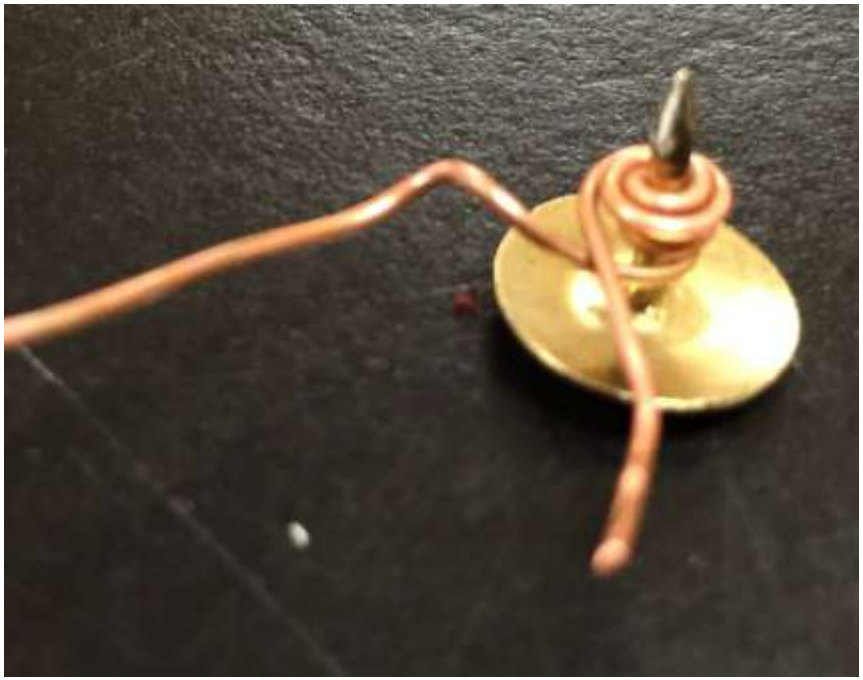
Making a Telegraph – Step 1



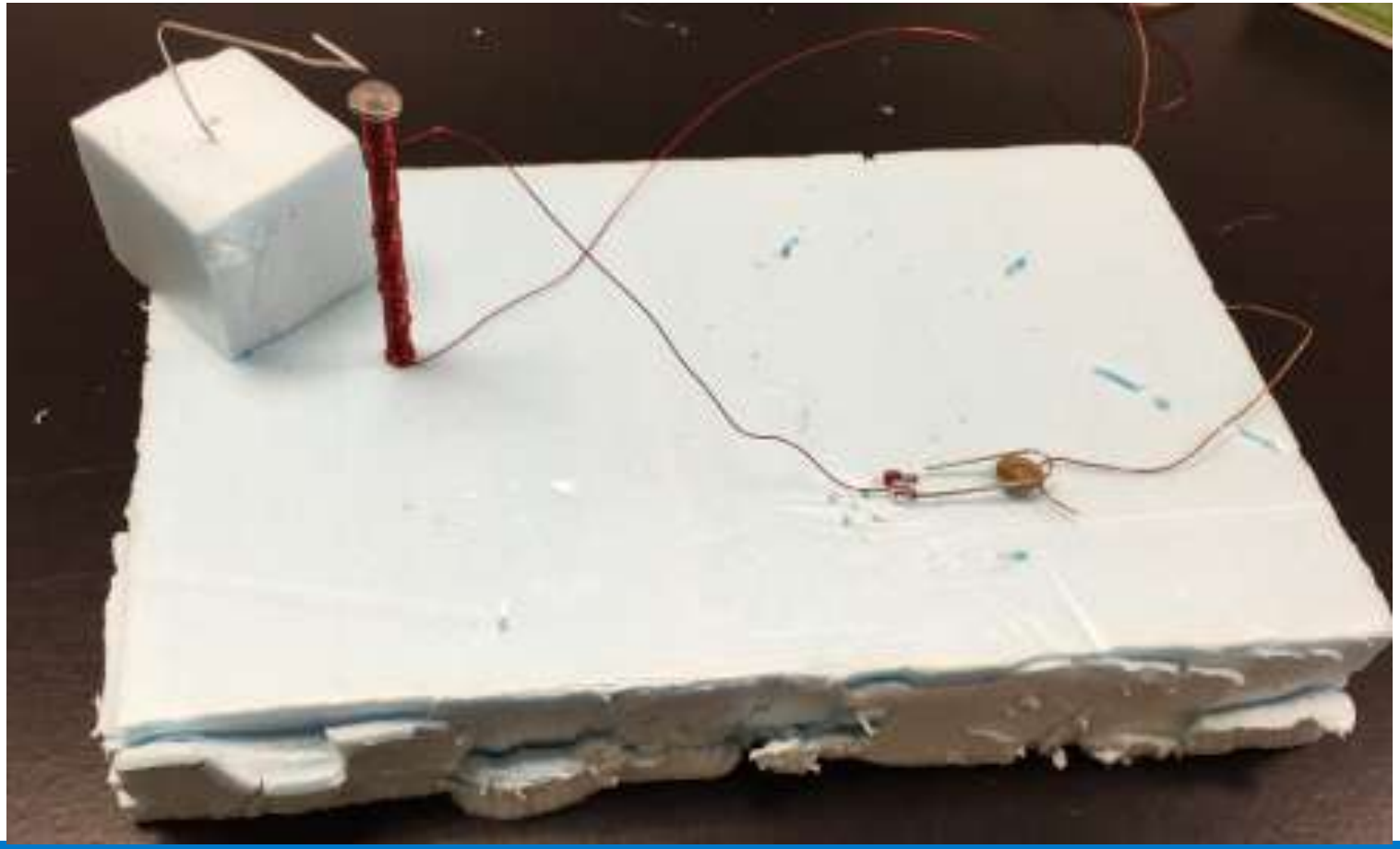


Making a Telegraph – Step 2

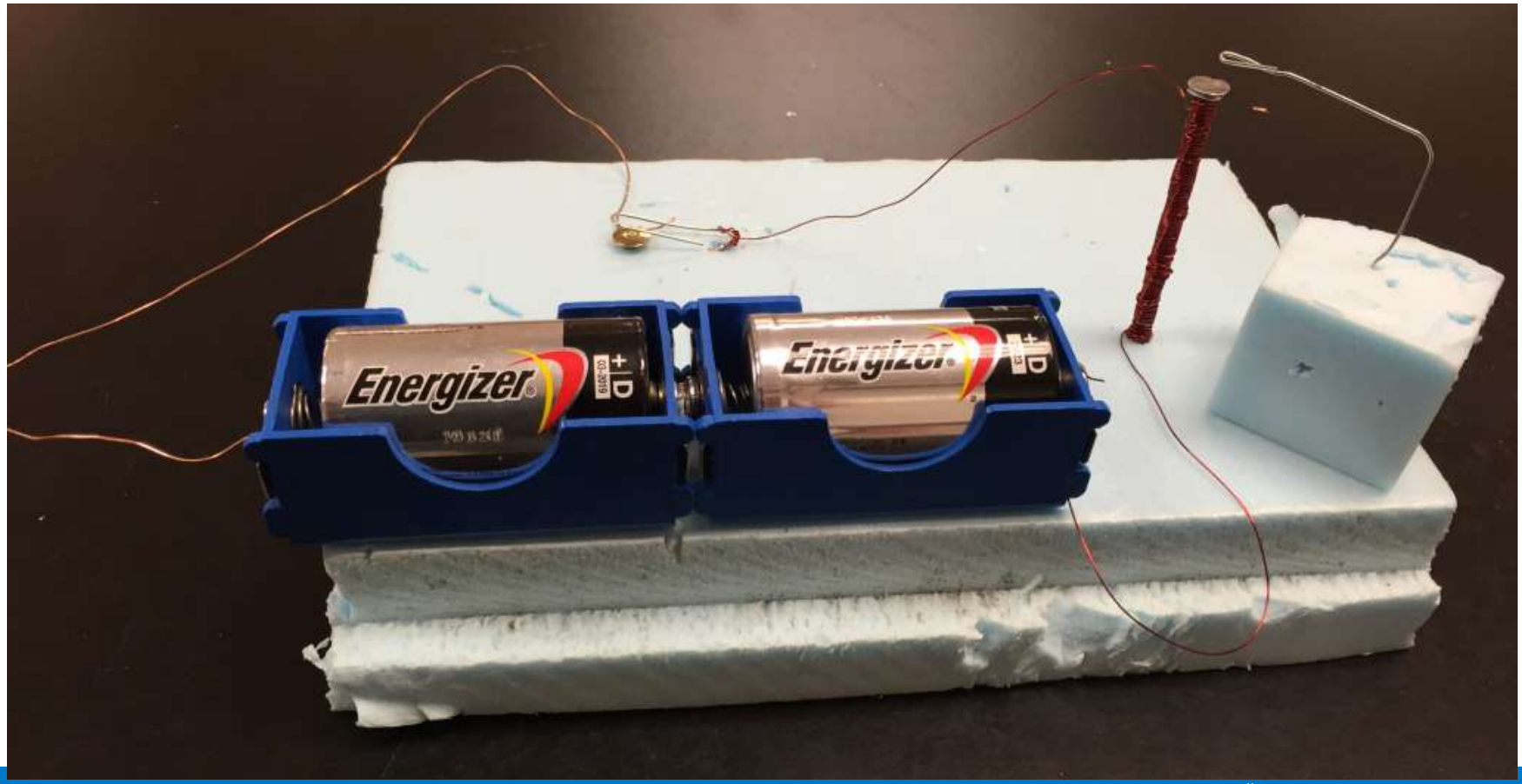




Making a Telegraph – Step 3



Making a Telegraph – Step 4



Using the Telegraph

Safety First! – If you leave your button pressed you create a SHORT CIRCUIT and the wire may get hot!