

Text to light

— using a torch and Morse code

(Ireland)

Background

Students investigate converting words (text) into light (energy) then back to words. This exercise is to represent what happens inside a data terminal where the words we send on one device to a another (e.g. Phone/computer) are scrambled into light packets and then unscrambled back into words. In internet communications these light packets would travel down a fibre optic cable to their intended destination.

You will need:

- ✓ A torch
- ✓ List of four letter words
- ✓ Morse code alphabet (Google search this)

Follow these steps:

1. Both students look at the Morse code. One student practices sending a letter to the other student by flashing the torch through Morse. The other student is to unscramble the light packet and work out which letter they just sent.



2. One person in the group creates a sentence in Morse, writes it down on paper & sends it to the other through light packets - Morse code.
3. The receiver is to decode the message.

What next?

Repeat the exercise but shine the light down a fibre optic cable. Create your own code in pairs, decide on what the code is in advance and send a message to each other.

So what happened?

Students are modelling what happens on an ongoing basis inside sections of our modern-day internet communication systems. Data terminals are converting light packets into text and vice versa.

