Flowing electricity

Approach: Station *Level:* Year 8 & year 4

Resources: Battery and bulb board (continuity tester);
1 each of aluminium, brass, plastic, wood, cardboard squares.

Questions/instructions

In this activity you will be finding out some of the things electricity can travel through.

1. Check that everything on the board is working by touching the 2 loose alligator clips together.

   The bulb will go if everything is working.
   •If the bulb does not go tell the teacher now.

2. **Think first — but do not try it yet.**
   Electricity can travel through some things, but it can't travel through everything.
   Look at the objects. Which ones do you think electricity can travel through?

   Write down what you think in the table.

I think electricity can travel through these objects	I think electricity can't travel through these objects

3. **Now try it.** Now test the objects.
   Put each object on the board and join an alligator clip to each end.
   Tick the **yes** or the **no** box after you have tested each object.

Object	Lets electricity travel through? Yes	No
plastic		
wood		
grey metal		
cardboard		
yellow metal		

When toast gets stuck in the toaster some people try to get it out with a knife.
It is not a good idea to poke around in toasters with anything.

4. What might happen if someone poked something made of the yellow metal in the toaster?

5. What might happen if someone poked something made of the wood in the toaster?

% responses

	year 8	year 4
Number of correct predictions:		
5	61	35
4	21	19
3	5	10
2	4	12
1	3	10
Number of correct results		
5	98	91
get electrocuted/ conduct electricity	87	42
other valid	8	33
not get electrocuted	18	10
fire	34	48
other valid	8	7