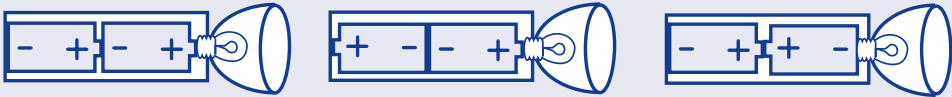


## Batteries

*Approach:* One to one interview

*Level:* Year 8 & year 4

*Resources:* Torch; 2 good batteries labelled A and D; 2 flat batteries labelled B and C.

<i>Questions/instructions</i>	% responses	
	<i>year 8</i>	<i>year 4</i>
In this activity you will be showing how batteries and torches work together.		
<b>THINK FIRST</b> — do not use the torch and batteries yet.		
These pictures show different ways of putting the batteries in the torch.		
1. Put a circle around the picture which shows the best way to make the light work.		
		
Why did you choose this way?		
Chose correct option	92	73
Explanation: circuit, electricity flow, + to -ve	41	9
'It goes this way'	38	44
No sensible answer	21	47
2. Now use the torch to find out which of the 4 batteries still work and which ones are flat.		
Write the letters of the batteries below.		
Batteries that work: _____		
Batteries that are flat: _____		
All 4 batteries correctly classified	11	12

### *Commentary*

The results for question 2 are rather misleading. Some flat batteries regained significant charge, confusing the results. Many students said *both* batteries were good if they produced *any* light, which could happen even if one battery was flat. However, many students did not find the correct logic for this part of the task.