Writing for a purpose

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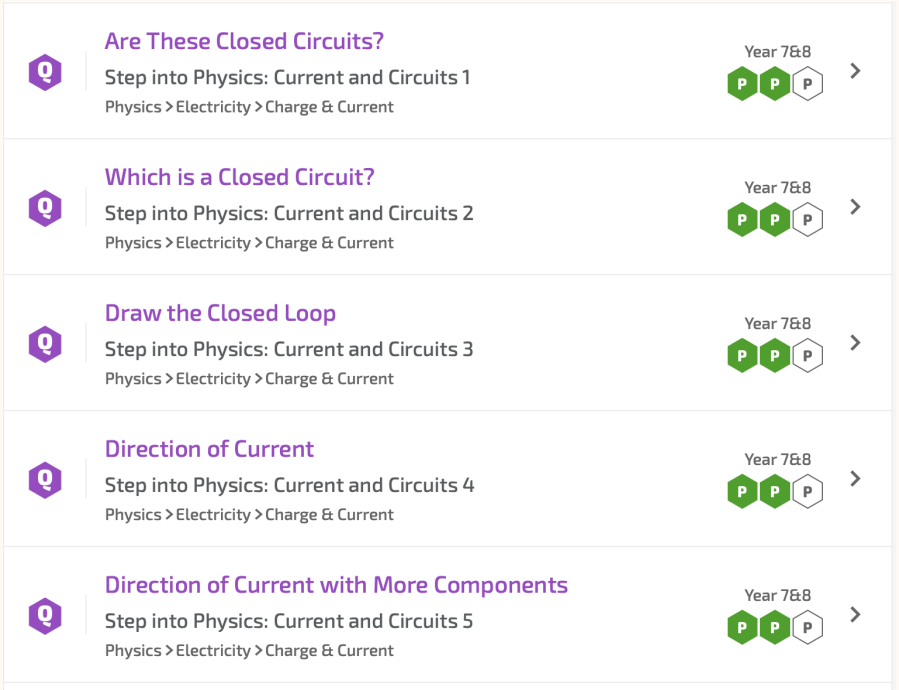
My Aims

- Practise the fundamentals of physics
- Develop intuition
- Become comfortable with the maths
- Challenge misconceptions

Practise the Fundamentals

Design:

- set of questions on one concept
- increase difficulty of each question – more complicated situations, novel situations



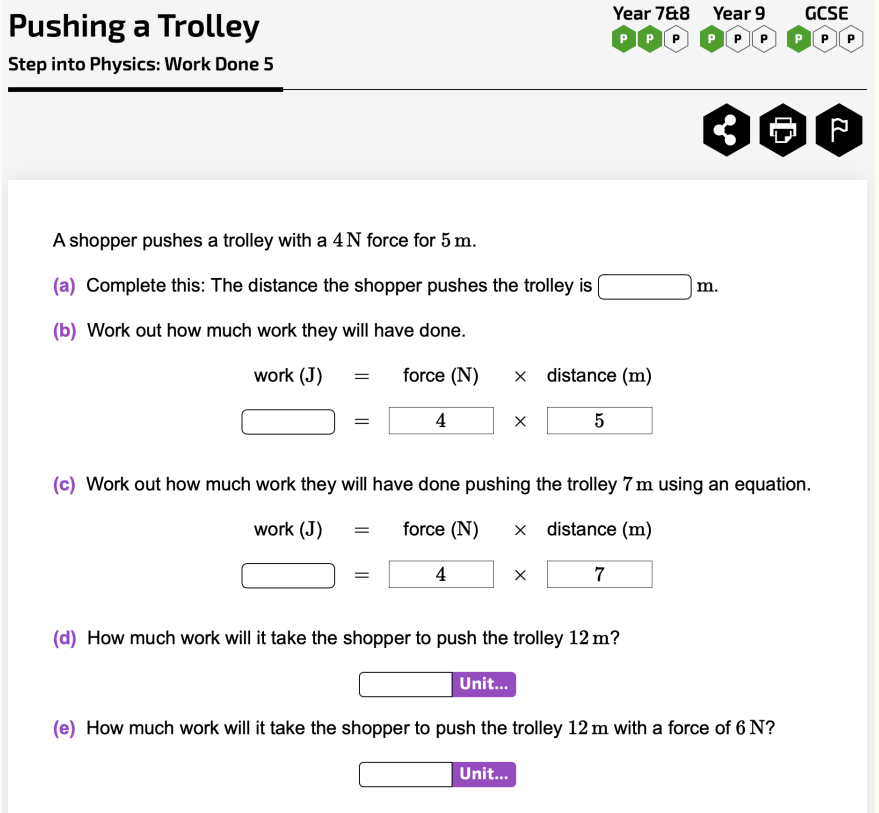
Develop Intuition

- Questions that are subtly different to a previous one
- One or two questions that combine concepts
- Make it relatable

Helps the students to start developing their problem solving skills.

Become Comfortable with the Maths

- Use their maths skills in the questions
- Scaffold it



Pushing a Trolley

Year 7&8 Year 9 GCSE

Step into Physics: Work Done 5

A shopper pushes a trolley with a $4\,\mathrm{N}$ force for $5\,\mathrm{m}$.

(a) Complete this: The distance the shopper pushes the trolley is [ ] m.

(b) Work out how much work they will have done.

work (J) = force (N) × distance (m)

[ ] = 4 × 5

(c) Work out how much work they will have done pushing the trolley $7\,\mathrm{m}$ using an equation.

work (J) = force (N) × distance (m)

[ ] = 4 × 7

(d) How much work will it take the shopper to push the trolley $12\,\mathrm{m}$?

[ ] Unit...

(e) How much work will it take the shopper to push the trolley $12\,\mathrm{m}$ with a force of $6\,\mathrm{N}$?

[ ] Unit...

Challenge Misconceptions

- Set of questions to challenge a misconception
- Use set of questions practising fundamentals to avoid the misconception earlier on, or as a refresher

My Inspiration

- World around me
- What students get stuck on or misconceptions
- What I know from experience they don’t understand well