Designing for people

Unit 1 · New and emerging technologies · matches the "Designing for people" lesson slides (about 60 minutes)

Teacher notes for someone teaching this lesson without a Design and Technology background, including a cover or supply teacher standing in for the usual class teacher.

IF YOU ONLY DO ONE THING (RUSHED COVER LESSON)

If you only do one thing: make sure every pupil can say what "Technology push" means in their own words before the lesson ends. New technology makes a product possible and it is offered to customers. Ask two or three pupils to explain it back to you - do not just ask "does that make sense?".

Key facts in plain language

These are the facts this lesson depends on. They are written in plain English, not subject jargon, so you can say them in your own words while you teach.

Technology push:
New technology makes a product possible and it is offered to customers.

Market pull:
Customers want something better and designers respond.

Cobot:
A collaborative robot designed to work safely beside people.

Inclusive design:
Designing so as many people as possible can use a product.

Trend:
A general direction in which taste or fashion is changing.

Common misconceptions

Drawn from the wrong answers pupils pick in this lesson's own question bank, paired with the explanation that is already written for the right answer.

Pupils may think: "Market pull" is correct.
Why it is wrong: the correct answer is "Technology push". The technology came first and the product ideas followed, so it is technology push.

Pupils may think: "Technology push" is correct.
Why it is wrong: the correct answer is "Market pull". Demand from consumers pulls the design in a new direction.

Pupils may think: "A robot that works in a fenced-off cell" is correct.
Why it is wrong: the correct answer is "A robot that works safely alongside people". Cobots (collaborative robots) have sensors so they slow or stop if they touch a person.

Pupils may think: "A product range sold in many bright colours" is correct.
Why it is wrong: the correct answer is "Braille on medicine packaging". Braille helps blind and partially sighted people use the product, widening who can use it.

Pupils may think: "So it can be patented again in that country" is correct.
Why it is wrong: the correct answer is "The name has an unfortunate meaning there". Names, colours and symbols can carry different meanings in different cultures.

Talking points to follow the slide deck

The slide deck for this lesson follows the usual DT Classroom shape: a retrieval starter, then each key term below in turn, worked examples, exam-style practice, then an exit ticket. Use these lines as you reach each part - they are the same facts as above, just phrased as something you can say out loud.

When the deck reaches "Technology push": say — New technology makes a product possible and it is offered to customers. Ask: "can someone give me an example?"

When the deck reaches "Market pull": say — Customers want something better and designers respond. Ask: "can someone give me an example?"

When the deck reaches "Cobot": say — A collaborative robot designed to work safely beside people. Ask: "can someone give me an example?"

When the deck reaches "Inclusive design": say — Designing so as many people as possible can use a product. Ask: "can someone give me an example?"

When the deck reaches "Trend": say — A general direction in which taste or fashion is changing. Ask: "can someone give me an example?"

Worked answers to this lesson's questions

The same question bank used for this lesson's knowledge organiser self-check and worksheet exam practice. Use this page as the answer key, or cover the right-hand explanation and hand out the questions as a silent task (see the cover lesson box below).

1. A lab invents a colour-changing fabric, then looks for products to use it in. This is…

a) Market pull, b) Inclusive design, c) Technology push, d) Consumer demand

Answer: c) Technology push. The technology came first and the product ideas followed, so it is technology push.

2. Customers ask for longer phone battery life and makers respond. This is…

a) Technology push, b) Planned obsolescence, c) Continuous improvement, d) Market pull

Answer: d) Market pull. Demand from consumers pulls the design in a new direction.

3. What is a cobot?

a) A robot that works safely alongside people, b) A robot that works in a fenced-off cell, c) A robot controlled remotely by an operator, d) A computer program that automates office tasks

Answer: a) A robot that works safely alongside people. Cobots (collaborative robots) have sensors so they slow or stop if they touch a person.

4. Which is an example of inclusive design?

a) A product range sold in many bright colours, b) A product tested only by its target group, c) Braille on medicine packaging, d) A slim, lightweight version of a product

Answer: c) Braille on medicine packaging. Braille helps blind and partially sighted people use the product, widening who can use it.

5. Why might a brand rename a product for another country?

a) The name has an unfortunate meaning there, b) So it can be patented again in that country, c) To avoid paying import tax on the product, d) So it can be made from local materials

Answer: a) The name has an unfortunate meaning there. Names, colours and symbols can carry different meanings in different cultures.

READY-TO-RUN COVER LESSON

Project the existing lesson slides as normal; read the key facts and talking points above before the lesson starts.

Low-prep silent task (needs no workshop tools or machinery): write or display the numbered questions above without the "Answer:" line, and have pupils answer them in silence on paper. Mark from the answers above at the end, or next lesson.

If the lesson plan calls for tools, machinery, heat or anything hands-on, do not run that part as a non-specialist cover teacher - set the silent task above instead and leave the practical for the subject teacher. See the general workshop safety guide in the Teachers hub.