

Name _____

Class _____

Date _____

By the end of this worksheet I can...

- ☐ describe how ergonomics makes products safe, comfortable and easy to use
- ☐ use anthropometric data and choose the right percentile
- ☐ describe how safety has influenced the design of a product

I DO

Worked example Read how a full-mark answer is built

A cordless hand vacuum cleaner.

1 Describe how ergonomics has influenced the design of the hand vacuum cleaner. (4 marks)

Full-mark answer each ✓ is one mark

The handle diameter is sized to fit the grip of an adult hand ✓. The power button is placed under the thumb so it can be pressed while holding the handle ✓. The vacuum is light so it can be held up to clean shelves without the arm tiring ✓. The bin release catch is coloured red so users can see where to press ✓.

Why marks are not awarded

"It uses the 95th percentile so it is comfortable and easy to use."

0 marks: percentiles on their own and generic "comfortable/easy to use" are not credited.

WE DO

Guided practice Use the starters and word bank to help you

A child's scooter.

2 Describe how safety has influenced the design of the scooter. (3 marks)

Sentence starters

First, ...
Next, ... using a ...
Then ...

Word bank

handlebars · operated · non-slip · stability ·
folding · wheelbase · rubber · rounded

Tip: 3 marks = 3 separate, developed points.

YOU DO

On your own No notes. Check your answers afterwards.

3 Quick check: tick one box for each.

a) Which feature mainly improves safety?

- ☐ Brand logo on the casing ☐ Glossy, easy-clean finish ☐ Guard over moving blades ☐ Extra storage compartment

b) A bright red, clearly labelled off switch reassures the user. This is...

- ☐ Anthropometrics ☐ Psychology ☐ Physiology ☐ Function only

c) "The force needed to squeeze the trigger is low so the user does not tire" is an example of...

- ☐ Physiology ☐ Anthropometrics ☐ Psychology ☐ Aesthetics

d) Which percentile is used to position an emergency stop button?

- ☐ 99th ☐ 50th ☐ 95th ☐ 5th

4 Key terms: write the letter of the matching description next to each term.

1. **Anthropometrics**

A How a product's look, feel, sound, smell or taste affects the user.

2. **Physiology**

B Strength, effort, movement and strain required to use a product.

3. **Psychology (ergonomics)**

C The study of human body measurements used to size products.

5 Explain which percentile is used for reach, and why. (2 marks)

6 Explain which percentile is used for clearance, and why. (2 marks)

Check and reflect

Mark your answers with the answer sheet. Go back to the checklist on the site and re-rate each "I can" statement above. Which one still needs work?
