

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
- ☐ describe the influence of anthropometrics, physiology and psychology, linking body parts to product parts
- ☐ describe how safety is ensured in products (testing, BSI, CE marking)

I DO

Worked example Read how a full-mark answer is built

The two chairs above.

1 Describe how anthropometrics and physiology have influenced the design of these chairs. (4 marks)

Full-mark answer each ✓ is one mark

The seat height suits the popliteal height (knee to floor) so feet rest flat ✓. The seat width suits the hip breadth of a large adult ✓. The camping chair is light enough to carry with one hand to the campsite ✓. Only a low force is needed to fold and lock the frame ✓.

Why marks are not awarded

"It is designed for the 5th to 95th percentile so it fits everyone."

0 marks: no body part linked to a product part.

WE DO

Guided practice Use the starters and word bank to help you

A family car dashboard and driver's seat.

2 Describe how ergonomics has influenced the design of the car interior. To gain full marks you must refer to anthropometrics, physiology and psychology. (6 marks)

Sentence starters

Anthropometrics: ...

Physiology: ...

Psychology: ...

Word bank

different · lengths · psychology ·

Anthropometrics · slides · pedals ·

physiology · drivers

Tip: 6 marks = 6 separate, developed points.

YOU DO

On your own

No notes. Check your answers afterwards.

3 Quick check: tick one box for each.

- a) Which percentile is used to position an emergency stop button?
☐ 99th ☐ 50th ☐ 95th ☐ 5th
- 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 feature mainly improves safety?
☐ Brand logo on the casing ☐ Glossy, easy-clean finish ☐ Guard over moving blades ☐ Extra storage compartment

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 5th percentile, so smaller users can reach. |
| 3. Psychology (ergonomics) | _____ | C Strength, effort, movement and strain required to use a product. |
| 4. Percentile for reach | _____ | D 95th percentile, so larger users fit through or under. |
| 5. Percentile for clearance | _____ | E The study of human body measurements used to size products. |

5 Explain what is meant by 'CE marking'. (2 marks)

6 Explain what is meant by 'BSI'. (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?
