

Name _____

Class _____

Date _____

By the end of this worksheet I can...

- ☐ describe how function influences the design of a product
- ☐ explain primary and secondary functions with examples
- ☐ describe how performance and fitness for purpose influence design
- ☐ describe maintenance issues associated with products
- ☐ explain how life expectancy affects design, manufacture and the environment

I DO

Worked example Read how a full-mark answer is built

An office chair.

1 Describe how function has influenced the design of the office chair. (3 marks)

Full-mark answer each ✓ is one mark

The seat height adjusts with a gas lift so it suits different desks ✓. Castors let the user move around the desk without getting up ✓. The backrest tilts to support different working positions ✓.

Why marks are not awarded

- X "The chair spins" / "it is adjustable" without saying how or why
- X Lists of features

WE DO

Guided practice Use the starters and word bank to help you

A wooden toy garage for young children.

2 Outline how maintenance has influenced the design of the toy garage. (1 mark)

Sentence starters

One ... is ...

Word bank

smooth · painted · replaced · tightened ·
screws · surfaces · varnished · standard

Tip: 1 marks = 1 separate, developed points.

YOU DO

On your own No notes. Check your answers afterwards.

3 Quick check: tick one box for each.

- a) Making a phone battery hard to replace mainly affects which factor?
☐ Aesthetics ☐ Maintenance ☐ Target market ☐ Anthropometrics
- b) A torch that also works as a bottle opener. The bottle opener is...
☐ Secondary function ☐ Primary function ☐ Performance ☐ Aesthetics
- c) A razor with replaceable heads compared with a disposable razor has...
☐ Longer life expectancy ☐ Shorter life expectancy ☐ No maintenance ☐ No secondary function

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

- | | | |
|-------------------------------|-------|--|
| 1. Primary function | _____ | A How well a product meets its intended use, user, environment and life expectancy. |
| 2. Secondary function | _____ | B Additional jobs that add value to the product. |
| 3. Fitness for purpose | _____ | C The main job a product is designed to do. |

5 Describe one maintenance consideration when designing a product. (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?
