

Name _____

Class _____

Date _____

By the end of this worksheet I can...

- ☐ describe the roles of designers, ergonomists, lawyers, production engineers, project managers, market researchers and materials technologists
- ☐ describe communication between members of a design team
- ☐ explain the advantages and disadvantages of in-house design teams and sub-contracting

I DO

Worked example Read how a full-mark answer is built

A company is developing a new electric scooter.

1 Describe the role of the ergonomist, the market researcher and the project manager. (6 marks)

Full-mark answer each ✓ is one mark

The ergonomist provides anthropometric data for the target users ✓ and advises on the handlebar height and grip size ✓. The market researcher runs focus groups to find what users want ✓ and reports on competitors and an acceptable price ✓. The project manager sets the schedule and budget ✓ and coordinates the team to meet deadlines ✓.

Why marks are not awarded

"The ergonomist makes it comfortable. The market researcher does research. The project manager manages the project."

0 marks: each restates the job title.

WE DO

Guided practice Use the starters and word bank to help you

2 Explain one benefit and one drawback of using sub-contractors. (2 marks)

Sentence starters

Benefit: ...

Drawback: ...

Word bank

skills · specialist · unreliable · confidentiality
· benefit · needed · drawback · higher

Tip: 2 marks = 2 separate, developed points.

YOU DO

On your own No notes. Check your answers afterwards.

3 Quick check: tick one box for each.

- a) Who provides data on hand grip sizes for a target market?
☐ Retailer ☐ Lawyer ☐ Production engineer ☐ Ergonomist
- b) Which is a disadvantage of using an external designer?
☐ Fresh ideas ☐ Specialist skills ☐ Higher fees and IPR issues ☐ Only hired when needed
- c) Who would apply for a patent on a new mechanism?
☐ Project manager ☐ Lawyer ☐ Ergonomist ☐ Market researcher
- d) Who checks a design can be made efficiently and economically?
☐ Manufacturer ☐ Consumer ☐ Marketing team ☐ Retailer

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

- | | | |
|-----------------------------|-------|---|
| 1. Role of a retailer | _____ | A Advises on material properties and suitable manufacturing methods. |
| 2. Role of a manufacturer | _____ | B Feedback on sales, what will sell and market trends. |
| 3. Role of a marketing team | _____ | C Ensures the product can be made efficiently and economically. |
| 4. Materials technologist | _____ | D Plans how the product is priced, promoted and sold. |
| 5. Production engineer | _____ | E Plans production rate, volume, tooling and system. |

5 Describe the role of a lawyer in a design team. (2 marks)

6 Describe the advantage of sub-contracting. (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?
