

1 Materials testing

1 Make sentences about the materials with 'can ..., but ... can't', or 'can ... and ... can'.

1 (bend / metal / wood) *You can bend metal, but you can't bend wood.*

2 (heat / air / water) *You can heat air and you can heat water.*

3 (melt / plastic / wood)

4 (scratch / glass / metal)

5 (stretch / nylon / glass)

6 (break / glass / wood)

7 (cut / wood / metal)

8 (compress / air / glass)

2 A lecturer is showing a DVD of a test. Complete the description. Use the present continuous.



Hello. Now we can watch the DVD of a car crash. Here they (1) *are testing* (test) the material for the seatbelt. The human dummy (2) _____ (sit) in the test car. This dummy weighs 90 kilos. Here the technician (3) _____ (tighten) the nylon seatbelt around the dummy. Now the technician (4) _____ (start) the engine of the radio-controlled car.

Look at the crash in slo-mo (= slow motion). The car (5) _____ (run) into the concrete block at 40 kph. The body of the dummy (6) _____ (stretch) the nylon seatbelt. And see, the dummy (7) _____ (touch) the airbag.

Look carefully. (8) _____ the dummy's face _____ (strike) the front window? No, it isn't. There is no contact with the front window.

3 Write questions and answers for the pictures.



1 A: *Are you pushing the handles?*
B: *No, I'm rowing.*

4 A:
B:

2 A:

5 A:

B:

B:

3 A:

6 A:

B:

B:

2 Properties

1 Find the names of 14 materials in the puzzle and circle them. The words go vertically from top to bottom, and sideways from left to right. No words go diagonally.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | A | J | L | O | Y | C | O | M | P | O | S | I | T | E |
| P | L | A | S | T | I | C | E | T | O | Z | P | R | A | K |
| L | U | R | T | I | B | K | Y | L | L | B | O | J | L | I |
| O | M | A | L | J | M | O | Q | A | Y | U | L | S | D | A |
| F | I | B | R | E | G | L | A | S | S | I | Y | T | I | Y |
| B | N | S | D | R | A | R | X | P | T | B | C | N | A | O |
| T | I | T | A | N | I | U | M | D | Y | F | A | H | M | I |
| J | U | E | K | Y | L | B | N | T | R | I | R | V | O | Z |
| A | M | E | B | L | C | B | F | G | E | A | B | H | N | I |
| J | R | L | K | O | Q | E | S | V | N | U | O | Z | D | W |
| Y | Z | C | O | N | C | R | E | T | E | X | N | B | G | Y |
| H | I | R | J | T | K | U | L | C | E | R | A | M | I | C |
| S | V | N | X | P | G | R | A | P | H | I | T | E | Q | W |
| I | Y | B | T | L | E | K | O | E | U | J | E | C | D | I |

2 Underline the two correct adjectives for each material.

- 1 A ceramic cup is flexible/heat-resistant and hard/soft.
- 2 A concrete floor is rigid/flexible and brittle/tough.
- 3 A rubber tyre is rigid/flexible and weak/strong.
- 4 A fibreglass window frame is heat-resistant/soft and rigid/flexible.
- 5 A nylon rope is rigid/flexible and strong/weak.
- 6 The graphite in the middle of a pencil is light/heavy and hard/soft.
- 7 A polycarbonate road sign is rigid/flexible and strong/weak.
- 8 A polystyrene coffee cup is brittle/tough and heavy/light.

3 Design a plane. Choose one material for each part of the plane.

1 (nose cone / plastic / aluminium)

The nose cone is made of aluminium.



2 (wheels / fibreglass / aluminium alloy)

3 (tyres / ceramic / rubber composite)

4 (frame / composite / polystyrene)

5 (inside / fibreglass / rubber composite)

6 (seats / plastic / ceramic)

7 (engine / fibreglass / aluminium alloy)

8 (wings / aluminium alloy / plastic)

3 Buying

1  15 Listen and complete the order form. A customer is buying equipment on the phone.

| THE CLIMBING SHOP | |
|---------------------|--|
| ORDER FORM | |
| Date: 23/03/08 | Helmet (polycarbonate / fibreglass) (L / M / S) |
| Product name: _____ | |
| Product no: _____ | Rope (nylon / nylon + rubber composite) (50 m / 75 m / 100 m) |
| Quantity: _____ | |
| Colour: _____ | Jacket (cotton / polyester) (XL / L / M / S) |
| Size: _____ | |
| Material: _____ | Backpack (nylon / polyester) (XL / L / M / S) |
| Price: _____ | |

2  16 Listen and correct the email addresses.

- 1 jclark@eyeway.co.uk → _____
- 2 alex2@antigm.ac.uk → _____
- 3 s.hagen@renault.fra → _____

3  17 Listen and write the website addresses.

- 1 News: _____
- 2 Live radio: _____
- 3 Radio-controlled toys: _____

4 A customer is phoning a sports shop. Write questions for the answers.

- 1 Q: *What's your surname, please?*
A: It's Badawi.
- 2 Q: _____
A: B-A-D-R-A-W-I.
- 3 Q: _____
A: 01273 497 633.
- 4 Q: _____
A: Ali dot badawi at atlas dot com.
- 5 Q: _____
A: Yes. A-L-I dot badawi at atlas, that's A-T-L-A-S dot com.
- 6 Q: _____
A: I need three helmets.
- 7 Q: _____
A: I'd like white ones, please.
- 8 Q: _____
A: I want to pay in euros, please.

4 Word list

| NOUNS (Materials) | NOUNS (Car parts, other) | VERBS | ADJECTIVES |
|----------------------|-----------------------------|----------|---------------------|
| alloy | backpack | bend | brittle |
| aluminium | cone | break | corrosion-resistant |
| ceramic | engine | burn | flexible |
| composite | frame | climb | hard |
| concrete | helmet | coat | heat-resistant |
| cromoly | jacket | compress | heavy |
| diamond | piston | corrode | light |
| fibreglass | radiator | drop | rigid |
| graphite | rope | heat | soft |
| nylon | spoiler | hold | strong |
| plastic | tyre | melt | tough |
| polycarbonate | vehicle | row | weak |
| polyester | wheel | run | |
| polystyrene | wing | scratch | |
| rubber | | stretch | dash |
| steel | | strike | dot |
| titanium | | touch | forward slash |
| | | | hyphen |
| | | | underscore |

**PHRASES FOR
EMAILS**

1 Memory test. What is a racing car made of? Write the materials from column 1.

- 1 The nose cone *is made of fibreglass.*
- 2 The wheels *are made of _____.*
- 3 The frame _____.
- 4 The tyres _____.
- 5 The radiator _____.
- 6 The engine _____.
- 7 The pistons are coated with _____.
- 8 The wings are made of _____ and _____.

2 Write the opposites of the adjectives from the list in column 4.

- 1 Nylon isn't weak. It's *strong.*
- 2 Polystyrene isn't tough. It's _____.
- 3 Graphite isn't hard. It's _____.
- 4 Rubber isn't rigid. It's _____.
- 5 Aluminium isn't heavy. It's _____.