

## Design and Technology Drawing tools

### Objectives


- learn the names for and use of different drawing tools.
- distinguish between tools used in Art and tools used in Maths.
- copy shapes into your notebook.

### Preparation

- Bring felt-tip pens, coloured pencils, rulers, compasses and pairs of scissors.

### Warm-up

- Books closed. Draw a simple house on the board. Ask: *Is this a real house?*
- Elicit that it is a *drawing* of a house and that before we build houses (or anything else), we have to design them.
- Ask: *What drawing tools do we use to make designs?*
- Elicit any words that students know, e.g. *ruler* or *pencil*.

- 1  1.45 Ask students to open their books at page 117 and read out the words in the box.
- Students can work in pairs to match the drawing tools in the picture with the words.
  - Put the following language on the board and ask students to use it in this task: *I think this is a \_\_\_\_\_. What about you? I (dis)agree. I think it's a \_\_\_\_\_. I I'm not sure what it is.*
  - Play the recording for students to check their answers.
  - Ask students to tell a partner what drawing tools they have in their pencil cases or bags.


### Answers

2 paper 3 drawing board 4 ruler 5 compass  
6 t-square 7 pencils 8 coloured pencils 9 felt-tip pens

- 2 • Draw a right-angled triangle on the board:



- Write the degree symbol (°) on the board. Explain or elicit that we measure angles in degrees. Point to the 90-degree angle on the triangle on the board.
- Draw *parallel*, *straight* and *curved* lines to teach these words.
- Ask students to work in pairs to complete the table.

- 3  1.46 Play the recording for students to check their answers to Exercise 3.

### Audioscript

**Emily:** Hey! Harry, here's my old drawing board. You can have it for your Design and Technology class, if you want.

**Harry:** Thanks Emily.

**Emily:** Look, you put the paper here on the board under the T-square.

**Harry:** T-square? What's a T-square?

**Emily:** This is a T-square. T like the letter T, see. You draw parallel lines with it.

**Harry:** OK. Look at this list. I need all these things too.

**Emily:** Let's see. What have I got? Setsquares. I've got some setsquares. You draw angles with setsquares...

**Harry:** Yes I know, 90° and 45°.

**Emily:** ... and 30° and 60° with this one.

**Harry:** Oh right. And I need a compass too. I'll need this to draw perfect circles.

**Emily:** Yes, for circles and curved lines. Here's one. What about a ruler?

**Harry:** Yeah, I've got a ruler.

**Emily:** That's what you need for straight lines and to calculate the length of a line. And have you got any felt-tip pens to colour your design?

**Harry:** No, I haven't. Can I have these?

**Emily:** Hands off Harry, these are my felt-tip pens. Get your own!

### Answers

2 parallel 3 angles 4 circles 5 straight 6 colour

- 4 • Write *In Maths*, *In Art* and *Both* on the board.
- Ask individual students to come up to the board and write their answers under one of the three headings.

### Suggested answers

**In Maths:** compass, ruler, setsquare, t-square

**In Art:** coloured pencils

**In both:** drawing board, felt-tip pens, paper, pencils

- 5 • Ask: *What shapes can you see in the picture?* Write the words on the board. Students will probably know *triangle* and *circle*, but you may have to teach them: *rectangular*, *cuboid*.
- Students say what drawing tools they need to draw the three shapes and then draw the shapes in their notebooks.
  - If they need help with how to do this, they can take a look here:  
<http://www.wikihow.com/Draw-an-Equilateral-Triangle>  
<http://www.wikihow.com/Draw-a-Circle>  
<http://www.wikihow.com/Draw-a-Cube> (a cuboid resembles a cube in form and so this page will help students with the drawing of a rectangular cuboid).

### Suggested answers

**Circle:** compass, coloured pencils **Triangle:** ruler, compass, setsquare **Cuboid:** ruler


### Your turn

- 6 • Put students in pairs. They take turns to describe and guess the tools.



3.4 Da Vinci's design

See page 134 for activities you can do with this video.

-  For homework, ask students to watch this video about designing a speaker. Students can watch the video with the subtitles on: [http://www.bbc.co.uk/schools/gcsebitesize/design/graphics/drawingsketching\\_act.shtml](http://www.bbc.co.uk/schools/gcsebitesize/design/graphics/drawingsketching_act.shtml)