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 121 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'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.

▶️ **●Discovery** **EDUCATION**
3.4 **Da Vinci's design**

See page 136 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