

D&T – Summer Task

Component 1: Principles of Design and Technology (Paper code: 9DT0/01)*

Written examination: 2 hours 30 minutes

50% of the qualification

120 marks

Content overview

Topic 1: Materials

Topic 2: Performance characteristics of materials

Topic 3: Processes and techniques

Topic 4: Digital technologies

Topic 5: Factors influencing the development of products

Topic 6: Effects of technological developments

Topic 7: Potential hazards and risk assessment

Topic 8: Features of manufacturing industries

Topic 9: Designing for maintenance and the cleaner environment

Topic 10: Current legislation

Topic 11: Information handling, Modelling and forward planning

Topic 12: Further processes and techniques.

Over the two years of your A Level course, there is a great deal of knowledge and understanding to develop before you are ready to take your exams at the end of Year 13. The specification is divided into twelve topic areas, with each topic often broken down into more focused areas of study.

During your D&T 16+ Induction session and as part of your D&T Summer Task, you will begin exploring a small section of Topic 3 (sub-section 3.3).

Topic	What students need to learn:	
3 Processes, techniques and specialist tools <i>continued</i>	3.3	Use of media to convey design decisions, to record to recognised standards, explain and communicate information and ideas using the following methods and techniques: a) pictorial drawing methods for representing 3D forms – isometric, 2-point perspective b) working drawings for communicating 2D technical information – 3rd angle orthographic projection, triangulation c) nets (developments) for communicating information about 3D forms in a 2D format d) translation between working drawings, pictorial drawings and nets (developments) e) report writing.

A B C D E F G H

I J K L M N O P

Q R S T U V W

X Y Z

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In the D&T 16+ Induction session, you will be taught the basics of Perspective Drawing.

If you were unable to attend the 16+ Induction session, you may wish to watch the following Youtube videos to begin to familiarise yourself with the technique:

Video 1: [How to Draw a Simple Road using One-Point Perspective for Beginners](#)

Video 2: [How to Draw a House using Two Point Perspective for Beginners](#)

When you are ready to do so, have a go at the first task.

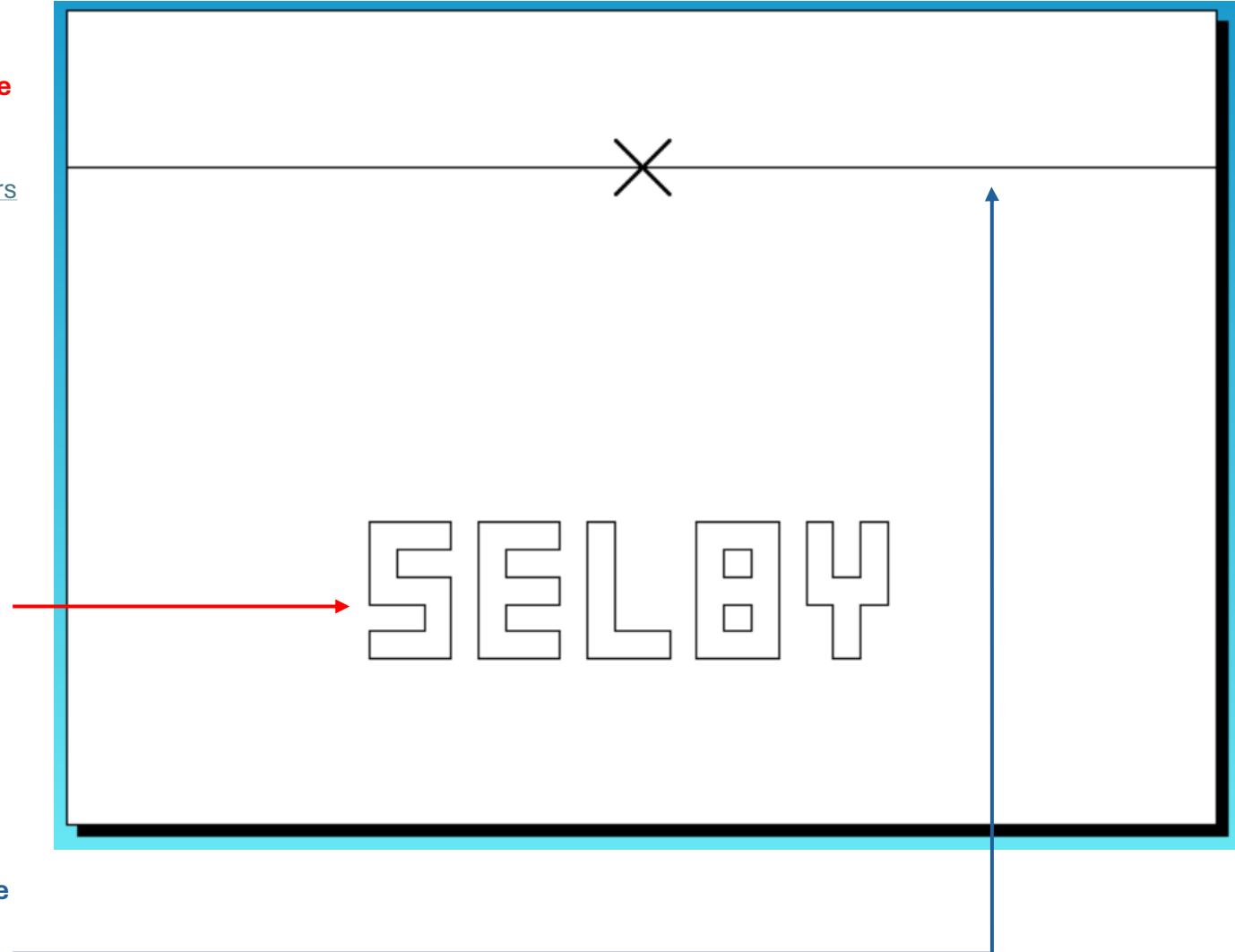
TASK 1 – YOUR NAME in ONE-POINT PERSPECTIVE

Step 1

Using the sample letters from the previous two pages, draw (trace) your name onto a piece of A4 paper. Each letter should be drawn 1cm apart. Tip: Have your page landscape way around and draw your letters on the lower half of the sheet (see example)

Step 2

Add a horizontal line (horizon) and mark a small X in the centre somewhere in the upper half of the sheet. The X represents what is referred to as the vanishing point. (see example).

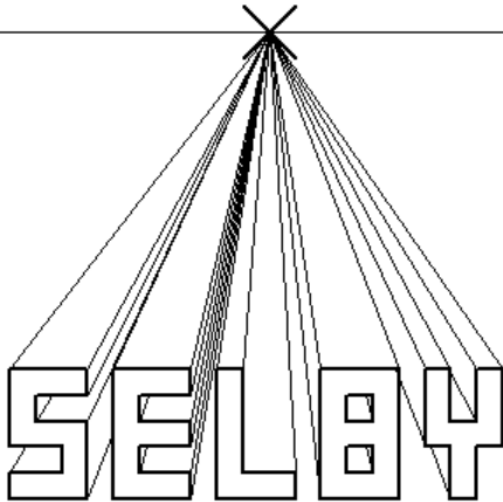


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Step 3

Draw faint lines from the corners of each letter to the vanishing point.

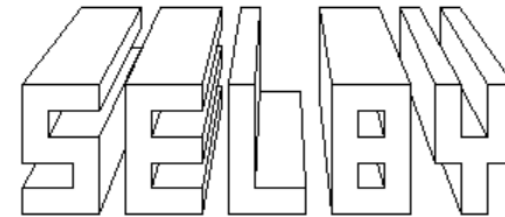
Tip: You may find it easier to work from the middle of your name/word rather than starting from the first letter (see example below)



Step 4

Make each letter appear three-dimensional by drawing in the back edges.

Tip: It is essential that the back edge lines are drawn parallel to the front edge lines. (see example below)



Step 5

Use an eraser to rub out any lines that you do not need and add colour to your 3D letters.

Tip: Think about light and shade. Imagine that the Sun is setting over the horizon in the background – What surfaces of each letter will be exposed to light and which surfaces will be in shadow?

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TASK 2 – A STREET SCENE IN ONE-POINT PERSPECTIVE

Take a fresh sheet of A4 paper and place it down in portrait orientation.

Start by drawing the horizon right across the middle of the page and place a small X in the middle to represent the vanishing point. (shown in **RED** in this example).

Next, imagine that the edges of your paper are the front of the scene. Draw lines (as shown) from the edges of the paper to the vanishing point.

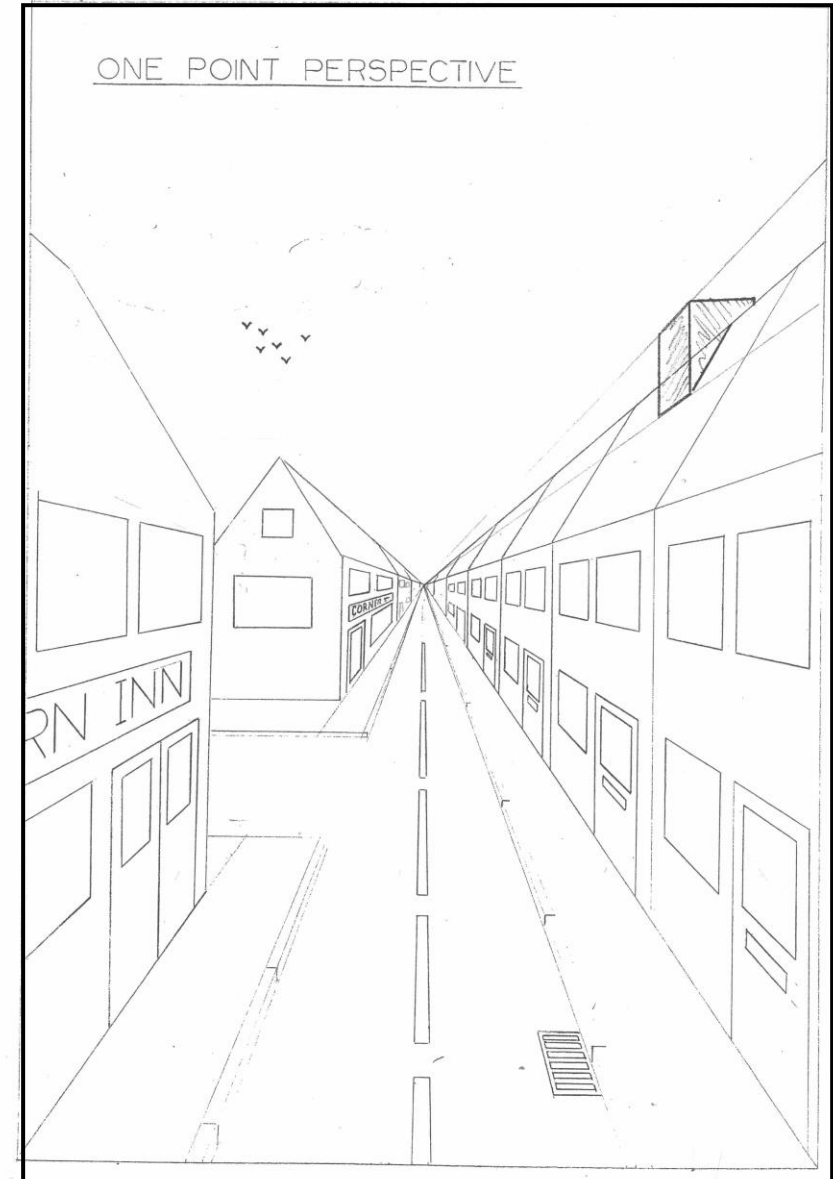
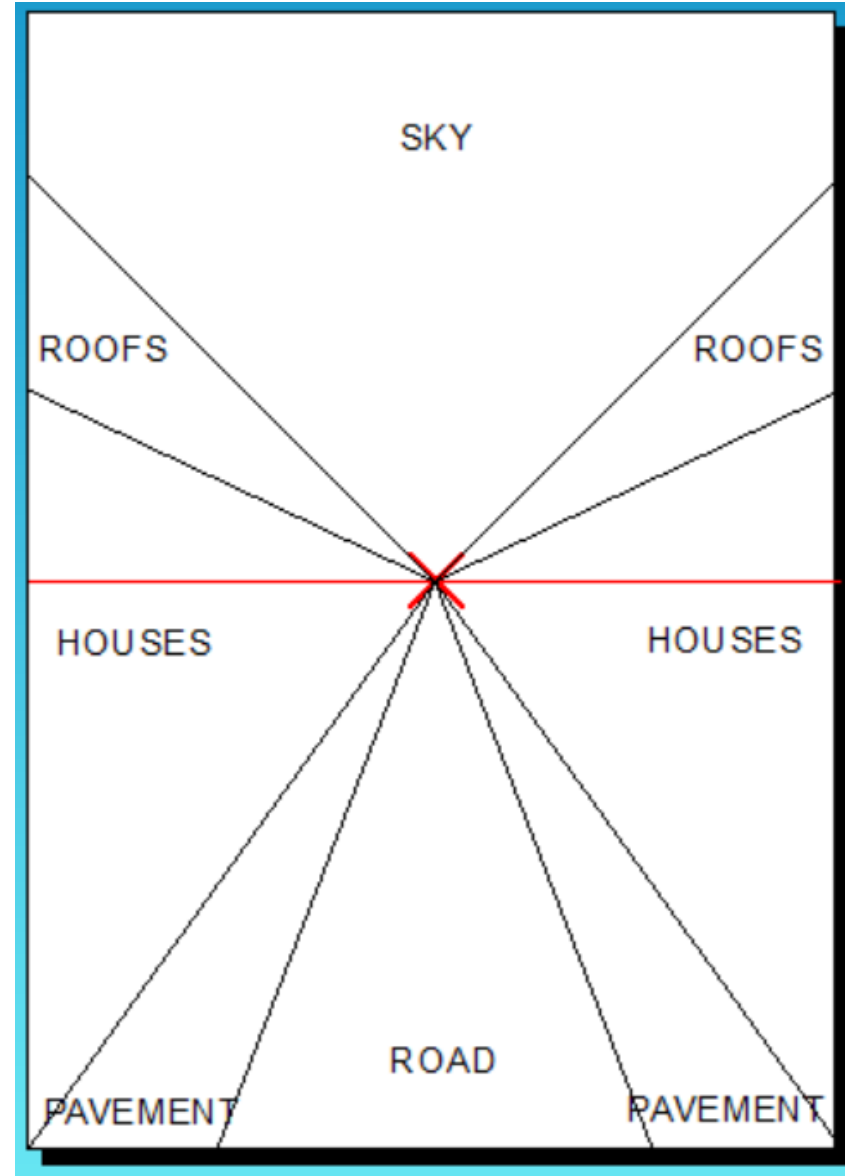
Note: You do not need to label the sections as shown in the example – unless of course it helps you to make sense of what you're drawing.

Study the finished example to the far right. Other than the lines that divide up the 'roofs' sections, you should notice that every line is either ...

- a) Horizontal
- b) Vertical
- c) Heading towards the vanishing point

Copy the street scene onto your piece of paper.
DO NOT TRACE!

Tip: You may find it useful to work on one section at a time. For example, you might start by dividing up the 'houses' section to create a row of terrace houses before adding in details such as windows and doors.



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TASK 3 – A STREET SCENE IN TWO-POINT PERSPECTIVE

Take a fresh sheet of A4 paper and place it down in landscape orientation.

Start by drawing the horizon right across the middle of the page and place a small X in the middle to represent the vanishing point.

Note: This time, the horizon line should be drawn about one-third of the way down from the top edge of the paper

Study the finished example to the far right. It may look complex but it's not too different from the block drawing exercise that you completed in the induction lesson. The only difference is that rather than drawing the blocks randomly in space, this time you're drawing them in more specific locations so that they appear as if they are sitting alongside each other (to create the parade of shops). Something that you should notice is that other than the sloping roofs, every line is either vertical or heading towards one of the two vanishing points. This includes all of the details such as the window, doors, and even the lettering on the shop signs.

Copy the street scene onto your piece of paper.
DO NOT TRACE!

Tip: Start by drawing a two-point perspective block in the middle of your page for the Grocer's shop and then move onto the adjacent buildings (blocks).

