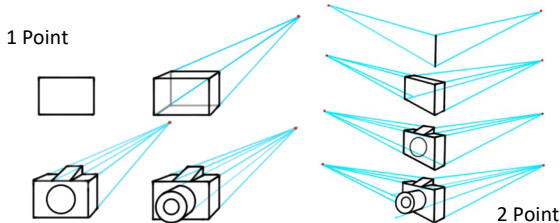


# Drawing Techniques

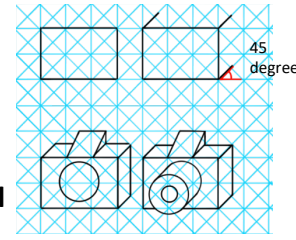
**1 & 2 Point Perspective** – 1 point creates an image with a sense of depth using 1 **vanishing point** on the **horizon line**. **2 Point** creates an image that is quick and realistic using **2 vanishing points** on the **horizon line**.

1. Draw a **horizon line** and mark either 1 or 2 **vanishing points** on it.
2. For **1 Point** draw the front view of the object below or above the **horizon line**. For **2 Point** draw one edge of the object.
3. From each corner of the object or edge draw **construction lines** to the **vanishing point/points**.
4. Draw lines for the sides of your object along the **construction lines**, at the end of these lines draw a **vertical line** between the **construction lines**.
5. For **1 Point**, you then connect the **vertical lines** with **horizontal lines**. For **2 Point**, you draw **construction lines** from the **vertical lines** to the **vanishing points**.



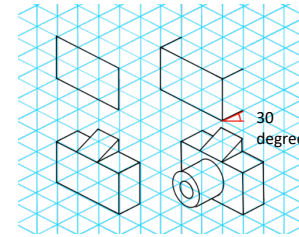
**Oblique** – 3D designs that use **45 Degree lines, Horizontal** and **Vertical lines**. All **construction lines** must be drawn on one of these lines.

1. Draw the front view of the object.
2. From each corner, draw **construction lines** at **45 degrees**
3. Draw over the **construction lines** half the length of the object.
4. Continue along the **horizontal** and **vertical lines** until the drawing is finished.



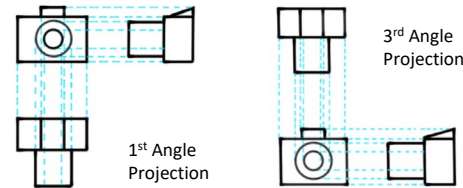
**Isometric** – 3D Designs that use **30 degree lines** and **Vertical lines**. All **construction lines** must be drawn on one of these lines.

1. Draw one **vertical** edge of the object.
2. From the points of this line draw **construction lines** at **30 degrees**.
3. Draw horizontal lines along the construction lines the depth required.
4. Then draw **vertical lines** the height required.
5. From these **vertical lines** draw your next **construction lines** at **30 degrees**.



**Orthographic** – Technical line drawings showing a **front, top** and **right side views**. Used to show detail and measurements of a product clearly from a range of angles.

1. Draw the front of the object.
2. Draw **projection lines** out to the side at key points.
3. Connect the **projection lines** with the correct measurements:



## Top Tip:

If you are trying to draw a circle or curved object, always draw a box first. All objects will fit into a box.

## Key Terms:

1. **Construction Lines** – Faint sketched lines that are guides to the rough shape of a product before creating a design within them.
2. **Vanishing Point** – A point in the distance where the construction lines meet. It can be positioned to the right or left, above or below the horizon line. Depending on how you want your image to appear.
3. **Horizon Line** – Is a faint horizontal line that is drawn across the picture on which the **vanishing points** are placed.
4. **Vertical line** – A line that is drawn straight up the page from top to bottom.
5. **Horizontal line** – A line that is drawn across the page from side to side.
6. **Projection Line** – A line that marks out where an edge will be in a different view.

**Freehand sketching** – used by designs when generating initial designs. Can be in 2d or 3d and can use **different mediums** (pencils, pens and fine liners) to develop an idea. Can be drawn onto **grid paper or templates** and **include arrows** to show movement.

**Exploded Views** – an effective way of demonstrating what is inside a product. It shows how the product will look if it was disassembled (taken apart)

**Assembly drawings** – used to inform manufacturers and clients how to assemble a product correctly (example Lego instructions)

