

S1-3 Broad General Education

OLHS Technical Department



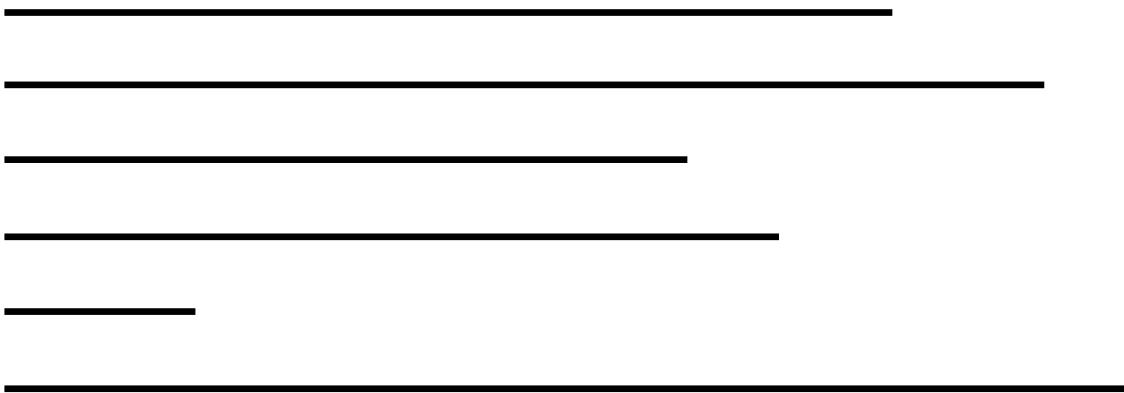
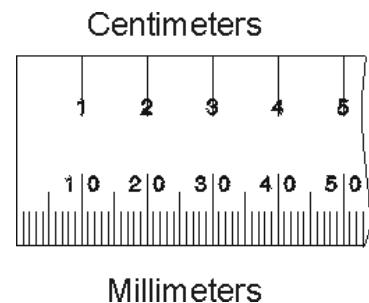
# Manual Graphics

Booklet

# Measuring Task 1

In Graphic Communication we measure using the unit of **millimetres** (mm). You may be used to measuring already in units of centimetres (cm). There are **10 mm in 1 cm**.

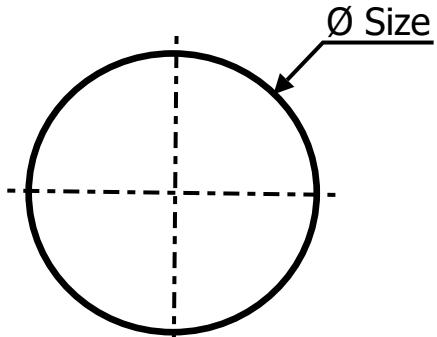
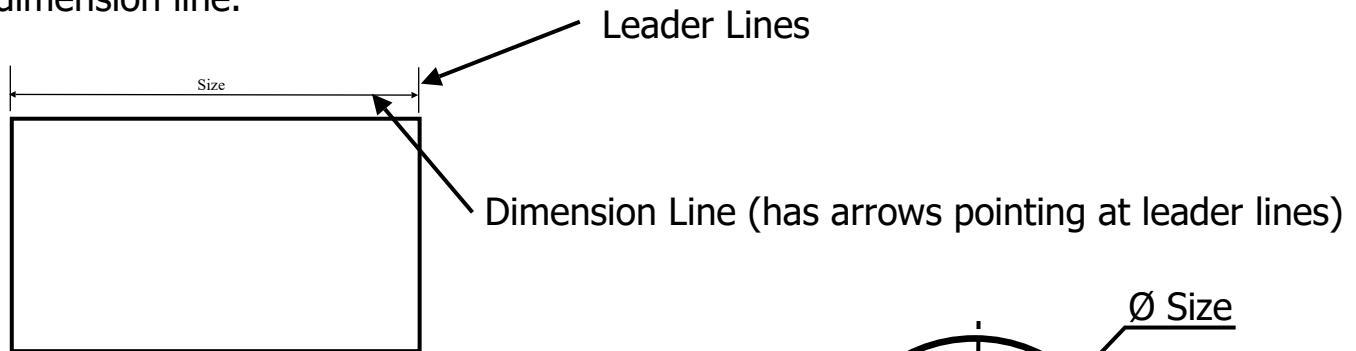
Here are some lines for you to measure their **length**.



# Dimensioning

When adding sizes to a drawing this is called **dimensioning** (adding dimensions). There are 3 parts to this; adding Leader lines, adding a dimension line, and putting the dimension in the correct place.

- Leader lines and the dimension line show what is being measured.
- The dimension (size) is written on top of the line, above the centre of the dimension line.



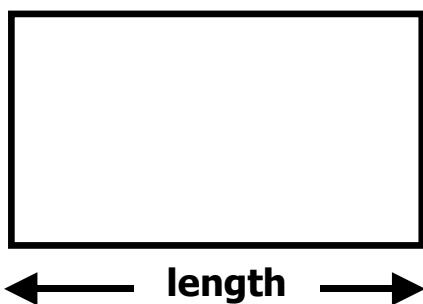
Circles are dimensioned with a **diameter**.

The symbol for diameter is  $\emptyset$ .

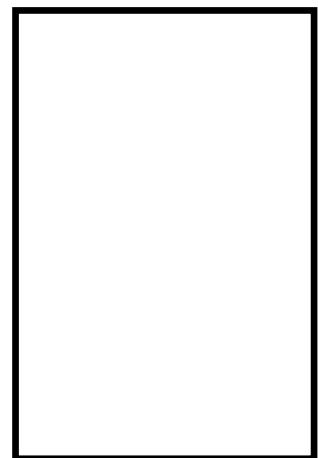
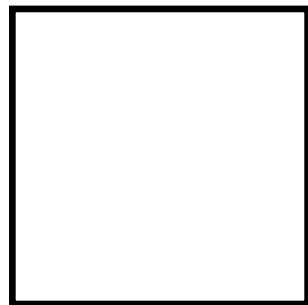
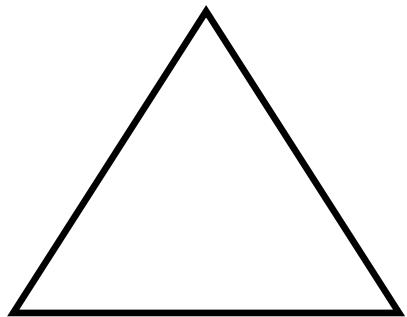
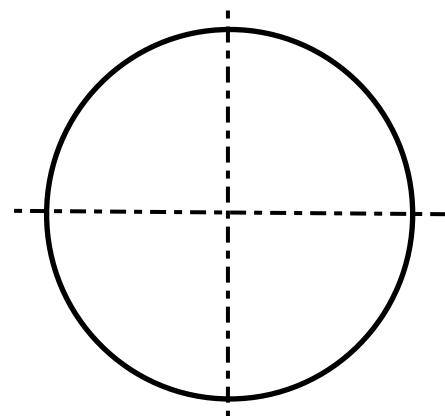
The diameter is the distance across the circle, through the center.

## Measuring Task 2 -----

Now here are some 2-dimensional-shapes for you to measure. You can measure their **length**, **height** and, **diameter**.

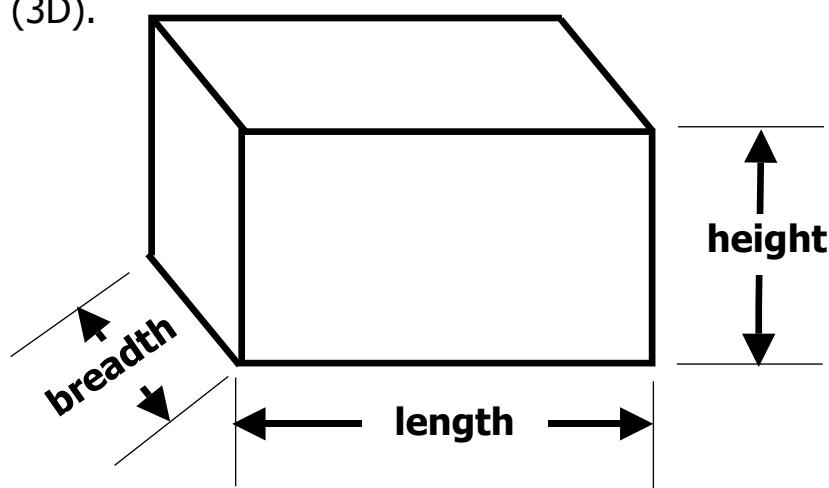


↑  
**height**  
↓



## 3D -----

By adding the **breadth** (thickness) we make the shape change from 2-dimensions (2D) to 3-dimensions (3D).



Green

Amber

Red

# *Oblique Sketching*

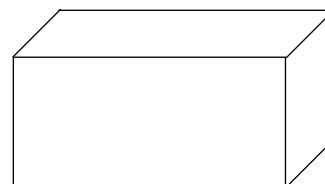
When drawing an object in **oblique** view we start by **constructing** a flat, **2-dimensional** view first.



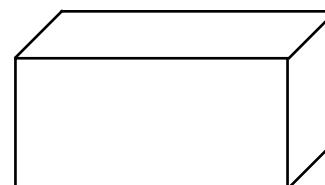
The next step is to draw a sloping line at an angle of **45°** (half of a right-angle) from the corners of the shape.



These lines will represent the depth of the object being drawn and are all the same length.

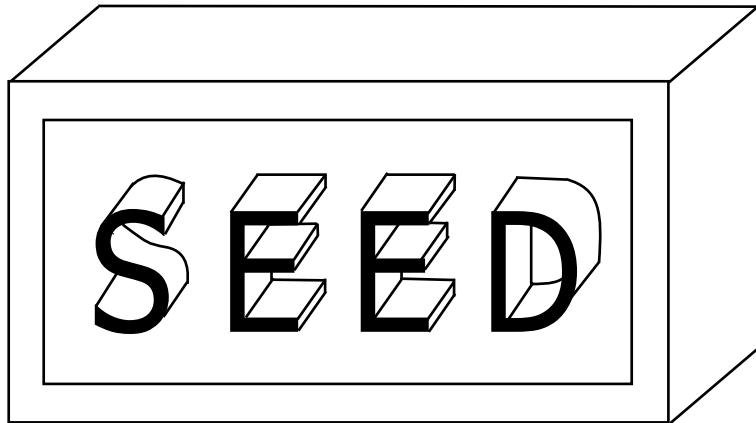
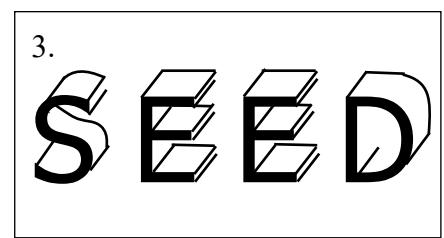
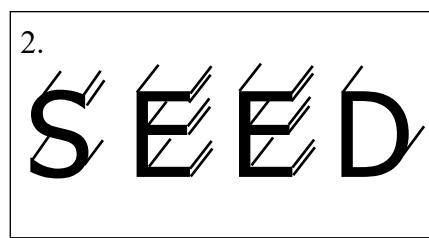


To complete the box add **parallel** lines to join the corners.



Remember to keep your lines **nice and light** at first (**construction lines**). When you are happy with your drawing you can **outline** your work to **define** it.

Practise sketching different shapes and letters using the oblique technique. You could design a box of bird feed or design your own name plate. Remember to keep all the depth lines going in the **same direction** and at an **angle** of 45°.



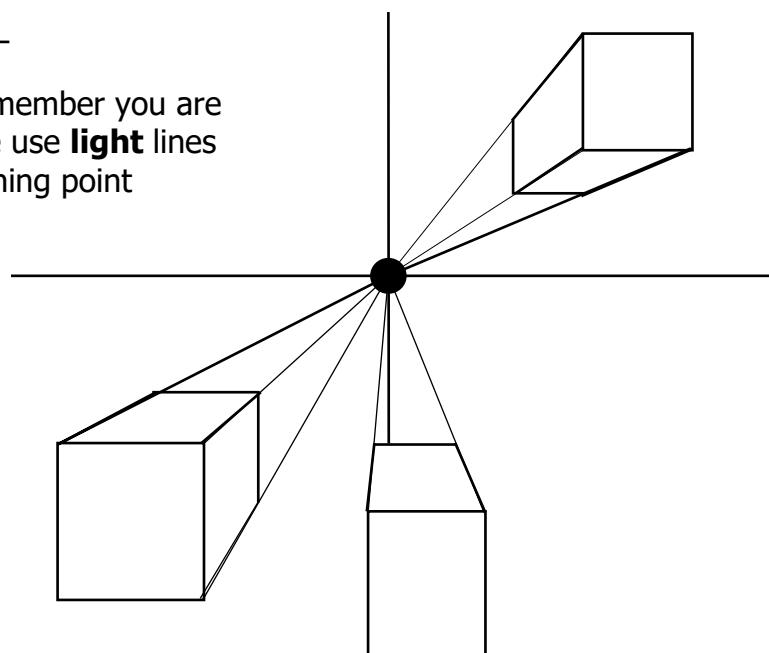
# One Point Perspective



Drawing in **perspective** gives the illusion of objects that are near to you looking bigger and those that are further away looking smaller.

Follow the instructions below in order to **sketch** one point perspective boxes.

1. Divide your page into four.
2. Mark the Vanishing Point
3. Draw the front of the square first, remember you are **constructing** the drawing, therefore use **light** lines
4. Project the corners back to the vanishing point
5. **Outline** your completed drawing.

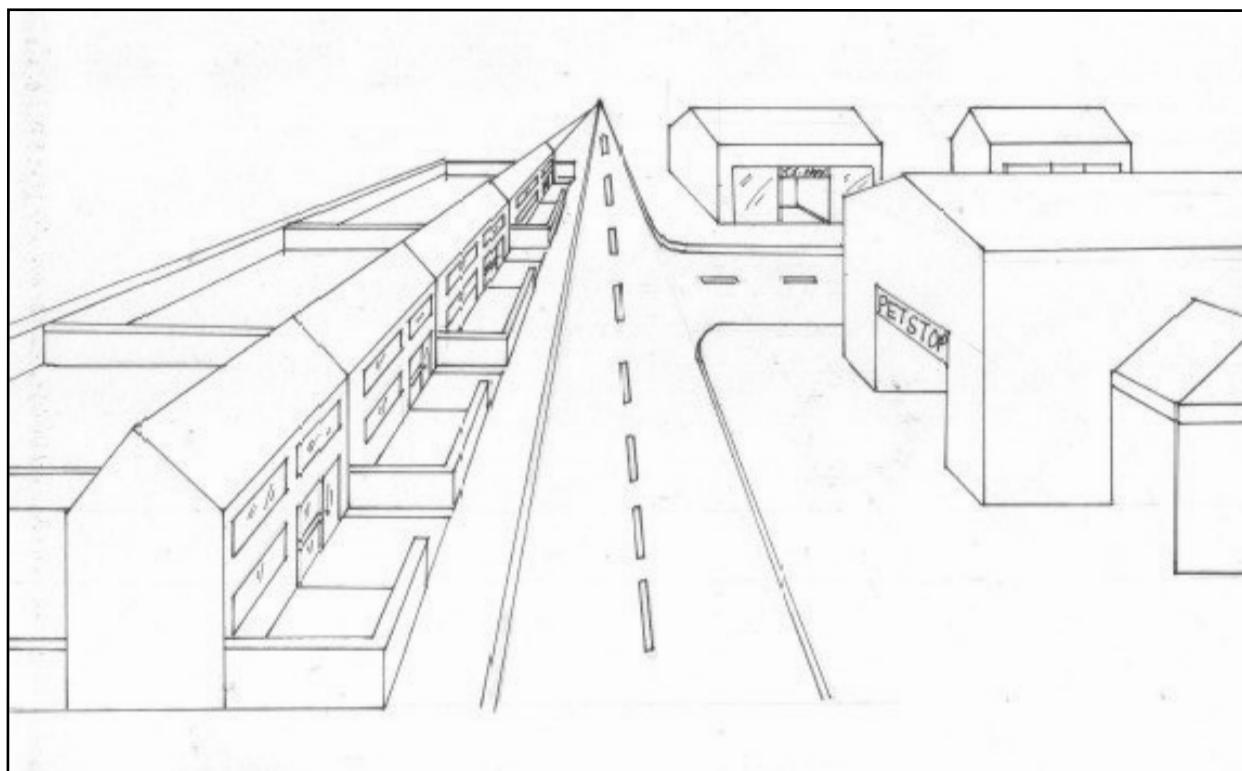


After **constructing** the boxes successfully, you

can now try something more complex such as

a high street. Your teacher will demonstrate how to do this.

When confident you can **personalise** your street with other objects such as lamp posts, paths and garden objects etc.



Green

Amber

Red

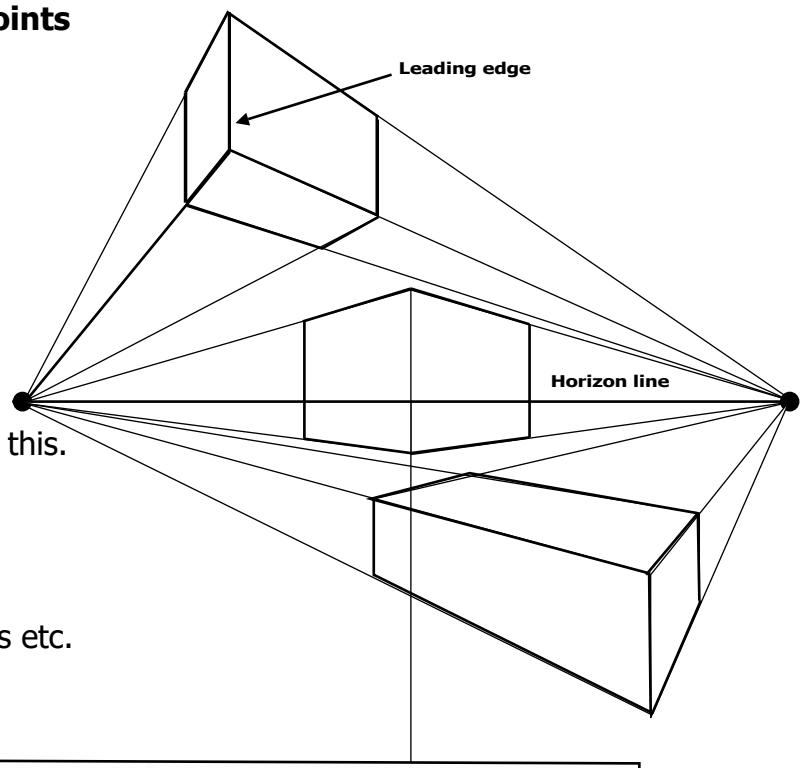


# Two Point Perspective



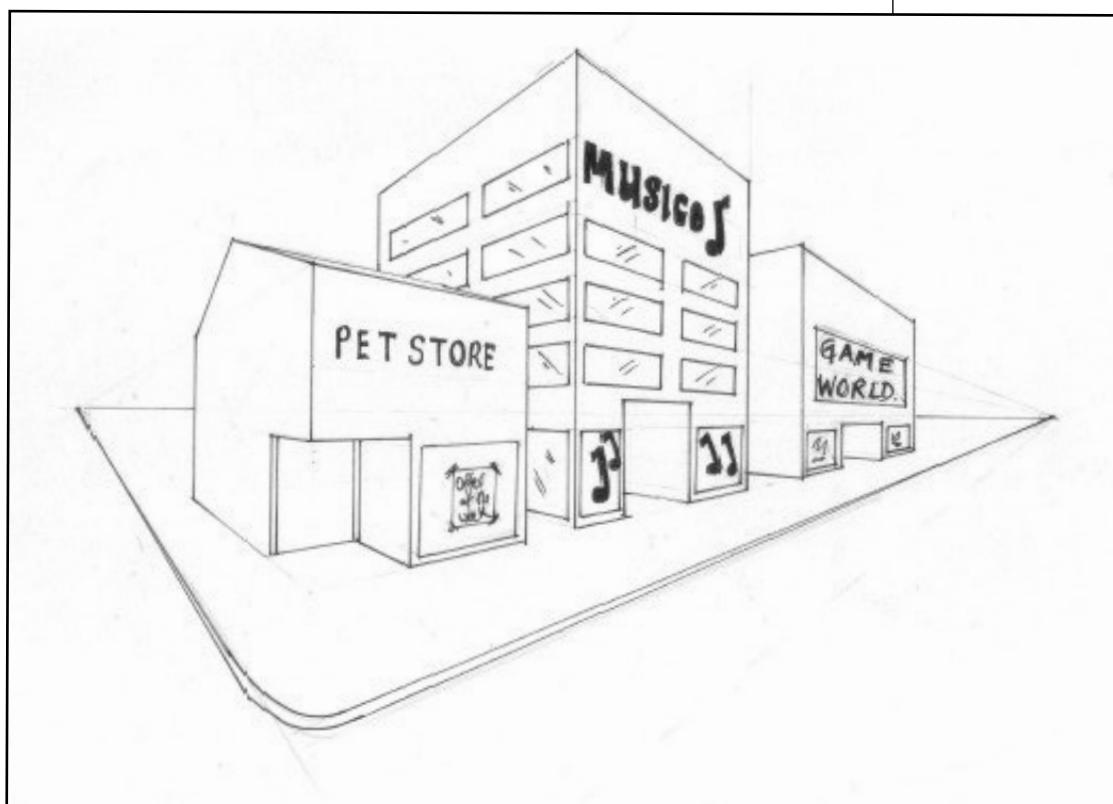
**Two point** perspective differs from **one point**, in that **2 vanishing points** are used. A **leading edge** is also drawn to give the exact **height** of your drawing. All other sizes are **estimated**.

1. Draw in a **horizon line** (eye level) in the centre of the page.
2. Mark on **vanishing points** (vp1 & vp2) ●
3. Sketch the **leading edge** of the box
4. Project the upper and lower ends of the **leading edge** to the **vanishing points**
5. Estimate the **length** and **breadths** of the two sides and place these on vertically
6. Project these to the **vanishing points**
7. **Outline** when complete



After **constructing** the boxes successfully, you can now try something more **complex** such as a high street where you could buy a bird feeder. Your teacher will demonstrate how to do this.

When confident you can **personalise** your street with other objects such as lamp posts, shop graphics, road markings etc.



Green



Amber

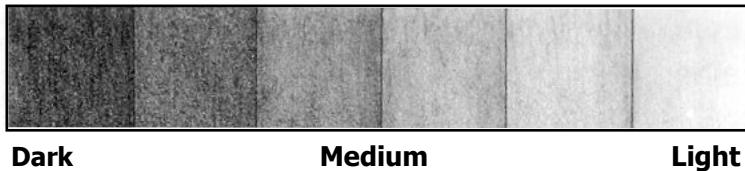


Red



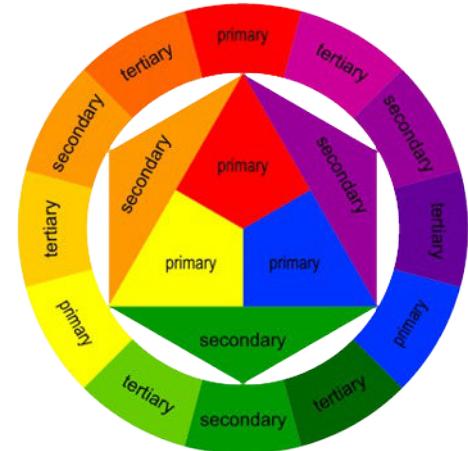
# *Rendering*

In Graphic Communication we **add colour** to show the **effects of light, shade and texture**. We call this **rendering**. The **tonal scale** is a useful tool to give drawings a **realistic** appearance. The tonal scale represents different **degrees** of **light** and **shade** falling onto a solid object.



## The Colour Wheel

There are three types of colour on the colour wheel;  
Primary, Secondary, Tertiary.



## Task

Trace the words below and use the correct colours to **render** them.

# Primary

# Secondary

# Tertiary

Green



Amber



Red



# *S1 Manual Graphics Course*

## **SELF ASSESSMENT SHEET**

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Name ..... Class .....

How successful were you in each of the following lessons?

		Green	Amber	Red	Comment
1.	Measuring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
2.	Dimensioning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
3.	Oblique Sketching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
4.	One point perspective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
5.	Two point perspective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
6.	Tonal scale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....
7.	Colour Wheel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	.....