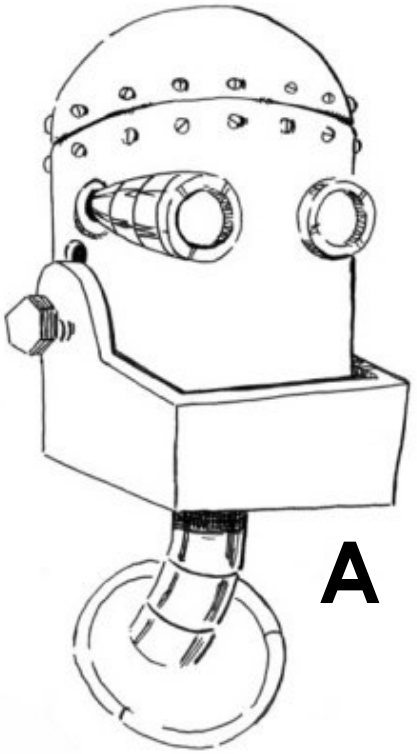
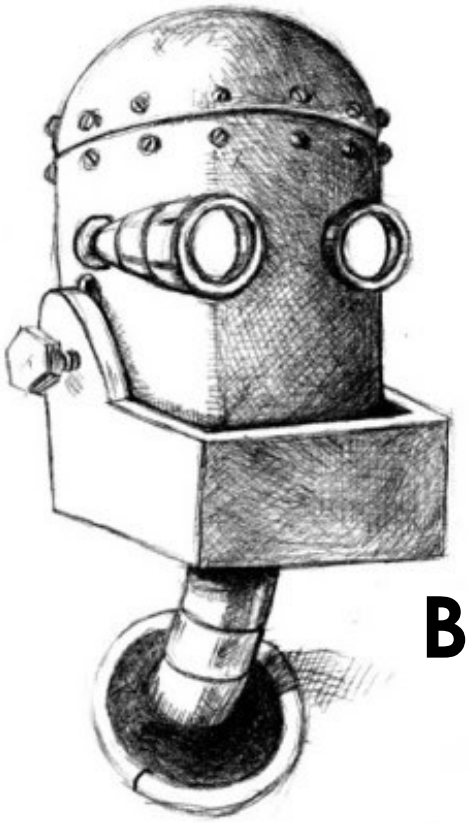
Rendering 3D Shapes

Yr. 8 Information

B1

Which of these robot drawings **A** or **B** looks the best and WHY?





Rendering 3D Drawings

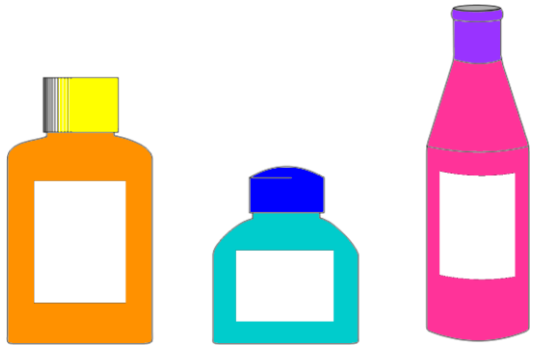
Shading or rendering is an important skill in art. It means you can make things look more real.

Over the next few tasks we are going to improve your rendering skills so that **you can use rendering to make a 3D drawing to look more realistic**.

First we need to find out what you can do to start with. This is called a **baseline test** and we will compare this to what you can achieve at the end to **show progress**.

TASK 1 – BASELINE assessment

Render (shade in) the bottle using colour on your BASELINE sheet.

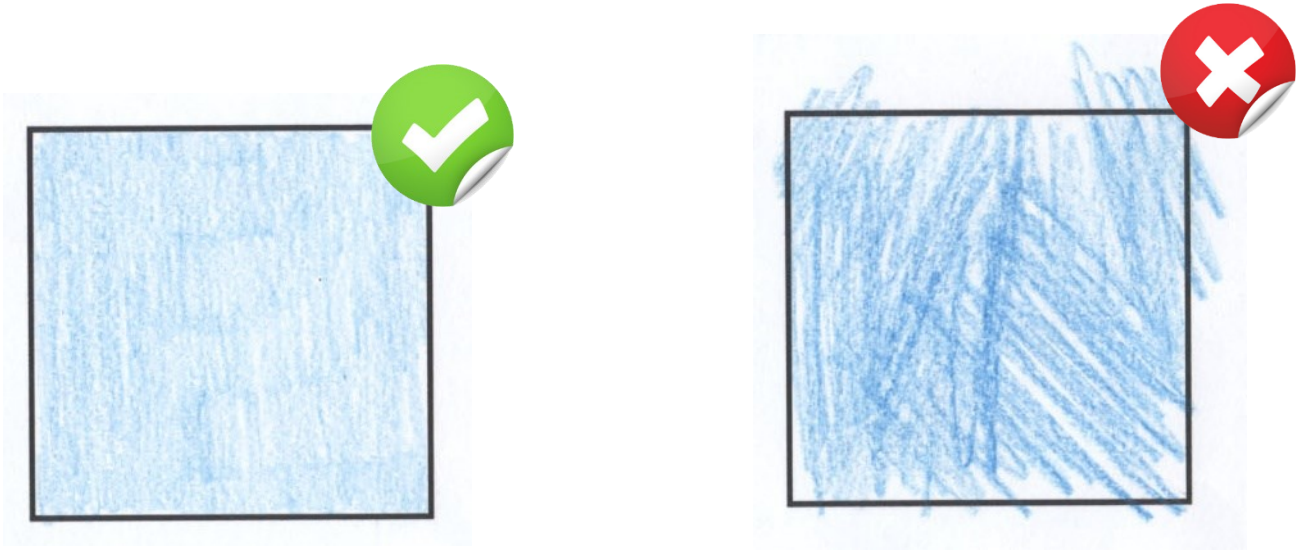


Rendering 3D Drawings

Staying in the lines.
Being able to use colour but stay within the lines of any drawing is the first important skill.
Lets test it.

TASK 2

Choose a colour and Render (shade in) **BOX 1** neatly.



IMPROVEMENT
Is you attempt as good as this? Be honest.
If not then have another go in **BOX 2** and take care to stay within the lines.

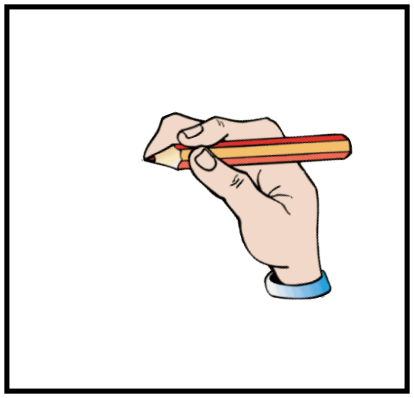
Rendering 3D Drawings

Why Way?

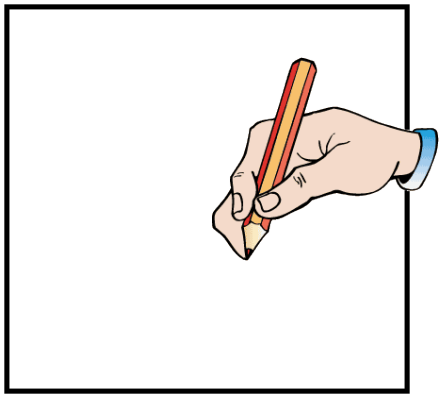
Some people prefer to shade in a horizontal way (side to side) and some people prefer the vertical way (up and down). Lets find out which is best for you.

TASK 3

Colour **box 3** in using ONLY ***side to side*** movements. Then colour in **box 4** using only ***up and down*** movements.
DO NOT TURN YOUR PAGE AROUND TO MAKE IT EASIER!



BOX 3



BOX 4

If your shading looks best in **box 3**, you are a ***lefty/righty*** sort of person. If your shading looks better in **box 4** you are a ***uppy/downy*** person. **This is the way you should always use from now on.**

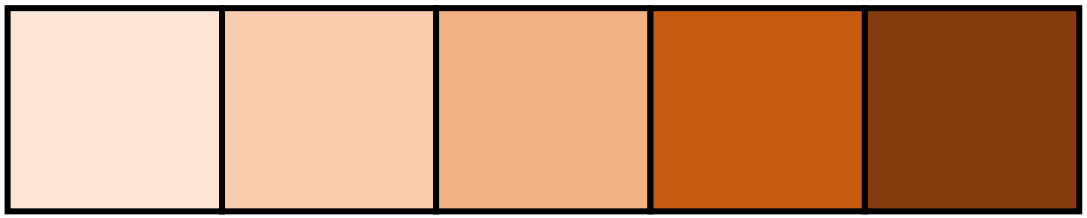
Rendering 3D Drawings

Using Tone

Being able to use different tones (light or dark) of the same colour is the next important skill.

TASK 4

Using colour tones shade in the boxes 5-9. Box 5 should be the lightest tone and box 9 the darkest.
REMEMBER to still use the skills from the previous exercises.

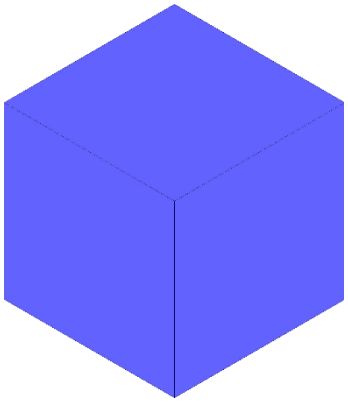
Light  **Dark**

Always start with the 'darkest' tone first. It is easier to make the following ones lighter but harder to make the darkest darker.

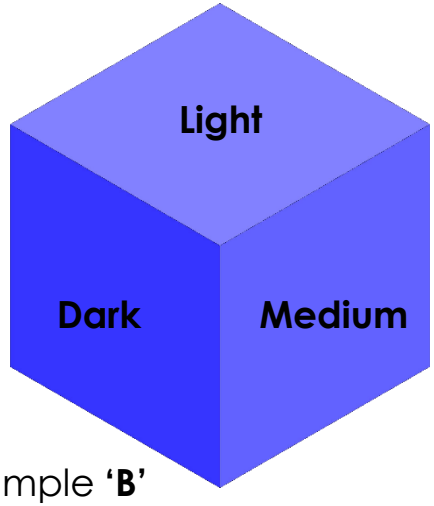
Rendering 3D Drawings

Using Tone To Make Things Look 3D

Being able to use different tones (light or dark) will help any drawing that you do in 3D look more realistic.



Example **'A'**



Example **'B'**

The top face should be the **'light'** tone.

One of the faces should then be a **'medium'** tone.

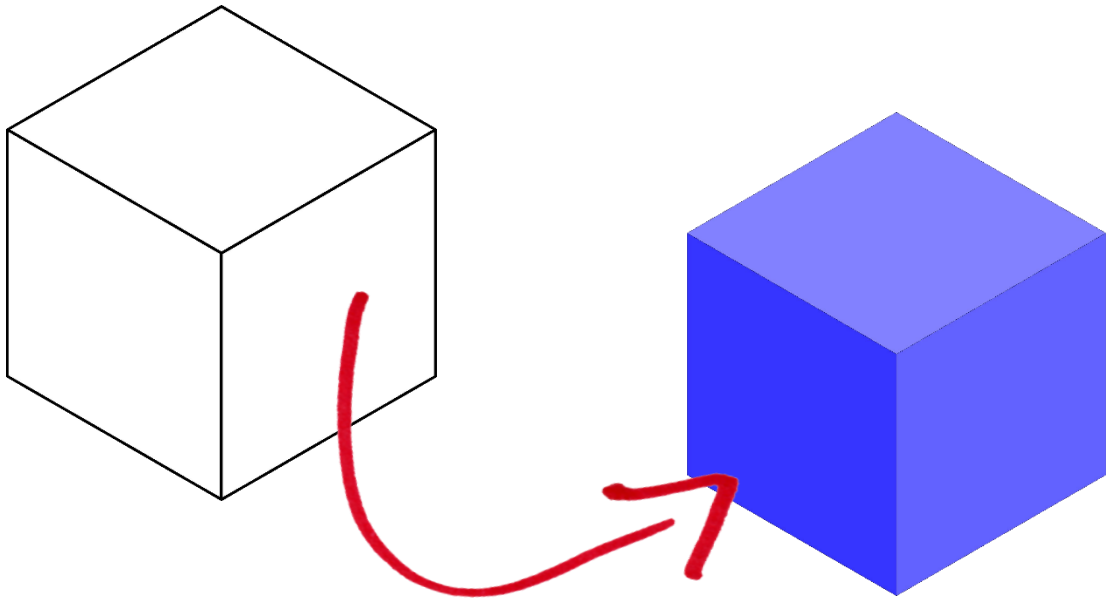
The final face should be the a **'dark'** tone.

Use the tone scale you created earlier to help get the right shades.

Rendering 3D Drawings

TASK 5

Using colour tones render **cube 1** in a colour of your choice.
When completed try **cube 2** in a different colour.



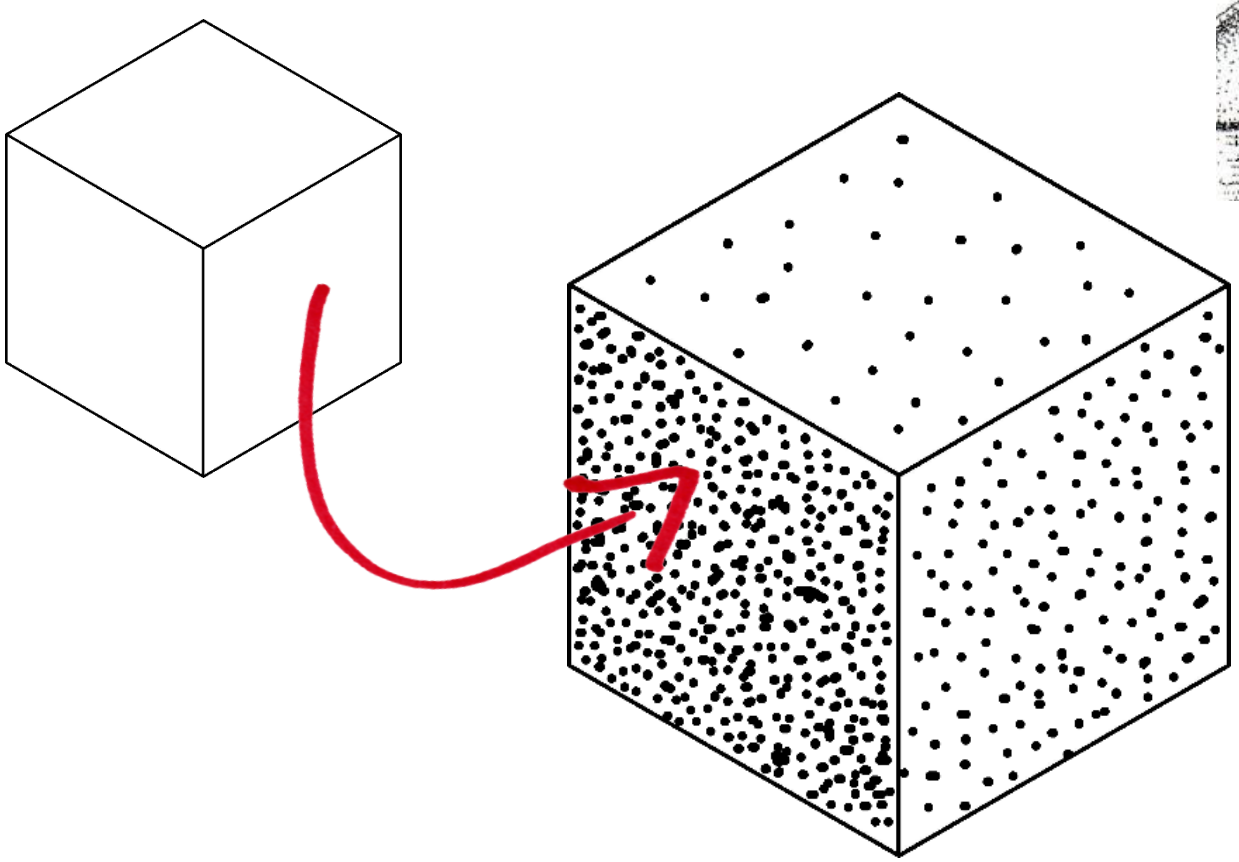
TOP TIPS

Use the tone scale you created earlier to help get the right shades.

Rendering 3D Drawings

Other Ways Of Rendering – STIPPLING

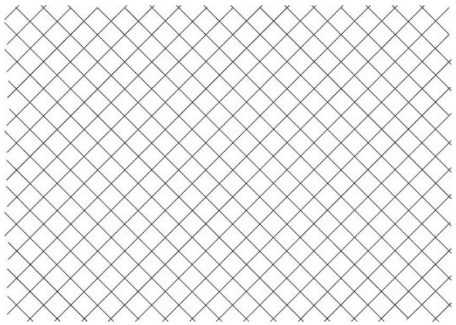
Using stippling is another way of rendering any drawing you do. It uses a series of **dots** that can be close together or space further apart depending how dark you want it to look.

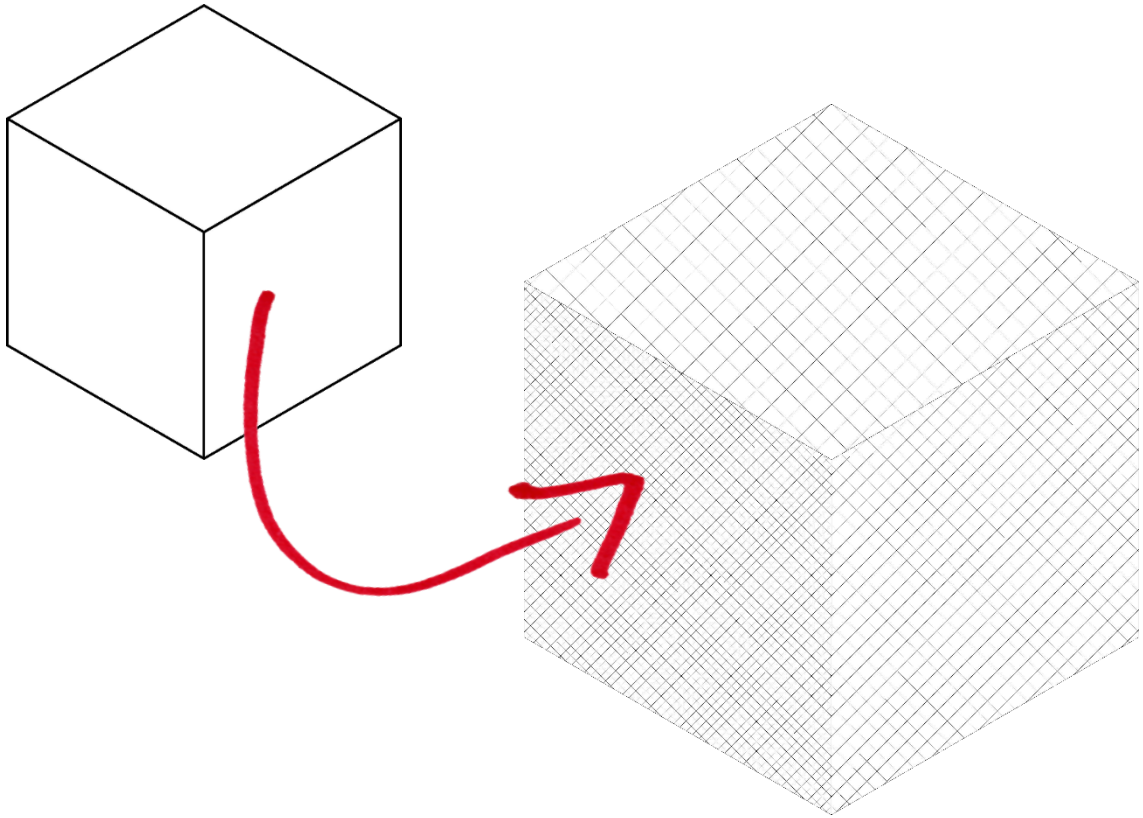


Rendering 3D Drawings

Other Ways Of Rendering – CROSS-HATCHING

Using cross-hatching is another way of rendering any drawing you do. It uses a series of **parallel** lines that can be close together or space further apart depending how dark you want it to look.



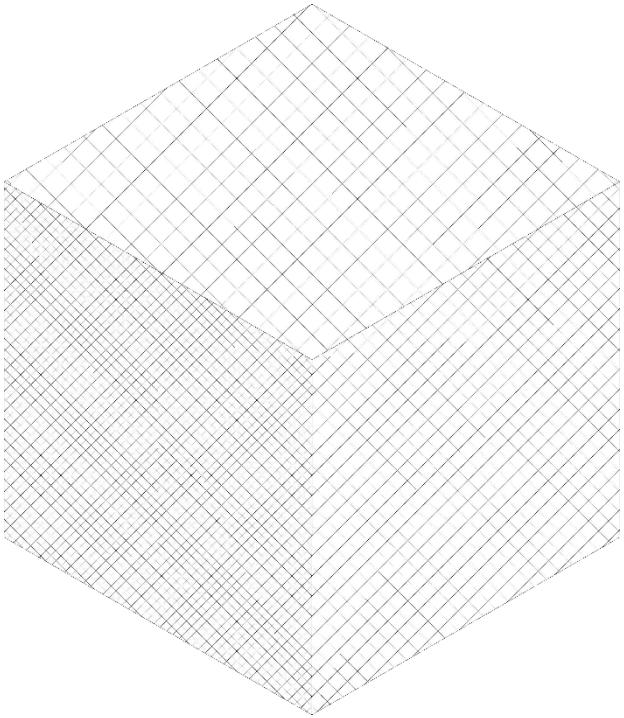


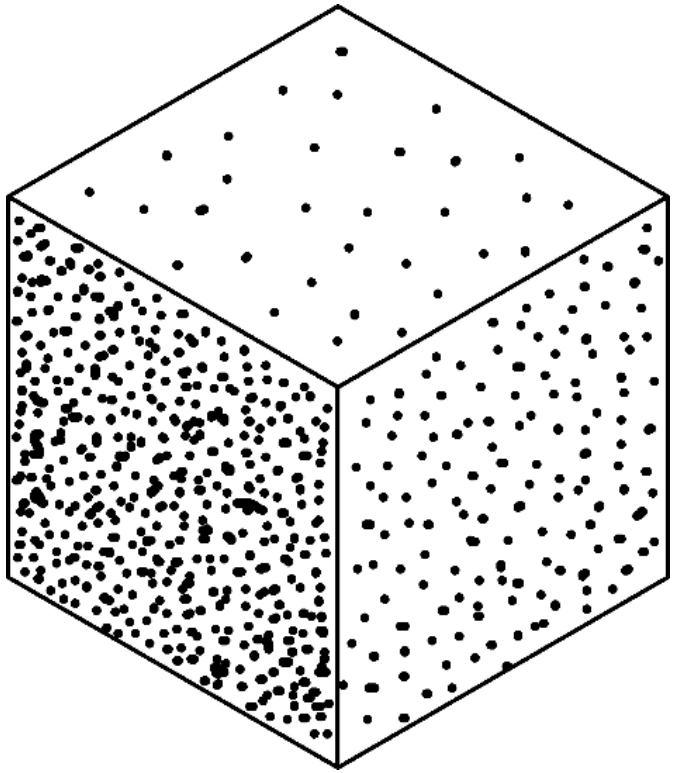
Rendering 3D Drawings

TASK 7

Other Ways Of Rendering – STIPPLING and CROSS-HATCHING

Try rendering the two cubes using stippling and cross hatching.

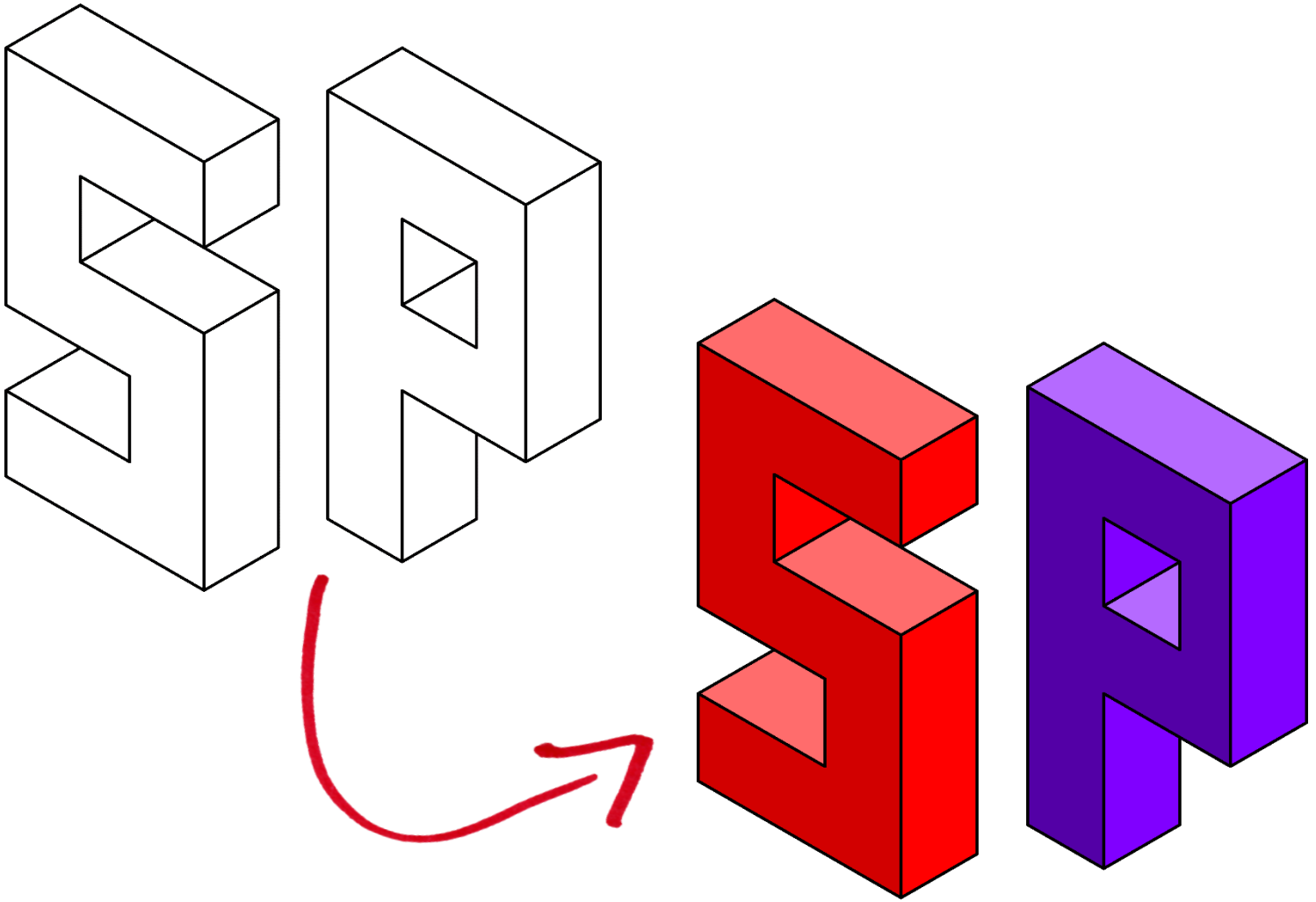




Rendering 3D Drawings

Using Tone To Make Things Look 3D

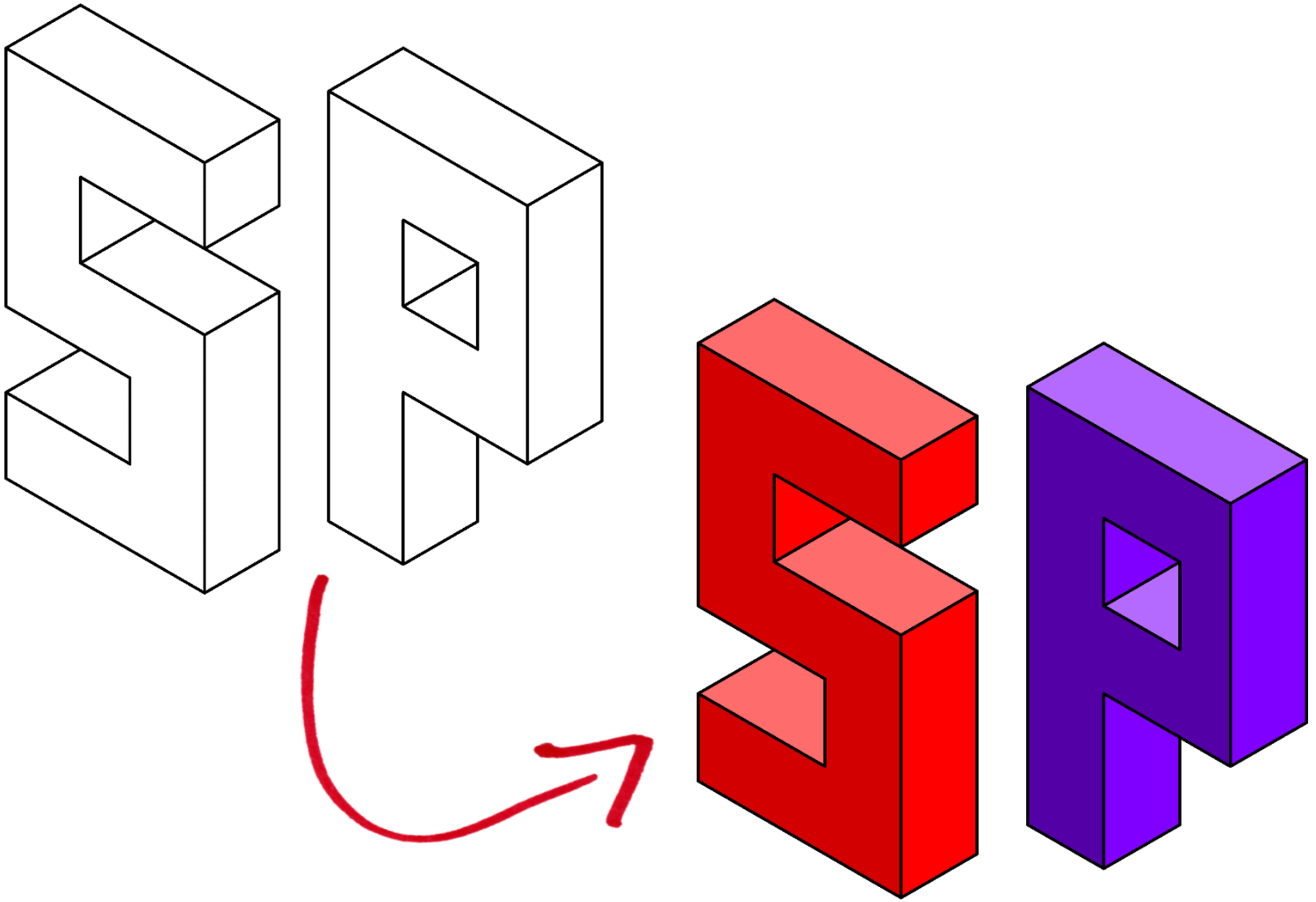
You can use different tones (light or dark) on any 3D shape to help it look more realistic.



Rendering 3D Drawings

TASK 8

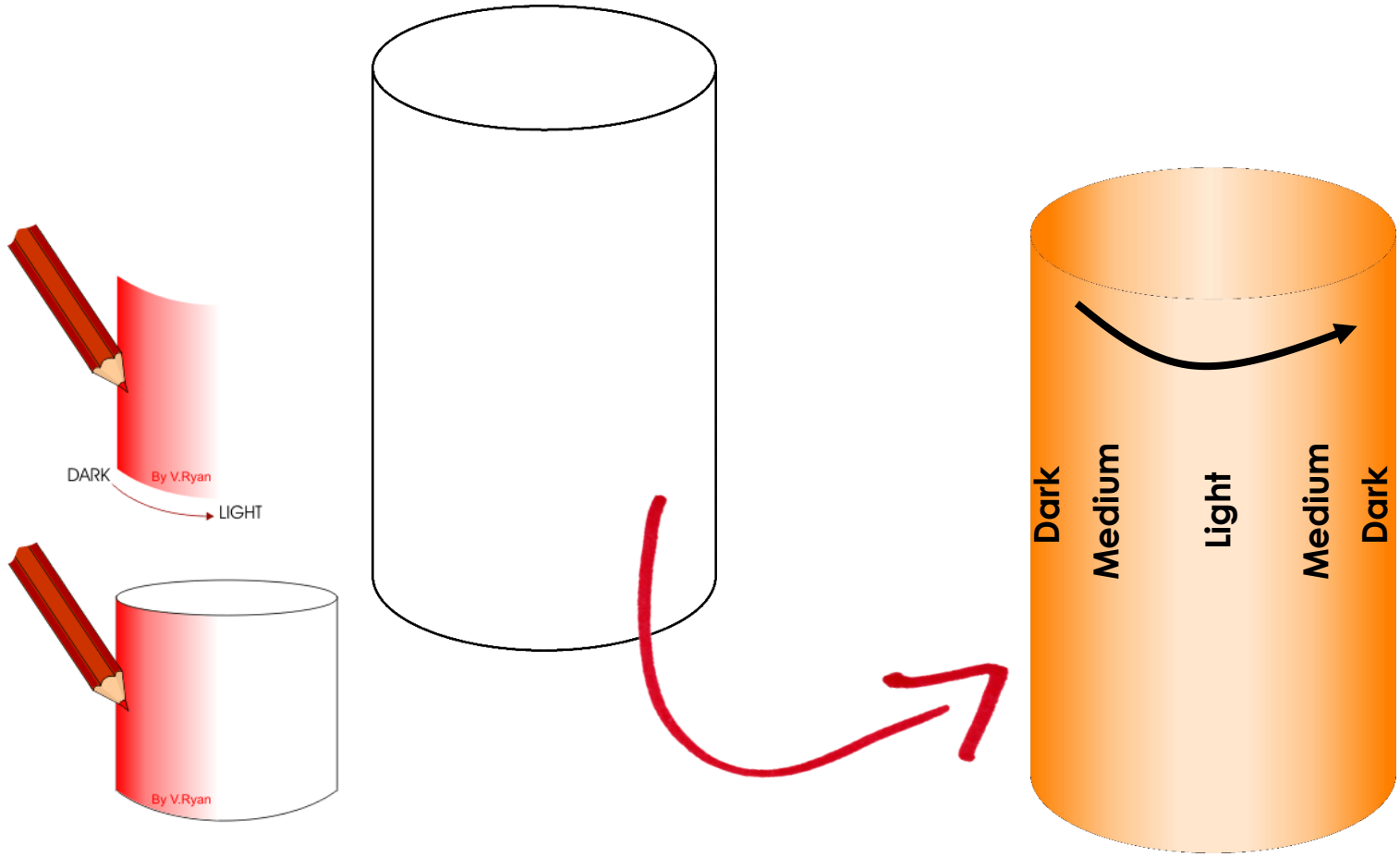
Using colour tones render **LETTERS 1** in a colour of your choice. When completed try **LETTERS 2** in a different colour.



Rendering 3D Drawings

Using Tone To Make Things Look 3D

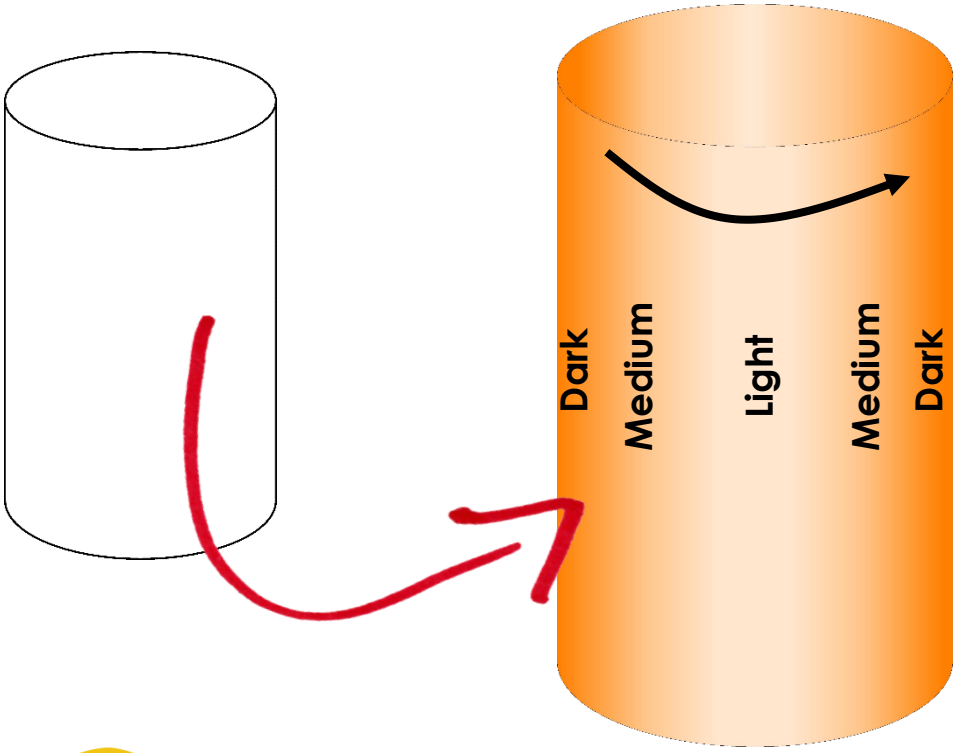
You can also use tone to make surfaces look **curved**. The trick is to go from dark at the edges to light in the middle and then back to dark.



Rendering 3D Drawings

TASK 10

Using colour tones render **cylinder 1** in a colour of your choice.
When completed try **cylinder 2** in a different colour.

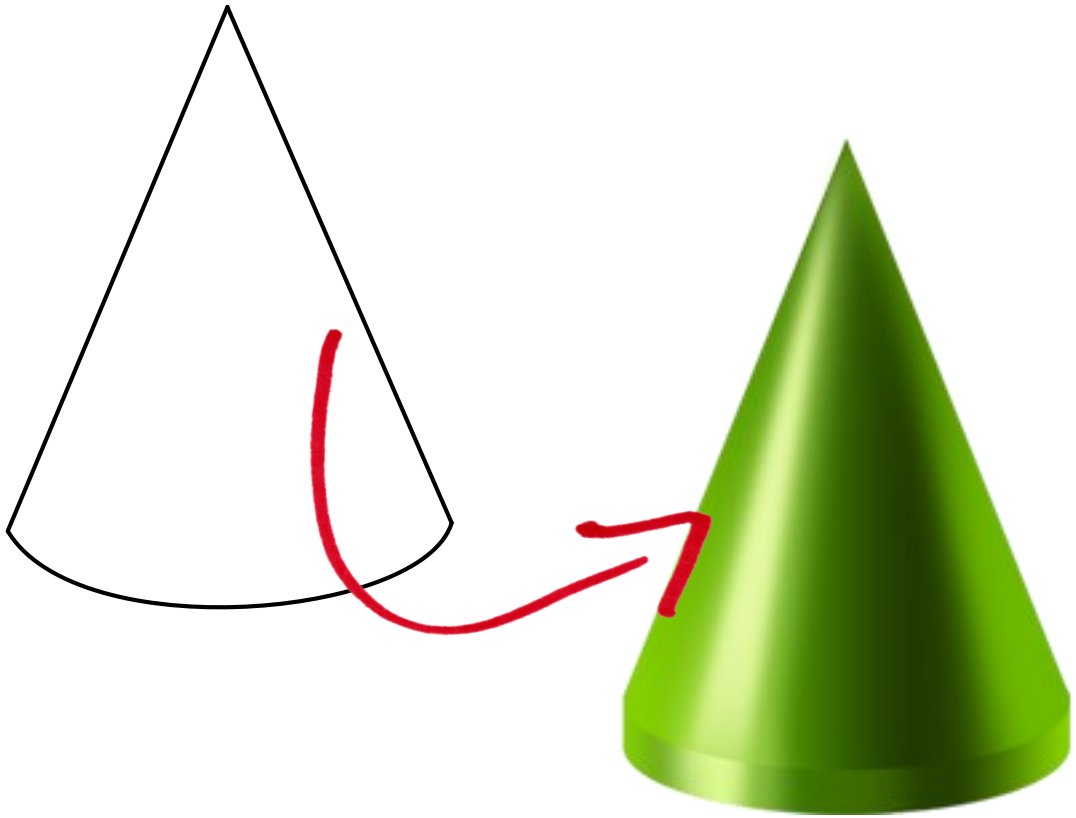


Use the tone scale you created earlier to help get the right shades.

Rendering 3D Drawings

Using Tone To Make Things Look 3D

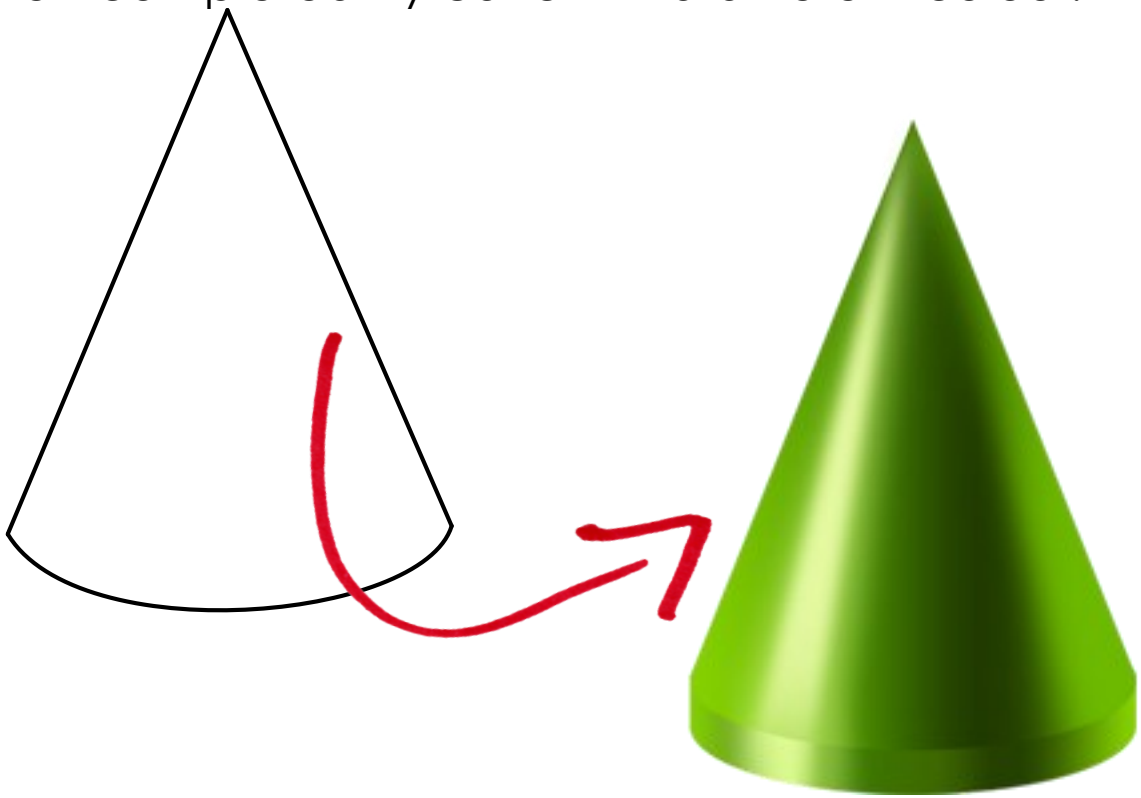
You can also use tone to make surfaces look **curved**. The trick is to go from dark at the edges to light in the middle and then back to dark. This also works with **CONE** shapes.



Rendering 3D Drawings

TASK 11

Using colour tones render **cone 1** in a colour of your choice.
When completed try **cone 2** in a different colour.

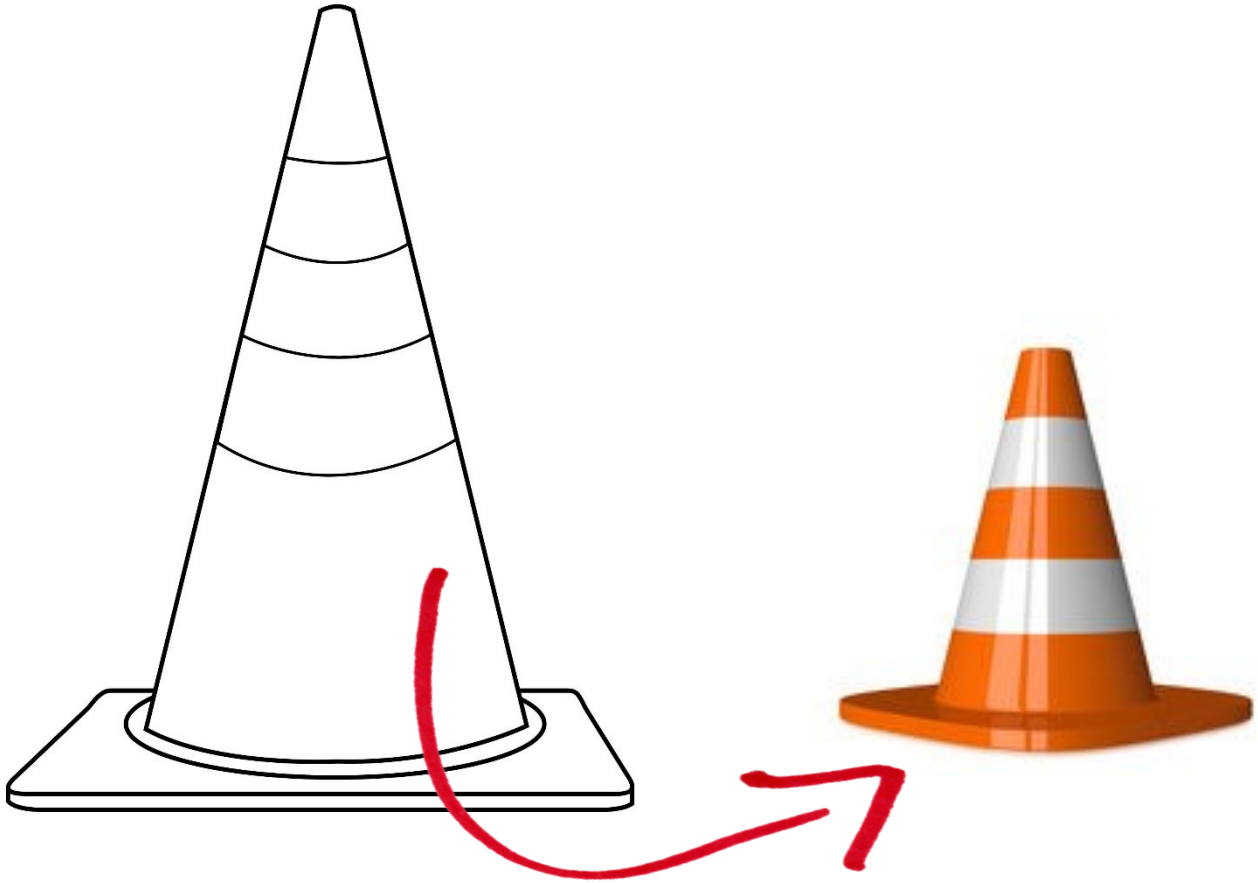


Rendering 3D Drawings

TASK 12

Rendering a real object.

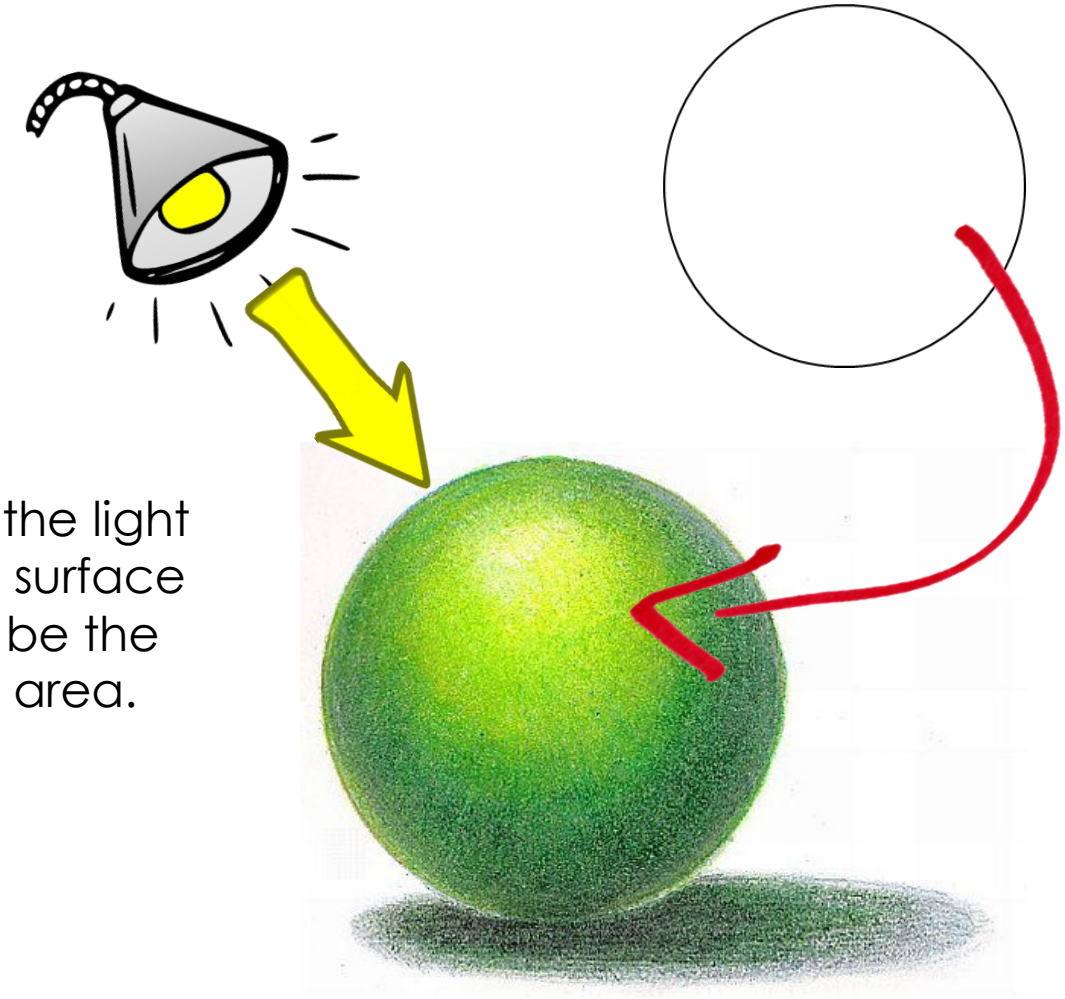
Have a go at rendering this real world object. It is still a cone so remember the dark to light shading technique.



Rendering 3D Drawings

Using Tone To Make Things Look 3D

You can also use tone to make surfaces look **like a sphere**.
The first thing to do is to decide where the light is coming from.

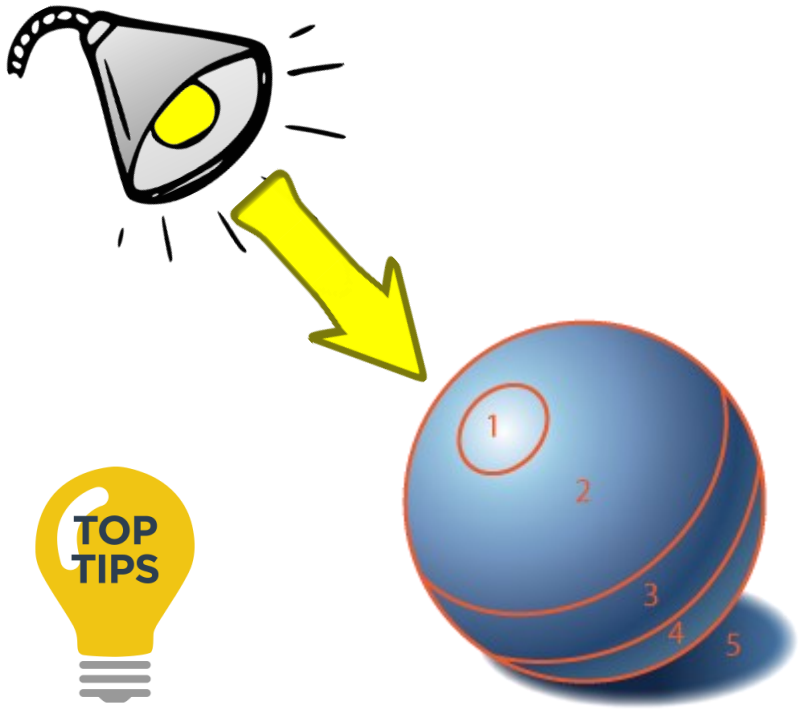


Where the light hits the surface first will be the lightest area.

Rendering 3D Drawings

Using Tone To Make Things Look 3D

It sometime make it easier to split the sphere up into sections from light to dark.



Remember to 'blend' the tones.

1.Highlight is the lightest area of an object. This is where direct light hits the surface.

2.Light - as the surface curves, it does not get as much light, so it becomes slightly darker.

3.Shadow - once the surface curves away from the light source, it does not receive any direct light, but it does get some indirect light from the surroundings - that's why it is not completely black.

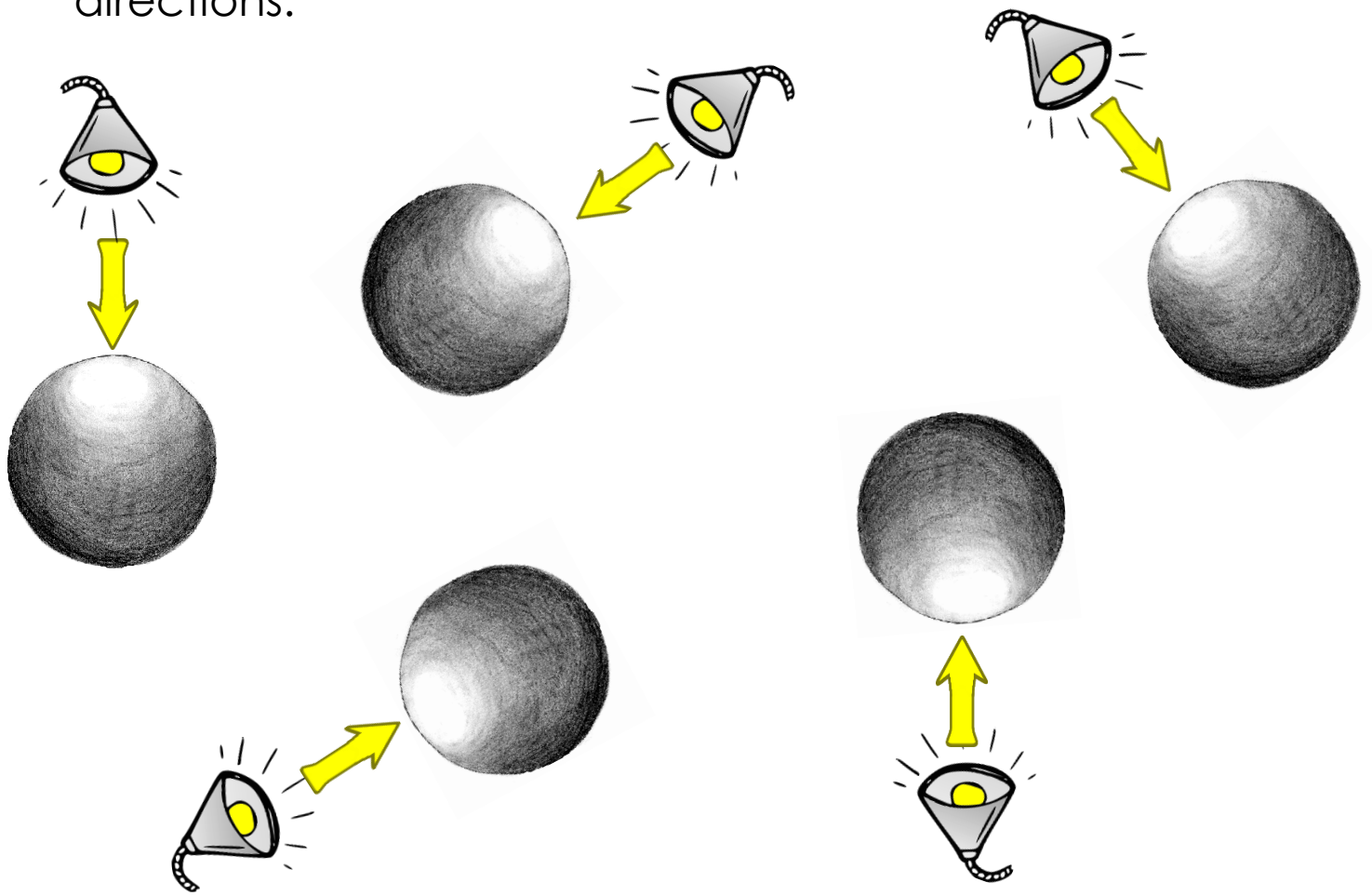
4.Reflected light is light that is bounced off the surfaces (surroundings), making the value slightly lighter.

5.Cast shadow is the darkest value, but further it is from the object - lighter it gets.

Rendering 3D Drawings

Using Tone To Make Things Look 3D

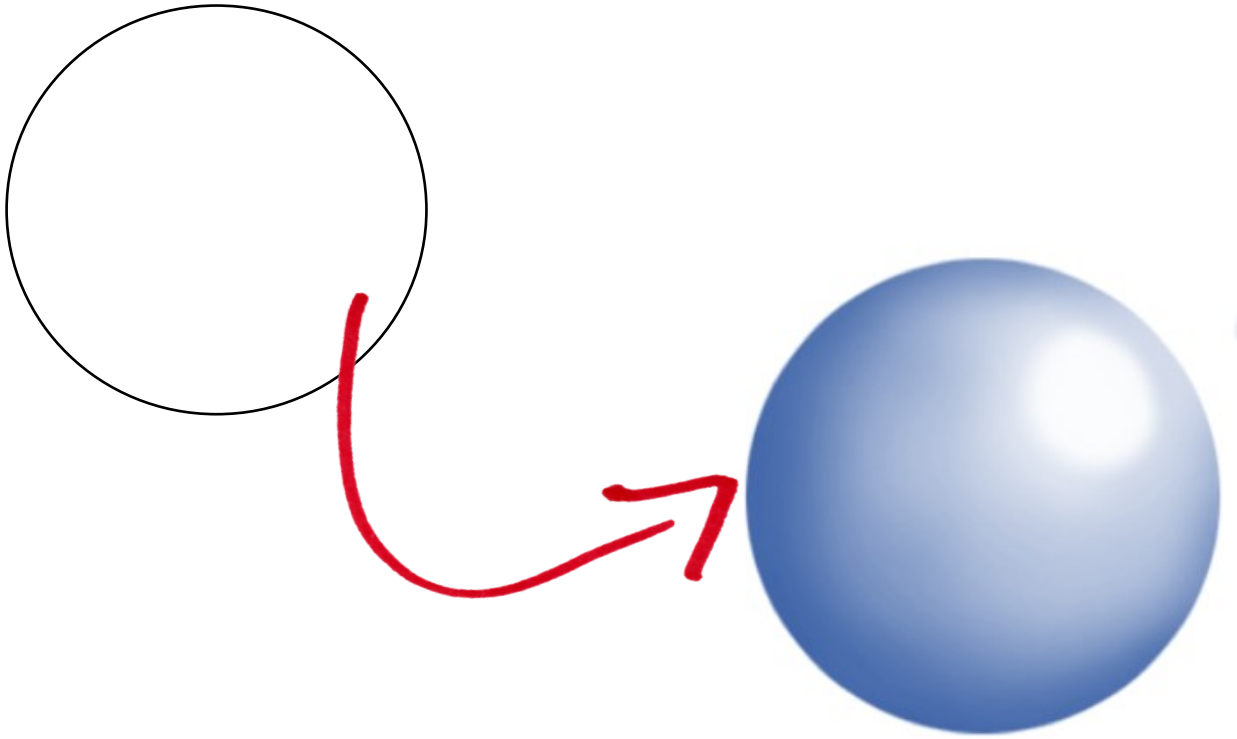
When rendering spheres you can experiment with the light coming from different directions.



Rendering 3D Drawings

TASK 13

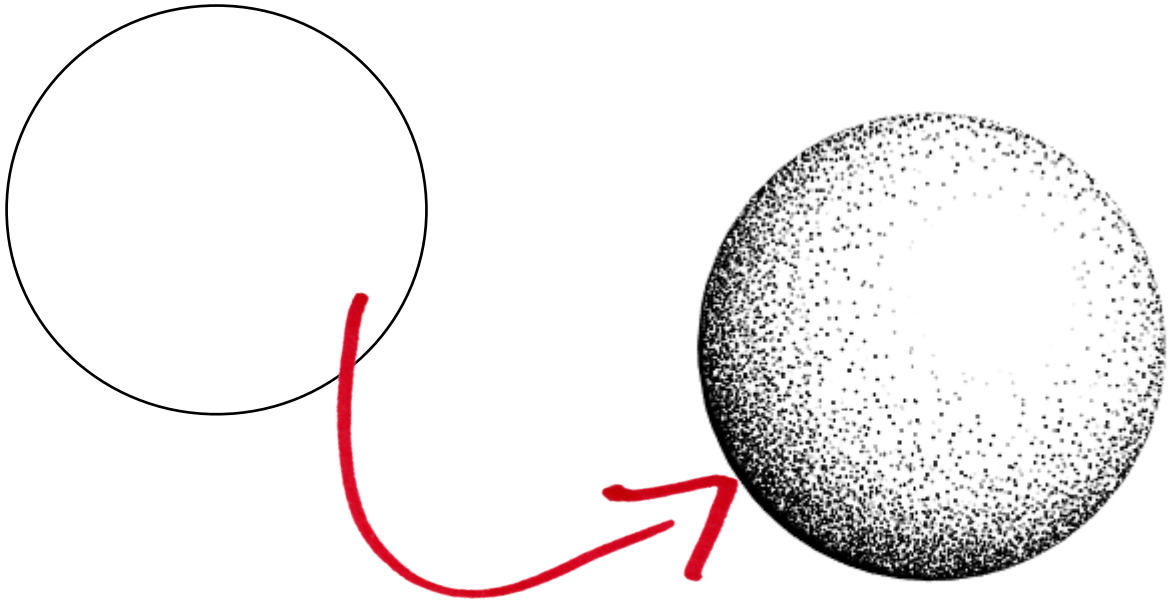
Using colour tones render **sphere 1** in a colour of your choice.
When completed try **sphere 2** in a different colour.



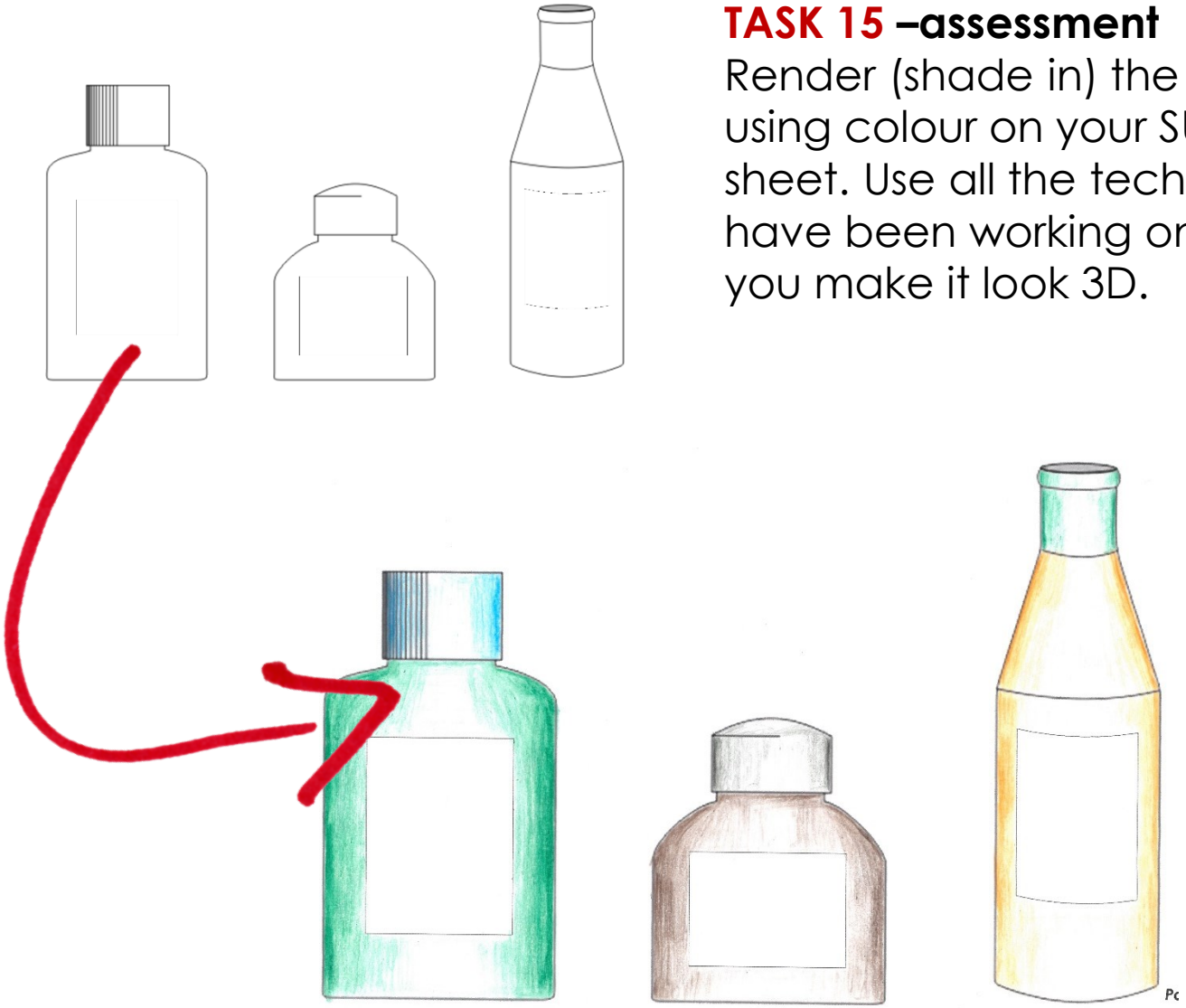
Rendering 3D Drawings

TASK 14

Using other ways of rendering we have looked at and render the two **spheres** using stippling and cross hatch.



Rendering 3D Drawings



TASK 15 –assessment

Render (shade in) the bottles using colour on your SUMMATIVE sheet. Use all the techniques you have been working on to help you make it look 3D.