Bomere and the XI Towns Federation Knowledge Organiser - Computing

Topic: Creating media – Introduction to vector graphics	Class/Year Groups: Owls	Term: Summer

What you already know?

This unit progresses learners' knowledge and understanding of digital painting and has some links to the Year 3 'Creating media – Desktop publishing' unit, in which learners used digital images. In this unit, learners create images that could be used in desktop publishing documents.
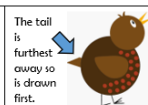
Creating Simple Vector Drawings

Vector drawings use lines and shapes to create bigger and more detailed images.

Plan your drawing by thinking about what shapes it is made up of. Each shape is called an object. Circles

The tail is furthest away so is drawn first. When vector drawing, the shapes overlap, so start with the objects that are the furthest away.
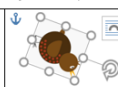
Copy and paste has been used to make the red spots the same size. You can save a lot of time and effort doing the same thing over and over by duplicating shapes. This is done most easily by copying the object that you want to duplicate (hold ctrl + c) and pasting (hold ctrl + v) a new one.

You can enlarge/reduce an object by clicking on it and dragging the handles to the desired size. You can rotate an object by dragging the circular handle at the top.
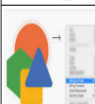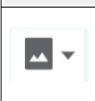
Advanced Tips

Grouping: 1. Select all images. 2. Right-click 3. Choose 'group.' All of the objects can now be moved and changed at the same time.

Advanced Layering: Right-click on objects and use the 'send to back' and 'bring to front' tools (in 'order') to ensure that your layering is in the correct order.

Backgrounds: You can create backgrounds by uploading images (using this icon). Remember to 'send to back' after it has been inserted.

Selecting Multiple Objects

This allows you to perform tasks with the whole drawing, rather than individual objects:

-Click, drag and drop a box around all of the objects in an image. This allows you to select all of the objects.
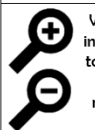
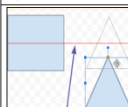-When you perform an action (e.g. copy and paste) it will now apply to all.

More Complex Vector Drawings

Google Drawings has been used in these examples, but lots of other vector drawing software uses the same tools and functions.

When dealing with small and intricate objects, it is important to use the zoom tool. Zooming in allows you to work with more precision. Zooming out allows a wider view.

The line tools can be used to help you change the colour and weight (thickness) of the line, and to make dotted lines.

The Alignment guides pop up as you move objects around, and help you to align and size objects.

Coloured lines can be drawn, and colours can be used to fill shapes.

Gradient colours can be used to colour the same object in different colours.

Remember to that vector drawing is all about layering. By gradually adding layers of basic shapes, you build up something far more complex.

Vocabulary:

vector	a drawing made on the computer using lines and shapes
object	when you create vector drawings, each shape is called an object
rotate	the movement of an object in a circular motion
alignment	to line up text or objects with each other on a page
grouping	a tool to link a number of objects together into a group.
layering	objects and images are placed on different layers to create a digital image.

National Curriculum Objectives:

- Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information.