

Seamer and Irton CP School – Computing (H.Griffiths)

Topic – Introduction to Vector Graphics

**Year 5
Summer 1**

Strand – Creating Media

Prior Learning

This unit progresses students' knowledge and understanding of **Year 1 -digital painting – Autumn 2** and has some links to **Year 3 - desktop publishing- Spring 1** in which learners used digital images.

All previous **Creating Media** Units, have progressively developed each learners' ability to select and create a range of media including text, images, sounds, and video alongside learning how to use software tools to support their computing work.

Key Knowledge I need to understand

I need to understand that:

Vector drawings are computer graphic images that are made using 2-D shapes.

The drawings are connected by lines and curves to form polygons and other shapes, forming a complete picture.

There are lots of different apps and programs that can help us to complete vector drawings, including Google Drawings and Adobe Illustrator.

Many techniques, e.g. zooming, rotating, resizing & duplicating, can help to create accurate images.

In this unit, learners start to create vector drawings. They learn how to use different drawing tools to help them create images. Learners recognise that images in vector drawings are created using shapes and lines, and each individual element in the drawing is called an object. Learners layer their objects and begin grouping and duplicating them to support the creation of more complex pieces of work.

How I will show what I have learned

To identify that drawing tools can be used to produce different outcomes

- I can recognise that vector drawings are made using shapes
- I can experiment with the shape and line tools
- I can discuss how vector drawings are different from paper-based drawings

To create a vector drawing by combining shapes

- I can identify the shapes used to make a vector drawing
- I can explain that each element added to a vector drawing is an object
- I can move, resize, and rotate objects I have duplicated

To use tools to achieve a desired effect

- I can use the zoom tool to help me add detail to my drawings
- I can explain how alignment grids and resize handles can be used to improve consistency-
- I can modify objects to create a new image

To recognise that vector drawings consist of layers

- I can identify that each added object creates a new layer in the drawing
- I can change the order of layers in a vector drawing
- I can use layering to create an image

To group objects to make them easier to work with

- I can copy part of a drawing by duplicating several objects
- I can recognise when I need to group and ungroup objects
- I can reuse a group of objects to further develop my vector drawing

To apply what I have learned about vector drawings.

- I can create a vector drawing for a specific purpose
- I can reflect on the skills I have used and why I have used them
- I can compare vector drawings to freehand paint drawings

What vocabulary I need to know

Vector, drawing tools, shapes, object, icons, toolbar, move, resize, colour, rotate, duplicate/copy, organise, zoom, select, alignment grid, resize, handles, consistency, modify, layers, front, back, order, paste, group, ungroup, reuse, improvement, evaluate, alternatives,

What's next

In **Year 6 – Web Page Creation – Autumn 2**, learners will be introduced to creating websites for a chosen purpose. Learners identify what makes a good web page and use this information to design and evaluate their own website. Throughout the process, learners pay specific attention to copyright and fair use of media, the aesthetics of the site, and navigation paths.

In all **Creating Media** units Learners will progressively develop their ability to select and create a range of media including text, images, sounds, and video alongside learning how to use software tools to support their computing work.

Assessment

National Curriculum Computing links

- 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.

Assessment

Formative assessment opportunities are highlighted in each of the lesson plan documents. The learning objective and success criteria will be introduced at the beginning of each lesson and then reviewed at the end. Learners should assess how well they feel they have met the learning objective using the teacher's chosen method.

Summative assessment – the assessment rubric document should be used to assess student's work. The rubric should be completed digitally and stored in individual pupil folders and then used alongside teacher judgement to complete ScholarPack. <https://teachcomputing.org/curriculum/key-stage-2/creating-media-vector-drawing>

Teachers

Teachers will need an understanding of the tools available in Microsoft Publisher OR Microsoft PowerPoint such as shape and line drawing tools: undo, redo, select, fill, and delete.

Teachers would benefit from knowing that vector drawings are created using shapes and that each shape used is called an object. It would be helpful to know how to move, resize, rotate, duplicate, and change the colour of objects.

Teachers will need to share files with the learners.

Teachers need to understand that each added object creates a new layer in the drawing. It would help to know how to move shapes to a different layer using 'bring to front' or 'send to back'.

Teachers would benefit from understanding that objects can be grouped. Knowing how to group objects and copy/paste or duplicate them using keyboard commands would be an advantage.

Teachers would benefit from an understanding of how digital images can be made, either using shapes or pixels. It would be an advantage for teachers to have an understanding of the drawing tools available in Microsoft Publisher OR Microsoft PowerPoint to support learners in showcasing their skills in this lesson.