**Name: Date:**

**Digital images**

**Activity 1: Bitmap**

Before you write your description, look at the answer builder tool underneath the help you.

|  |  |
| --- | --- |
| Description:  An image that is made up of a series of pixels, Each pixel can store a certain range of colours and each one is represented by a binary value. | Example: |
| Answer builder:   |  |  |  | | --- | --- | --- | | ⚫ | ⚫⚫ | ⚫⚫⚫ | | What are tiny squares called that make up the image? | What does each square store? | How does each square store this data? | | |

**Activity 2: Colour depth**

Before you write your description, look at the answer builder tool underneath the help you.

|  |  |
| --- | --- |
| Description:  The colour depth is determined by how many bits can be stored per pixel. For an example, an image that can store 1 bit per pixel can only store two possible colours (black and white) An increase in colour depth will increase quality of the file but it will also increase in size. | Example: |
| Answer builder:   |  |  |  | | --- | --- | --- | | ⚫ | ⚫⚫ | ⚫⚫⚫ | | What determines the amount of colours that can be stored per pixel? | Provide an example | Explain how colour depth can impact quality and size of the image file. | | |

**Activity 3: Resolution**

Before you write your description, look at the answer builder tool underneath the help you.

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| --- | --- |
| Description:  Resolution measured the number of pixels stored per inch. An increase in resolution will lead to a better quality graphic. The resolution can differ depending on purpose. For example, 300 DPI would be the resolution for a print graphic whereas 72 DPI is commonly used for web graphics. | Example: |
| Answer builder:   |  |  |  | | --- | --- | --- | | ⚫ | ⚫⚫ | ⚫⚫⚫ | | How is resolution measured? | What will an increase in resolution lead to? | Give examples of different resolutions used for print and web-based graphics. | | |

**Activity 4: Vector**

Before you write your description, look at the answer builder tool underneath the help you.

|  |  |
| --- | --- |
| Description:  A graphic that is made up of lines and curves and is commonly used to create logos. They are different to bitmap images because they’re scable which means when enlarged it maintains its quality becaue it uses mathematical equations to recalculate it’s size. | Example: |
| Answer builder:   |  |  |  | | --- | --- | --- | | ⚫ | ⚫⚫ | ⚫⚫⚫ | | What is a vector graphic made up of? | What would vector graphics be commonly used for? | How are they different to bitmap images? | | |

**Activity 5: Moving image file**

Before you write your description, look at the answer builder tool underneath the help you.

|  |  |
| --- | --- |
| Description:  A file that includes a visual aspect that includes the appearance of movement. One of the most common file formats used for this is a GIF. One advantage of using a GIF is it has a small file size however, it’s limited in the colours it can store. | Example: |
| Answer builder:   |  |  |  | | --- | --- | --- | | ⚫ | ⚫⚫ | ⚫⚫⚫ | | What is a moving image file? | What common file format is used to store moving image files on the web? | Identify one pro and one con to using this file format. | | |

**Activity 6: Compression**

Before you write your description, look at the answer builder tool underneath the help you.

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| --- | --- |
| Description:  Compression is a method used to reduce the size of a file. This is good because it can save on storage space and use less bandwidth if it needs to be transferred across a network. There are two types: Lossy which permanently removes data and Lossless which groups data together so it can be restored. | Example: |
| Answer builder:   |  |  |  | | --- | --- | --- | | ⚫ | ⚫⚫ | ⚫⚫⚫ | | What is meant by compression? | State the advantages of compressing files. | Explain two different types of compressions. | | |