

Year 8 Computing Knowledge Organiser

Topic 1 – Impressive Images with Photopea

1. Blur tool



Softens hard edges in an image

2. Brush tool



Paints brush strokes, can be soft or sharp

3. Burn tool



Darkens parts of an image

4. **Clipping Mask** A Photoshop Layer that applies an effect to just the layer immediately below, it stops effects ruining the whole image

5. Clone Stamp tool



Great for removing objects from an image by cloning part of the image onto another nearby part

6. Crop Tool



Trims an image - i.e. cuts off some of the outside

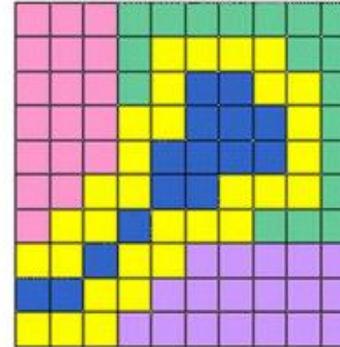
Revise more at
quizlet.com/whgsc computing

28. Quick Selection Tool



Smart selection tool for similar coloured areas, good for cutting out object from background

29. Raster image



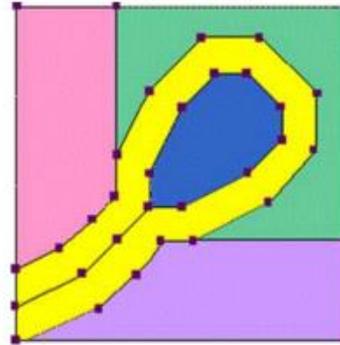
A type of picture made of a grid of pixels often taken by a digital camera. JPEG, GIF and BMP are this type and Photoshop is good at editing them.

30. Red Eye tool



Removes the red dots in peoples eyes caused by a camera flash

31. Vector image



An image made of shapes and lines, great for logos, .AI and .SVG are this format, and Illustrator is good at editing them.

What is a Python?

Python is a **text based programming language** that can be used to create small programs, web applications, games and even search engines like Google and YouTube!

Python is easy to learn and is a great beginner language.



Print statements

In order to display text in the **shell** you need to use a **Print** statement.

```
print ("Hello World")
print ("I am a programmer")
```

This is the output:

```
Hello World
I am a programmer
```

Input statements

Using **var = input ()** we can ask a user to input some information.

We can then **print** this back to the console window.

```
userName = input("what is your name?")
print ("Welcome ", userName)
```

userName is a **variable**. This means we can change the information stored. We can also name it whatever we want.

Syntax

Syntax is what we call the format that the code needs to be in, in order to be processed correctly.

If it is not in the correct format then the code will not work.

```
Traceback (most recent call last):
  File "C:/Python33/a.py", line 2, in <module>
    prin (greeting)
NameError: name 'prin' is not defined
***
```

Python tells us where the error is and what type it is. Here it says the line the error is on
Here it says what type of error.

Year 8 Topic 2

PYTHON

Key Words

Python

Programming

Print

Input

Output

Syntax

IF/ ELIF

String

Integer

Float

Variable

IF statements

IF statements can be used to select different options in a program depending on a condition. Also known as **selection**.

```
question = input("Are you revising?")
if question == "yes":
    print ("Well done!")
elif question == "no":
    print ("Oh dear!")
else:
    print ("I don't understand")
```

Variables

A variable is something that can be **used to store information**. The information that is stored can be changed.

Data types

Different types of data are stored in variables as different **data types**. There are **three** main data types:
String, Integer & Float

String

A type of variable for storing **text "strings"** e.g. "Hello World"
`string = str("This is a string")`

Integer

A type of variable for storing **whole numbers**
e.g. 10, 182, -44
`integer = int("This is an integer")`

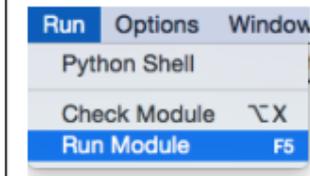
Float

A type of variable for storing **decimal numbers**. Also known as a **real number**
e.g. 2.5, 5.05, 3.14

```
decimal = float("This is a decimal")
```

Executing a program

In order to run or **test** a program written in Python the user needs to go to **Run** and then **Run Module**.



Alternatively, you could press the **F5** button on the keyboard.