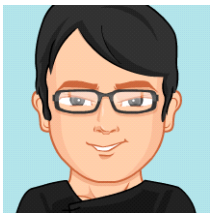
How has using a Collaborative Notebook helped your learning?

19 September 2015 12:46

With OneNote, I can collaborate with my peers in the collaboration space. We can all work together to create the best solutions to questions, and we can help each other answer questions. This is especially useful studying for exams, as we can all work together to create perfect answers to the model papers.
Another useful feature of OneNote that has helped me with my learning is the content library. My teacher can put all the resources I need there and I can access it at any time. I can search for the specific resource I need and saves me searching through pages and pages of jotters and folders.
Having all my study material on OneNote has made my life so much easier! It's all in the one place, organised, neat and tidy. I can even view the notes I can edit on my Apple Watch!
Using OneNote for learning has definitely helped me. The amount of paper and jotters I get given is too much. It's bad for the environment – and my back! I dream of the day that I can go into school with my iPad and not need a single sheet of paper, with OneNote, that dream is that little bit closer to a reality.

How easy was it to locate your class notebook?

Opening a new notebook on OneNote is really easy. When my teacher invited me to join, I got an email on my glow account with a link that I click on, and it takes me straight to the class notebook. It opens in the online version, and there's a clear button that says open in OneNote that opens my notebook on the OneNote App. After I sign into my glow account, it's right in front of me, every time I open OneNote on that computer! It's even easier when I go onto a different computer, because all I have to do is open the OneNote App, and then select the class notebook from the 'recent' tab.
After you open your class notebook for the first time, you can access it on any device easily! It's a lot easier than searching my bag for that one sheet of paper that I got 4 weeks ago that I thought I didn't need.



How easy do you find OneNote?

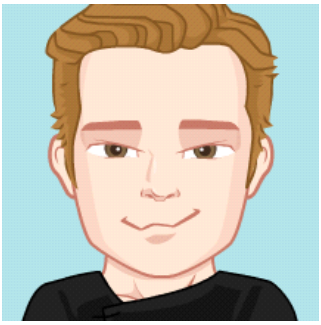
OneNote is really easy to use. It's a very familiar experience to Word, which all of us are used to.

It's got a simple to use interface, with lots of handy features, such as highlighting text, making to-do lists, things that make notes and school work easier to follow. I can insert PowerPoints and word documents too, it means that any resource already made doesn't have to be retyped into OneNote, you can just insert it.
As well as all these helpful features, I can also change the colour of my page, as well as the colour of the section, so that I can have colour coded study material – great for keeping things organised!

OneNote is just as easy to use on my phone or tablet as it is on the computer, it's just a really simple thing to use!

How has using a Collaborative Notebook helped your learning?

19 September 2015 12:46



Using class notebook had a massive positive impact on my learning capabilities as it gave me the opportunity to access a wide variety of resources anywhere which all provided in depth knowledge on the subjects I needed to study. Being able to access all of this information in the one location from home provided a major advantage for my studying as allowed to effectively use my time, mostly by not wasting time copying out notes and gathering all of my paper based notes when I wanted to study. Finally the use of the collaboration area gave me a chance to compare answers with other students so we could all work together to achieve a perfect solution to any problems.

How has using a Collaborative Notebook helped your learning?

19 September 2015 12:47

OneNote's collaboration area has helped me find better and more efficient answers for various tasks and questions which made remembering key points during revision season easier for me with my National 5 exams. The automatic storage of homework or classwork prevents any loss of work and allows users to access their resources anywhere with internet access. OneNote is a complete bridge between school and home, making catching up with missed lessons less of a hassle and from an environmental and financial point of view it decreases the use of paper as I have found my need for paper has dropped significantly since before I was introduced to OneNote. This service is the future of education and has and will benefit different people with different needs and goals when become more widespread.

How easy do you find OneNote?

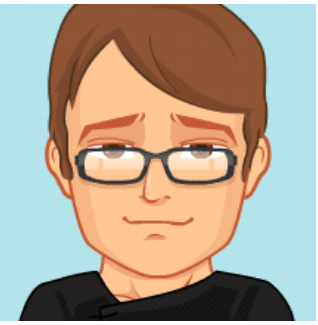
As a pupil with a sufficient knowledge of computers and that uses them on a daily basis, whether it's a mobile phone or a desktop PC, I have found learning to use OneNote simple and am confident that other people could pick it up easily once shown the basics and can puzzle their way through it.

How easy was it to locate your class notebook?

Locating my OneNote hasn't been much of a challenge since the GLOW collection of services such as OneNote, OneDrive and school sub-sites are all connected which provides different ways of accessing the Notebook depending on the user's needs and services they use more often.

How has using a Collaborative Notebook helped your learning?

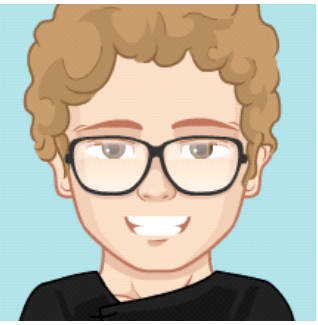
19 September 2015 12:49



I feel that using my tablet to take notes in class is very beneficial as it allows me to take notes that are more organized, colour co-ordinated and ones that contain other multimedia such as drawing, photos or videos. I also like that I can rearrange my work easily and search and browse it with ease. When using class notebooks that my teachers have set up it allows me to access and copy notes and resources from the content library to my area as well as being able to digitally share my homework the teacher.

How has using a Collaborative Notebook helped your learning?

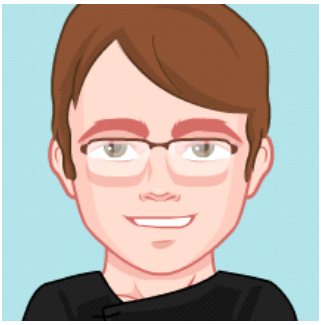
19 September 2015 12:49



Although aspects of OneNote such as collaboration and automatic saves have been important to me I feel that the most impact that OneNote has had on my learning is through the fact that no matter what, everyone can be kept in the loop. With OneNote, throughout a school year, becoming a database of
powerpoints and useful documents this means that if ever I were to miss a lesson for whatever reason I wouldn't have to go to great lengths to have to copy notes or something similar, I can be caught up overnight. The fact that so many documents and class notes are on OneNote means that it is accessible from anywhere which again has been a huge help in my learning also. Personally I also enjoy how like any other Microsoft development there are many features that may not be noticeable at first use but as your knowledge and level of use regarding OneNote increase these features become something that is usable on a daily basis, like for instance the 'show authors' feature among others.

How has using a Collaborative Notebook helped your learning?

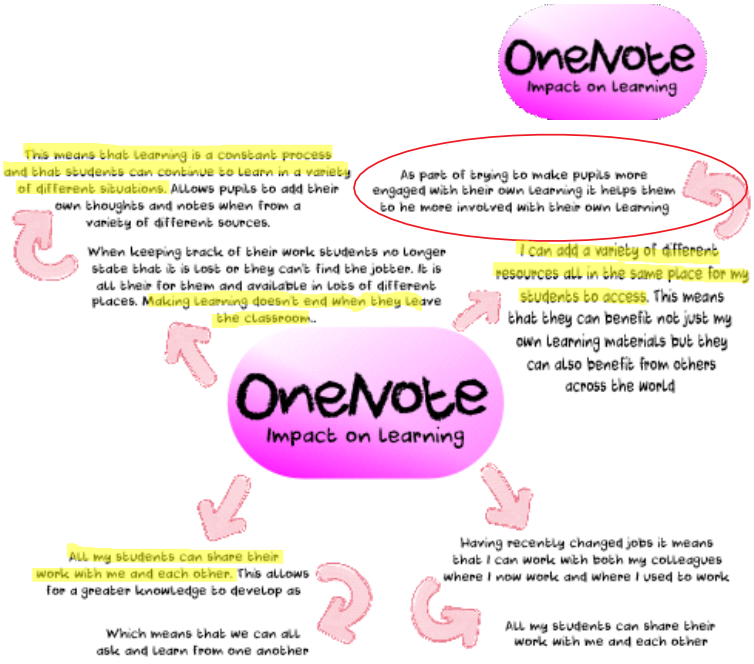
19 September 2015 12:50



OneNote Class Notebook has helped me learn by letting me get the resources I use in class at home, to help me with my study and my homework. I am able to access PowerPoints made by the teacher, and easily submit my homework. This means I have less to carry around and I am less likely to forget about something and leave it at home. Everything I need is in one easily accessible space, which I can get to through my computer, phone, or tablet. Also, the collaboration space allows me to work with my peers to solve group tasks, as we can all contribute and add what we know.

How I use one note…

20 September 2015 12:30



How did you know they were more involved in their learning? It what ways were they more involved?

I know they where more involved because I got more back in response to questions posted both online and in the feedback they gave in class discussions. Instead of the discussion in school being led by teacher voice more pupils had more participating. I also found those who where not as confident to speak in class would type the response in OneNote in a more detailed way. It also helped when I was helping pupils review their learning with course specification documents and it helped me to identify if they needed to focus on other areas.

I plan to expand this further this year by helping pupils develop their own learning through reviewing further their work and offering comments on OneNote.

Video

Sunday, September 20, 2015 4:39 PM

one note

One Note - an Overview

21 September 2015 19:46

- It is a web tool that allows a teacher to share resources with their students and to work with their students and for the students to work with each other online.

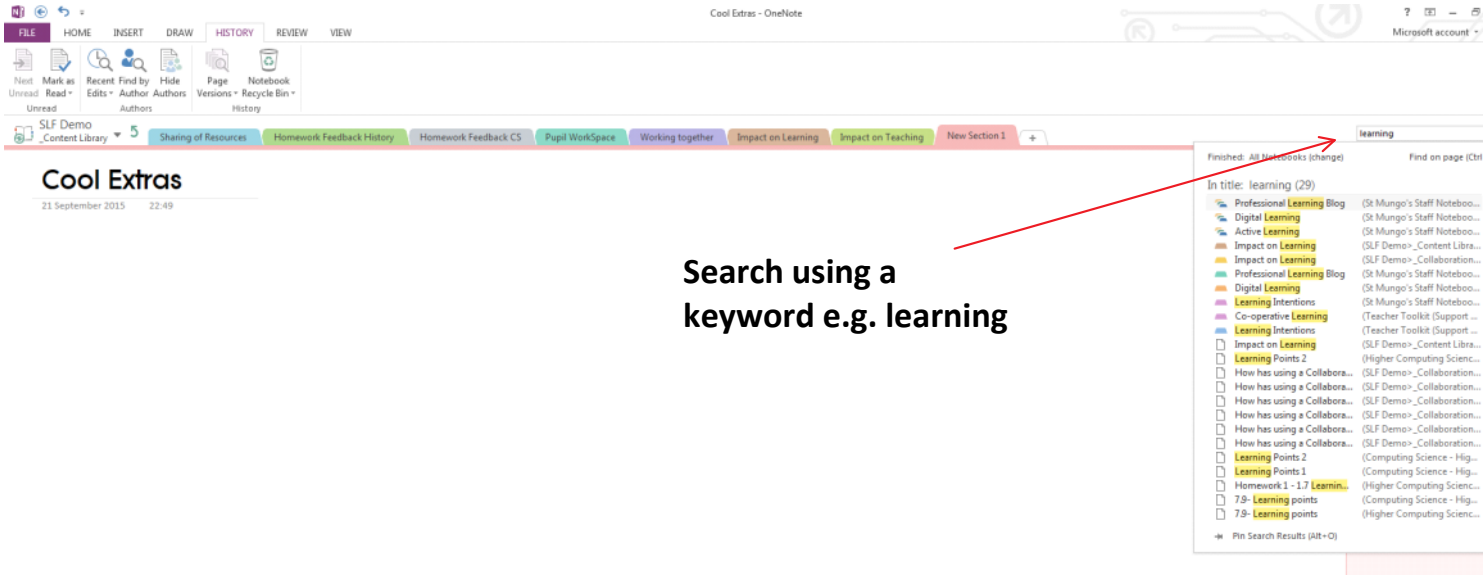
- You need to be online to access the OneNote Class Notebook app although once created and shared with students you can work on the notebook online or on the desktop version of OneNote. The desktop version syncs to the online version so both versions are up to date.

- OneNote is intuitively easy to use because it emulates a paper notebook with coloured section tabs and pages within the sections.

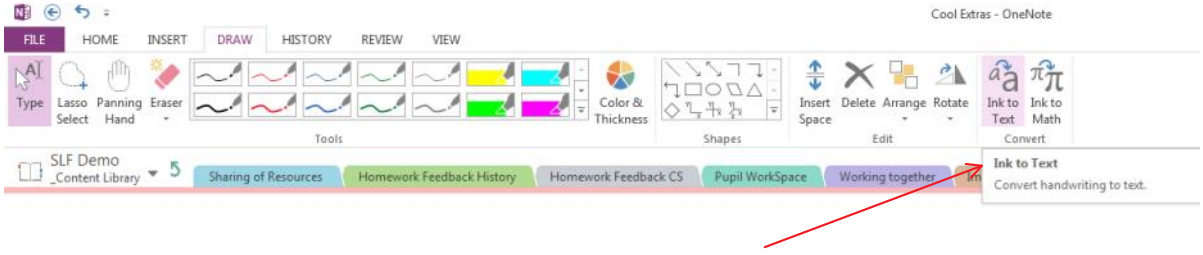
- Although you need to logon through your Glow account using OneNote does not necessitate you having to engage with any other aspect of Glow and Office 365.

Cool Extras

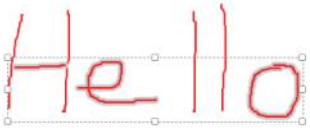
21 September 2015 22:49



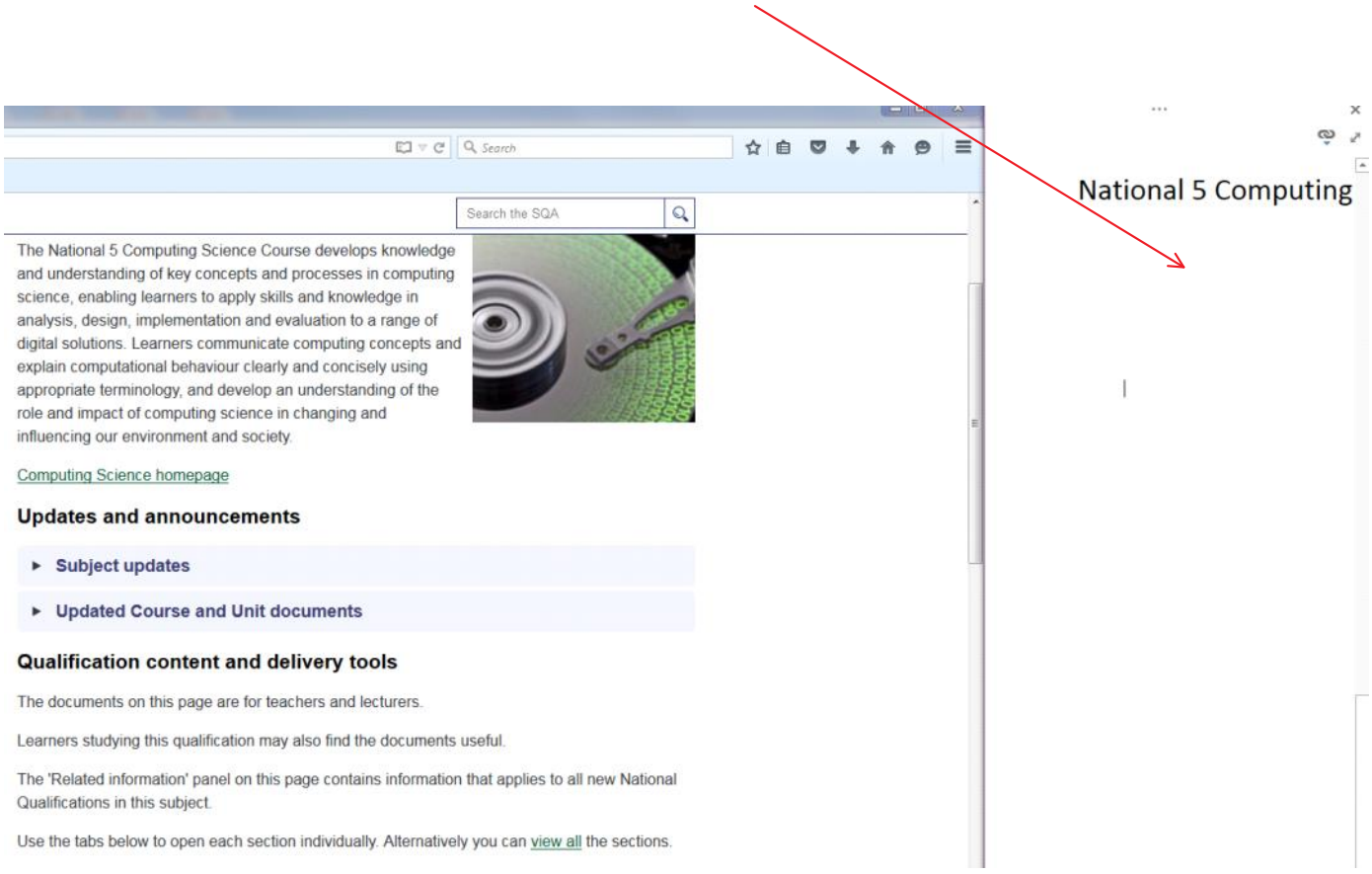
Search using a keyword e.g. learning



Turning Ink to Text



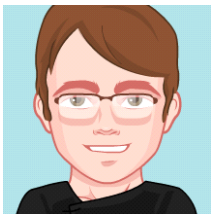
Dock to Desktop


National 5 Computing
Search
Search the SQA
The National 5 Computing Science Course develops knowledge and understanding of key concepts and processes in computing science, enabling learners to apply skills and knowledge in analysis, design, implementation and evaluation to a range of digital solutions. Learners communicate computing concepts and explain computational behaviour clearly and concisely using appropriate terminology, and develop an understanding of the role and impact of computing science in changing and influencing our environment and society.
Computing Science homepage
Updates and announcements
Subject updates
Updated Course and Unit documents
Qualification content and delivery tools
The documents on this page are for teachers and lecturers.
Learners studying this qualification may also find the documents useful.
The 'Related information' panel on this page contains information that applies to all new National Qualifications in this subject.
Use the tabs below to open each section individually. Alternatively you can view all the sections.

Content Library

19 September 2015 12:47

"Everything I need is in one easily accessible space, which I can get to through my computer, phone, or tablet"

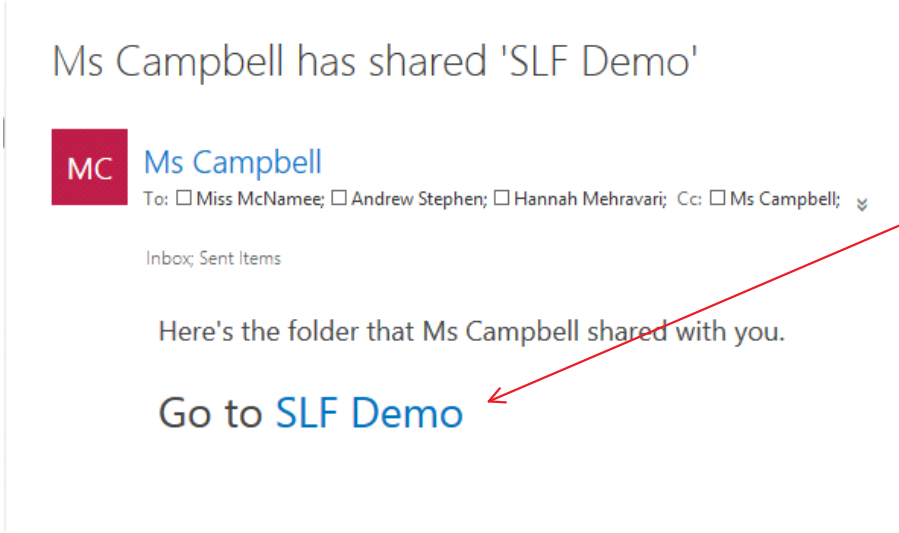


Paul.

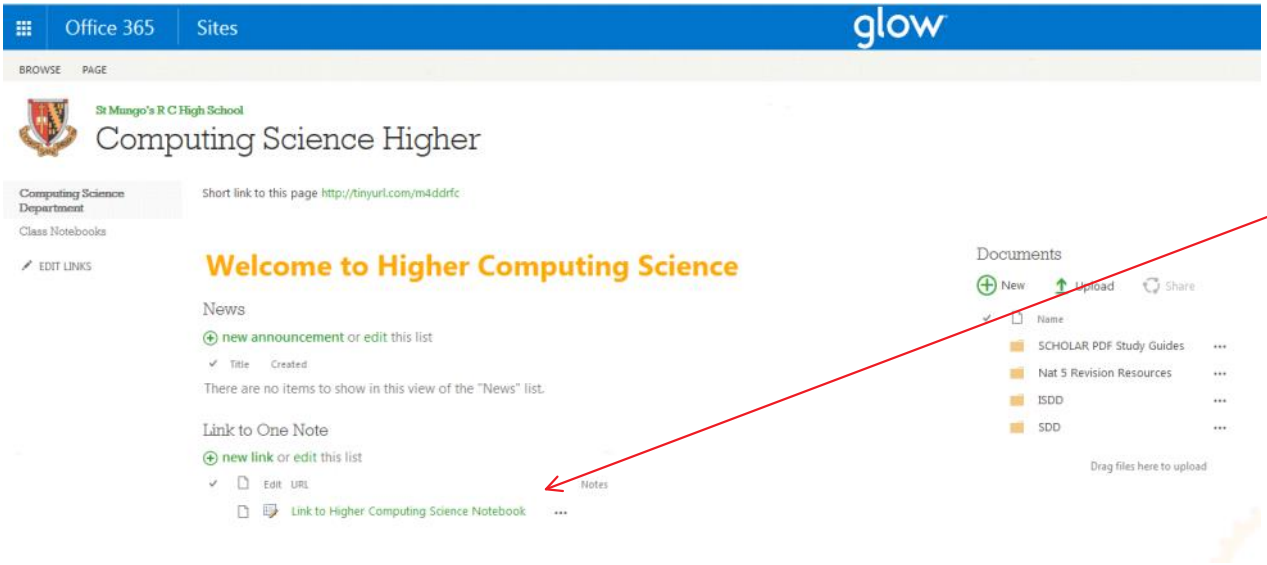
Accessibility

20 September 2015 08:46

When you create a class notebook an email notification is sent to all students and teachers that you add to the notebook.

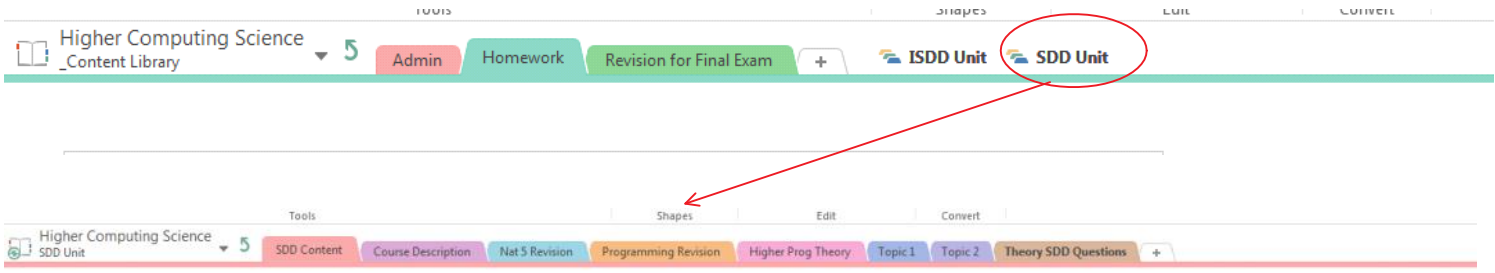


Example of link to the notebook



Content Library Structure

20 September 2015 09:35



SDD CONTENT

16 June 2015 09:55

SDD stands for **Software Development and Design**

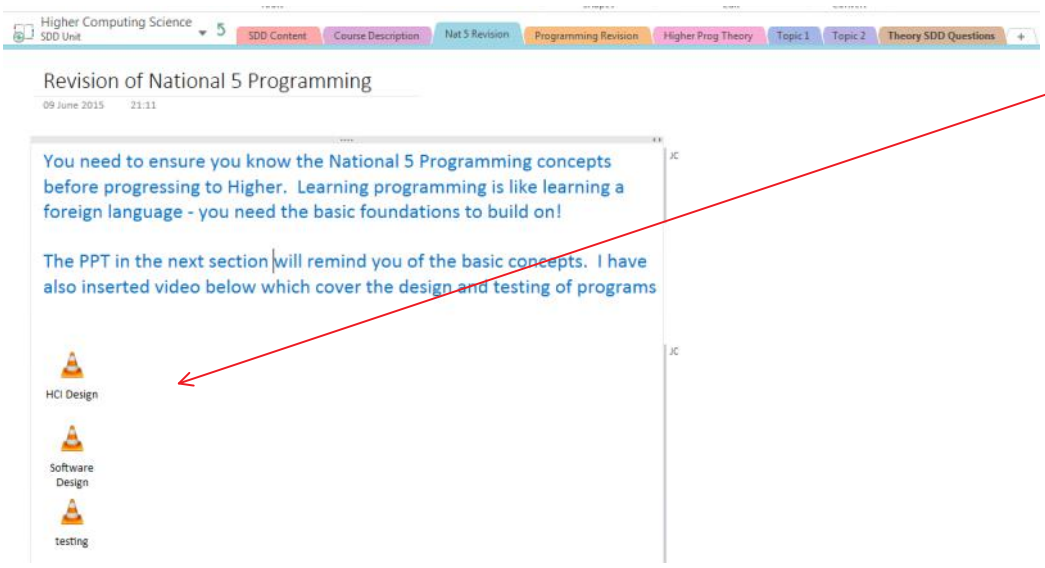
TOPIC	RESOURCE
REVISION OF NATIONAL 5 PROGRAMMING CONCEPTS	1. PRESENTATION
HIGHER SDD CONSTRUCTS AND CONCEPTS	1. PRESENTATION
TOPIC 1 - LANGUAGES AND ENVIRONMENTS	1. PRESENTATION 2. QUESTIONS
TOPIC 2 - LOW LEVEL OPERATIONS	1. PRESENTATION 2. QUESTIONS

2/9	Finished Activity 18 - Using a const Activity 19 - User defined function For theory note see relevant page under Higher SDD Constructs PPT.
3/9	Finished Activity 19 and printed. Annotated printout. Started Activity 20 - Re-Using a user defined function.
4/9	Theory - Topic 1 - Low Level Machine - pages 7 - 25.
8/9	Theory - SDD Questions - Languages and Environments (brown tab) and paper copies on my desk.
9 & 10/9	Practical - User Defined Functions
11/9	Practical - User Defined Functions - Activity 22 Some data rep
14/9	Go over Activity 21. First function of Activity 22.
15 - 17/9	Continue functions within Activity 22. Revision of pre-defined functions from Nat5
18/9	Theory - Topic 2 - Low Level Operations - Graphics, Sound and Video

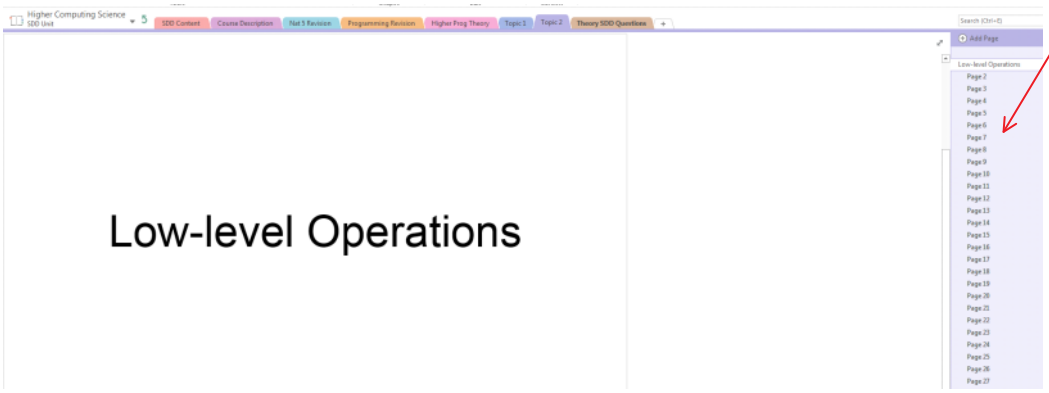
Variety of Resources

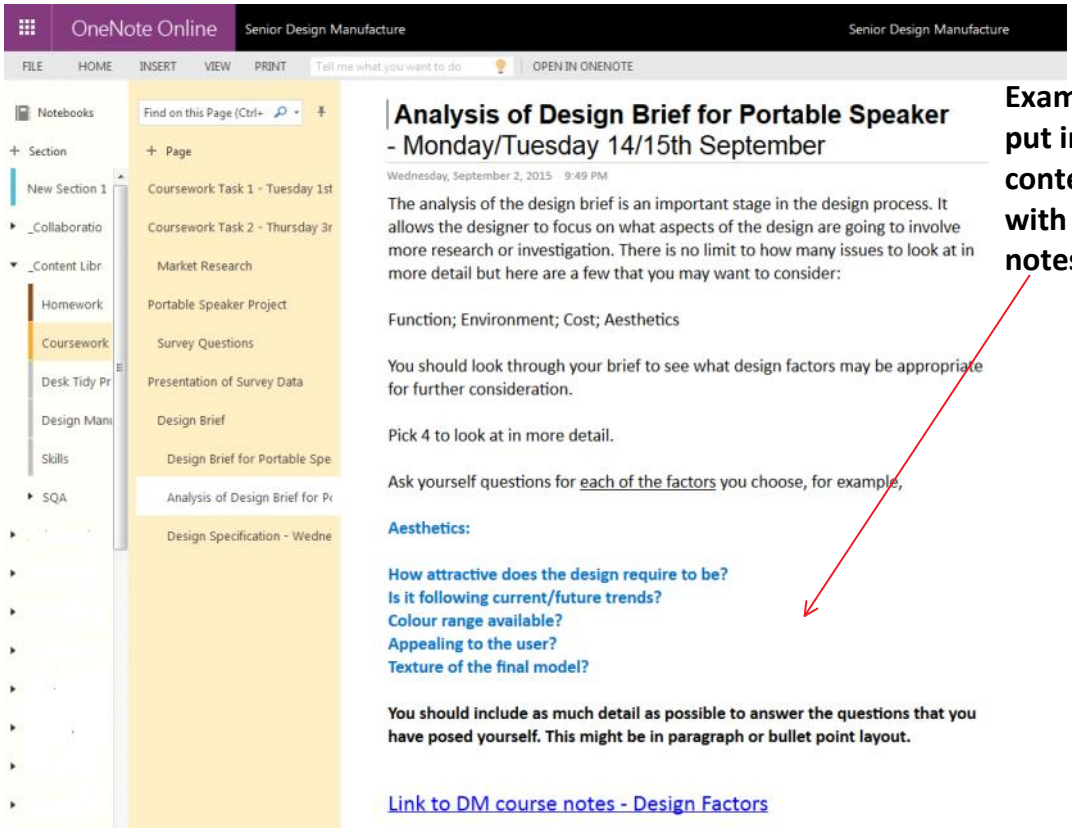
20 September 2015 12:08

Example of use of video.



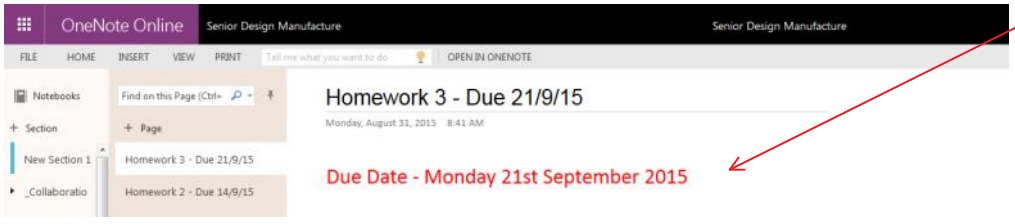
Powerpoint Presentation inserted as a printout.

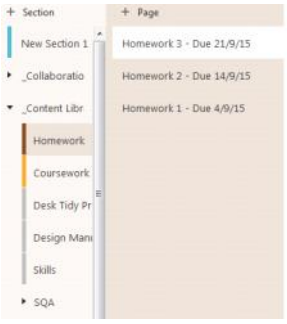




Example of work put into the content library with link to course notes.

Example of sharing homework - clearly states date due and is in one accessible area that cannot be edited by a student.





Monday, August 31, 2015 8:41 AM

Due Date - Monday 21st September 2015

Design Question

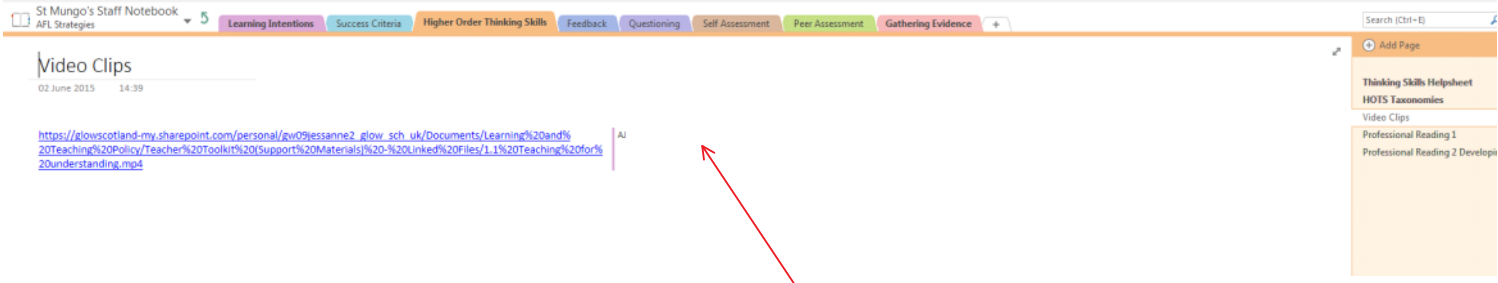
Designers frequently consider aesthetics as an important factor in the development of new products.

Explain how aspects of aesthetics have influenced the design of products that you are familiar with.

(You may refer to more than one product in your answer.) ***8 MARKS***

Teacher Toolkit

20 September 2015 13:08



Example of a Staff Notebook - sharing of professional learning resources.

Topic 1 Languages and Environments Questions:

1. Why were High-level languages developed?
2. Why do High-level languages have to be translated?
3. Name the three basic control structures and give an example of each.
4. What are the main characteristics of a **Procedural** Language?
5. What kind of application are **Declarative** languages most suitable for?
6. What does **Encapsulation** mean in the context of an Object Oriented programming language?
7. What are the benefits of **Inheritance** in the context of an Object Oriented programming language?
8. What text editing tools are available in the VB6 programming environment?
9. Why is it helpful to have both an interpreter **and** a compiler available in a programming environment?

1. High level languages were developed to solve particular problems.
2. They have to be translated because the computer only understands machine code.
3. Iteration - Conditional Loop, Selection - IF Statements, Sequence
4. Allow the user to define a step by step method of solving a problem, often used to solve numerical problems, provide operators like + / * -
5. unsure
6. "When an object is copied, within a program or to a different program, its methods and properties are copied along with it"
7. Old behaviors and stares are retained when new objects are created from existing objects
   Benefits?
8. unsure
9. Its helpful to have both an interpreter and compiler because the interpreter can be used when you a writing the code to test it while its still being made and the complier can be used once its finished and debugged to translate the source code into machine code

5/9

Languages and Envir...

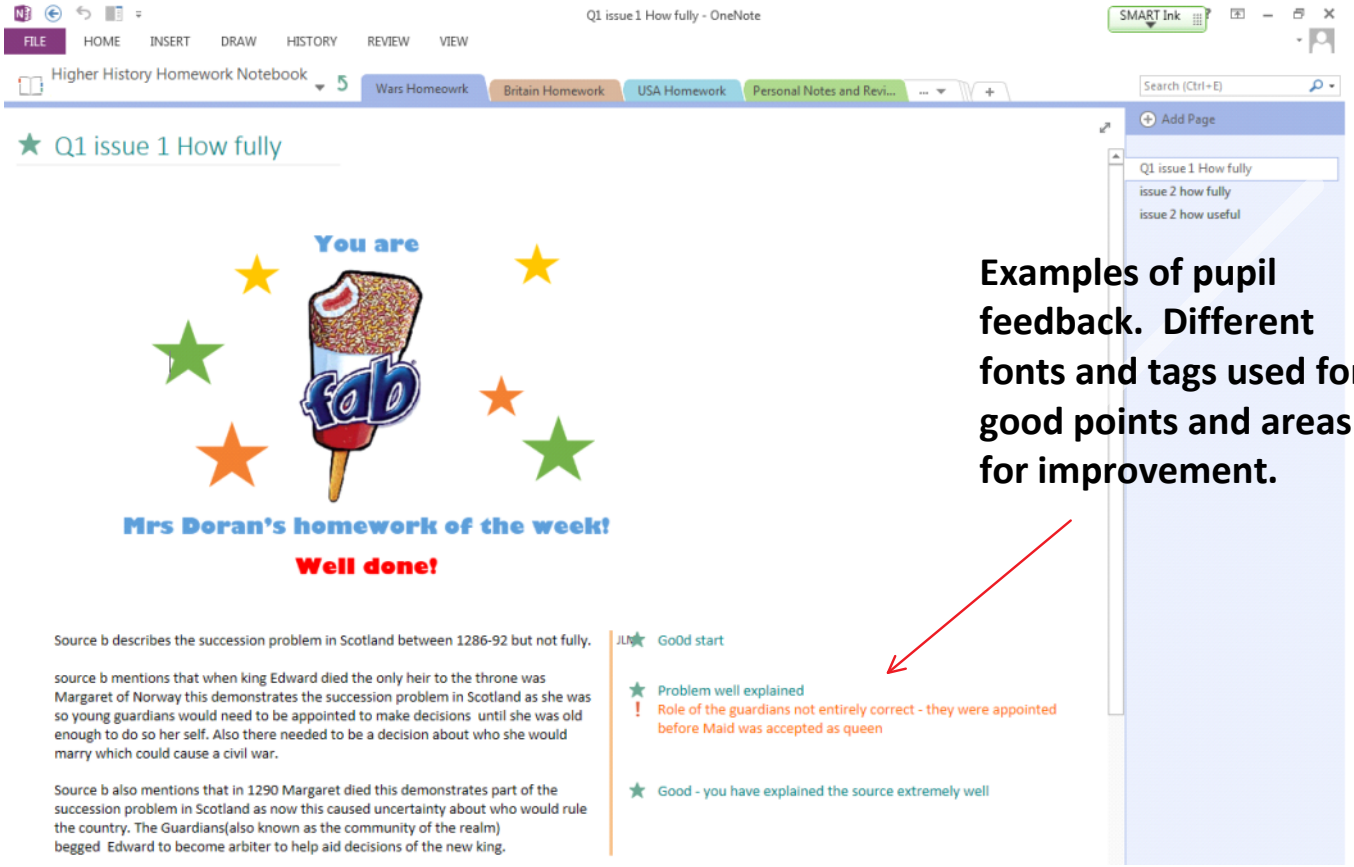
Audio recording started: 20:23 01 September 2015

Summary of Learning Points:

1. There are three basic control structures in programming: Selection, Iteration and Sequence
2. what distinguishes all the different programming languages is how these three control structures and types of data representation have been used and put into language specific computational constructs
3. Some of the different high level programming languages are: Domain-Specific, Object-Orientated, Procedural and Declarative
4. High level languages can be problem specific or general purpose and have to be translated from source code to machine code by a translator (Complier/Interpreter)
5. Modern Programming software's will include a debugging system and text editor

Homework Feedback

18 September 2015 20:20



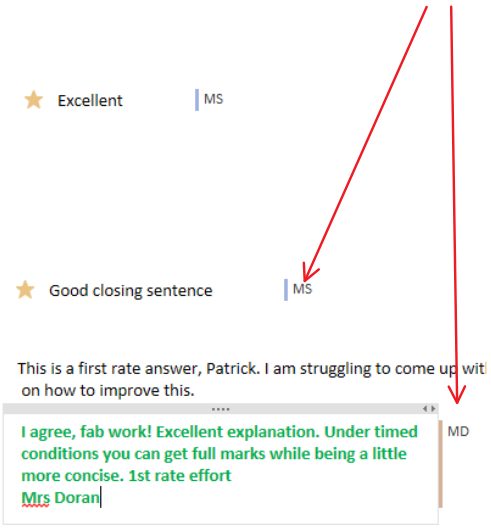
Examples of pupil feedback. Different fonts and tags used for good points and areas for improvement.

Example of two teachers working together to cross mark homework.

Source A fails to mention that Edward himself wanted the Scots to swear him as their Overlord before he would make the decision and went a step further to make all the claimants swear as well, So he could have them held by an oath when he had chosen. This caused more problems within the Succession problem as it is a clear indication of Edward attempting to take over legally. Which puts the Scots into a dead end.

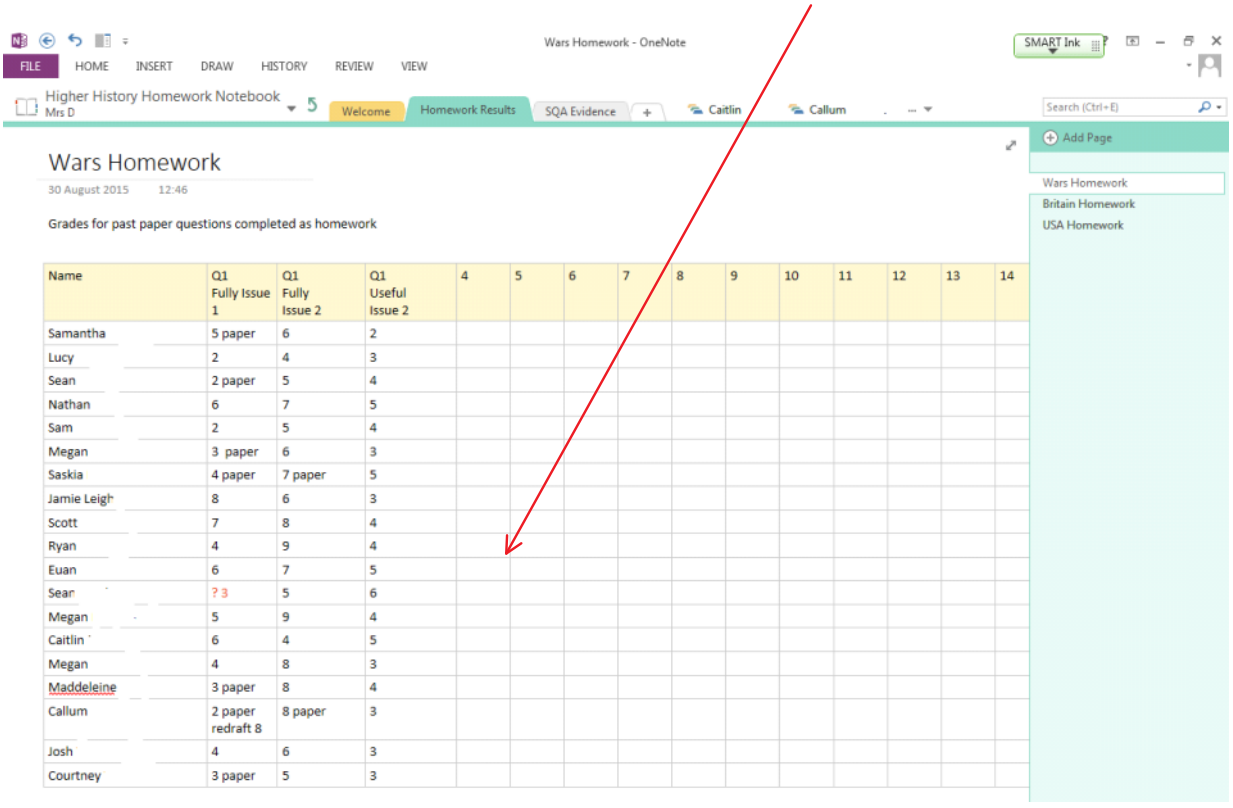
Source A also fails to mention that Balliol was eventually chosen to be King by Edward, This caused problems because Bruce, being angry that he didn't get the throne will do everything to weaken Balliol as a King and ultimately cause problems for him. Also the fact that he had sworn Edward as his overlord then puts Balliol under Edward's command. Meaning that really Balliol is only a puppet, Not a proper King.

As source A includes some relevant points but fails to mention all possible information, It partly tells us about the succession problem in Scotland between the years of 1286-1292.



conditions you can get full marks while being a little more concise. 1st rate effort
Mrs Doran

Teachers have a password protected area in the content area where they record pupil marks for homework.



Wars Homework

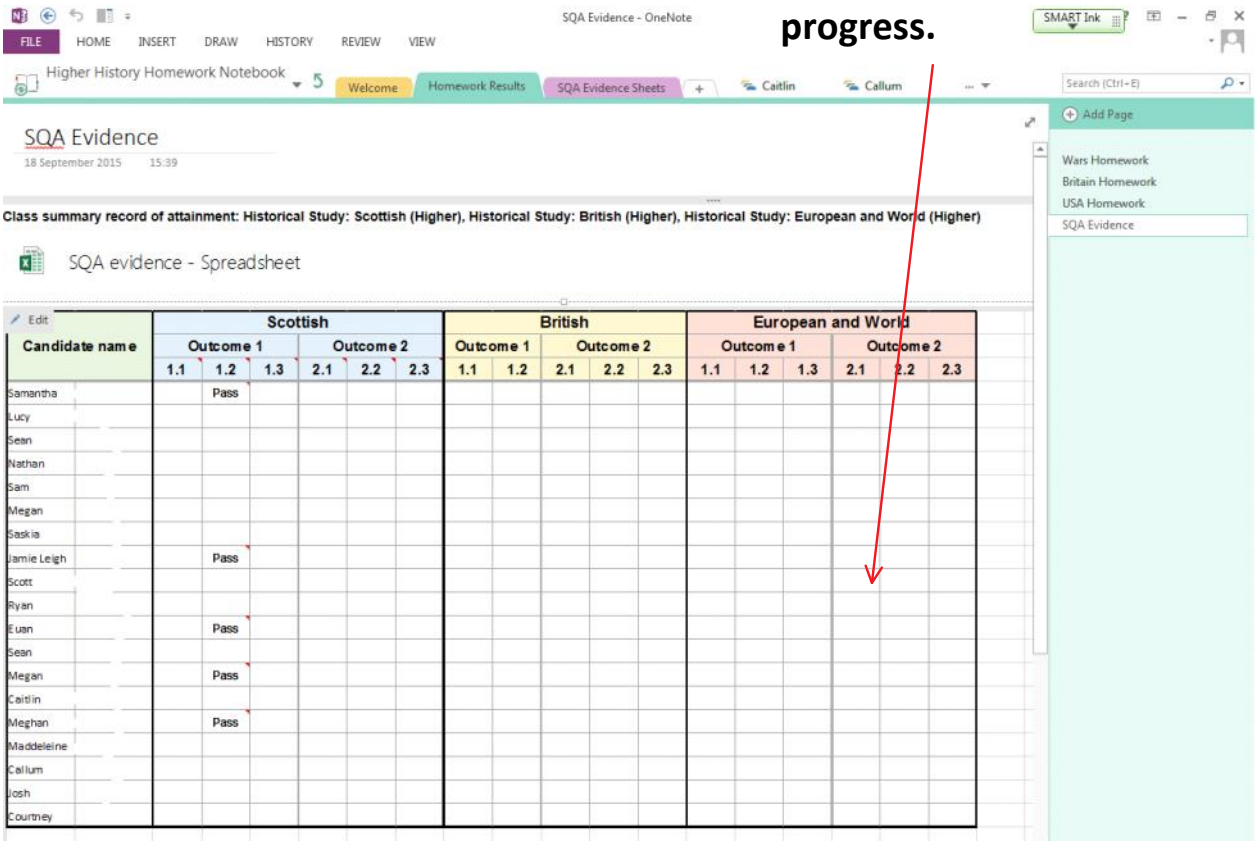
30 August 2015 12:46

Grades for past paper questions completed as homework

Name	Q1 Fully Issue 1	Q1 Fully Issue 2	Q1 Useful Issue 2	4	5	6	7	8	9	10	11	12	13	14
Samantha	5 paper	6	2											
Lucy	2	4	3											
Sean	2 paper	5	4											
Nathan	6	7	5											
Sam	2	5	4											
Megan	3 paper	6	3											
Saskia	4 paper	7 paper	5											
Jamie Leigh	8	6	3											
Scott	7	8	4											
Ryan	4	9	4											
Euan	6	7	5											
Sean	? 3	5	6											
Megan	5	9	4											
Caitlin	6	4	5											
Megan	4	8	3											
Maddeleine	3 paper	8	4											
Callum	2 paper redraft 8	8 paper	3											
Josh	4	6	3											
Courtney	3 paper	5	3											

In the same area they keep a

In the same area they keep a record of SQA progress.



Candidate name	Scottish						British					European and World					
	Outcome 1			Outcome 2			Outcome 1		Outcome 2			Outcome 1			Outcome 2		
	1.1	1.2	1.3	2.1	2.2	2.3	1.1	1.2	2.1	2.2	2.3	1.1	1.2	1.3	2.1	2.2	2.3
Samantha		Pass															
Lucy																	
Sean																	
Nathan																	
Sam																	
Megan																	
Saskia																	
Jamie Leigh		Pass															
Scott																	
Ryan																	
Euan		Pass															
Sean																	
Megan		Pass															
Caitlin																	
Meghan		Pass															
Maddeleine																	
Callum																	
Josh																	
Courtney																	

Homework 3 10/09/15

Thursday, September 10, 2015 10:52 PM

St Mungo's H.S. Understanding Code (2) National 5

1. Read the following VB code carefully;

```
1. Dim Name As String
2. Name = InputBox("Please enter your name")
3. LblNameOut.Caption = Name
```

a. What does line 1 mean in English?

Declaring variable as text

(1)

b. What does line 2 mean in English?

An input box asking you to enter your name

Into the variable called name

(1)

c. What does line 3 mean in English?

Assigning name as the label NameOut

Displaying the content of the variable name in the label NameOut

(1)

2. Read the following code carefully;

```
1. For Counter = 1 To 5
2.       PicDisplay.Print "The word is ";Word
3. Next Counter
```

1

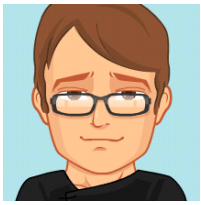
8/14

Homework 3 100...

Pupil Work Space

20 September 2015 12:28

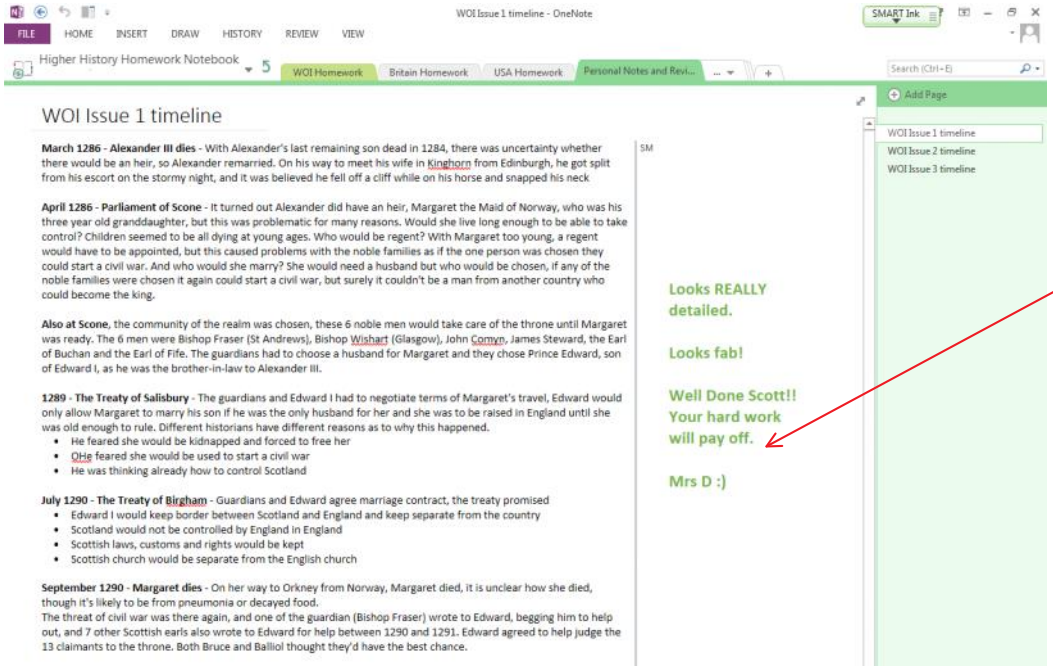
"I feel that using my tablet to take notes in class is very beneficial as it allows me to take notes that are more organized, colour co-ordinated and ones that contain other multimedia such as drawing, photos or videos"



Aiden

Pupil Work Space History

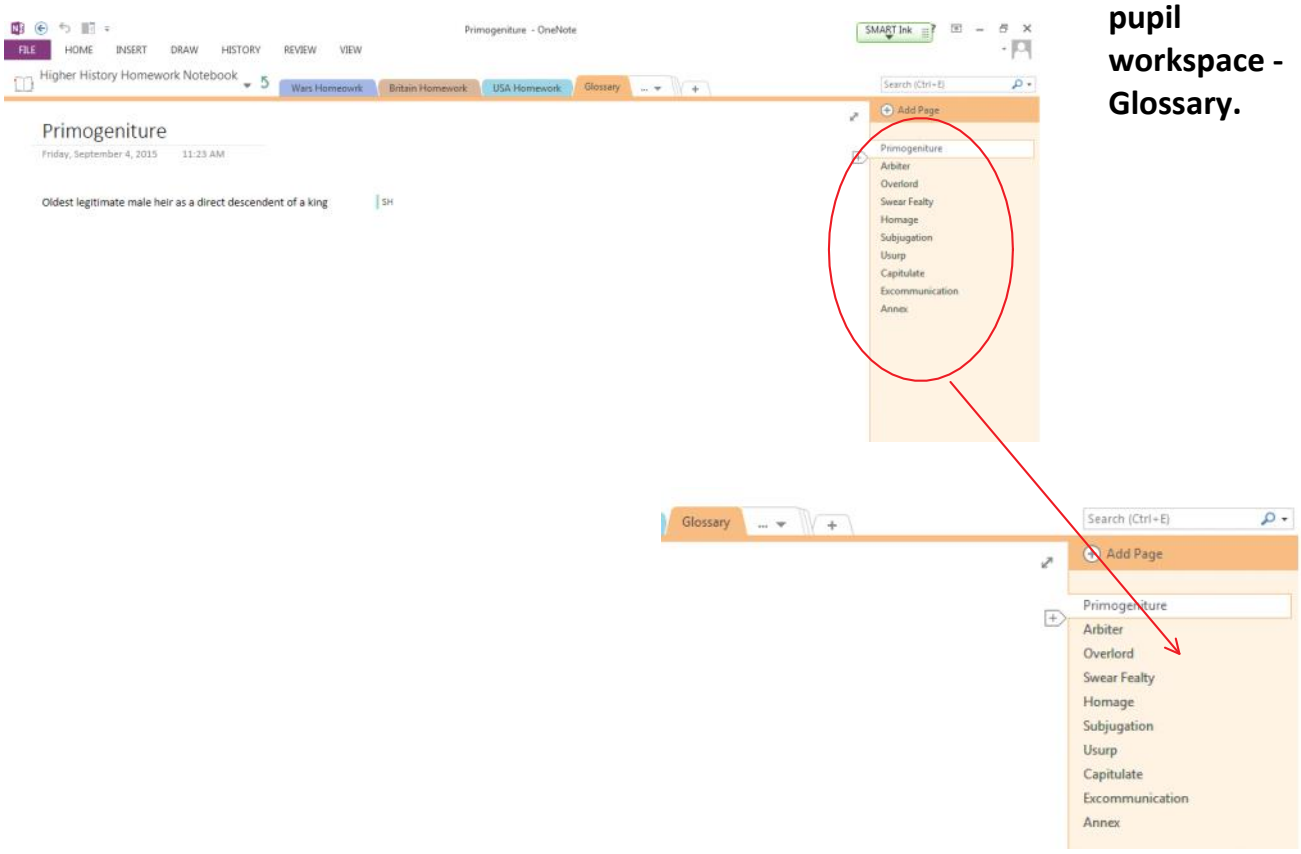
18 September 2015 20:28

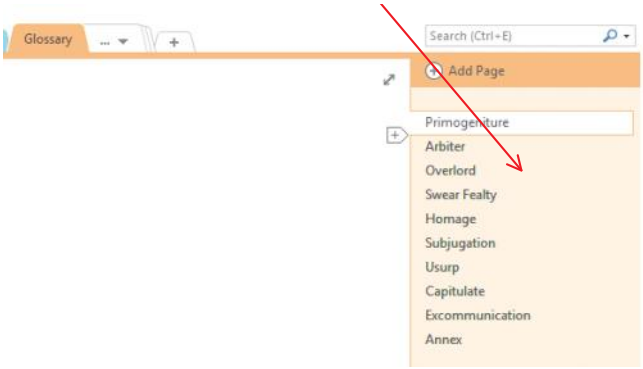


Example from Higher History pupil workspace - personal notes for revision.

Feedback provided by teacher.

Example from Higher History pupil workspace - Glossary.




Glossary
Search (Ctrl+E)
Add Page
Primogeniture
Arbiter
Overlord
Swear Fealty
Homage
Subjugation
Usurp
Capitulate
Excommunication
Annex

Code Readability

Monday, August 17, 2015 18:33

- 3 things that can make code more readable are:
  - Internal Commentary
  - Indentation
  - Meaningful Variable Names

Internal Commentary

- This should be used throughout the program as it will help you go back and change a program later.
- In VB lines that begin with ' are internal commentary.
- The first few lines should have ' to add details such as name date…

Indentation

- This should be used so as to help sort code into blocks which makes it easier to see what code is together, in a For Loop for example.
- It also makes it easier to read the code when you are dealing with nested statements.

Meaningful Variable Names

- This should be used as it makes it clear to the programmer what the intended use of a variable is.
- The name 'variable' could be anything, but 'pupilName' shows the use is a Pupils Name.
- However the name 'first_name_of_pupil_in_class_english_12_upper_floor' is too long and 'englishPupilName' would be better.

Example of using colour coding and highlighting to create revision notes.

Also, use of tags.

Types of Programming Languages

Monday, August 24, 2015 14:37

Types of Programming Languages

Procedural Languages

- Let the user define a step by step method of solving problems (originally used line numbers)
- Are used to create programs with definite beginning and end
- Are often used to solve numerical problems
- Provide operators like:
  - + - * / **AND NOT OR**

Declarative Language

- Lets the user describe the problem to be solved in terms of **facts** and **rules**
- Are often used to solve logical problems
- Consists of a **database** (facts and rules) and an **inference engine**
- Use techniques like **recursion** and **self-modifying code.**

Domain Specific Languages

- **HTML**: a page description language
- **SQL**: Database query language
- **Postscript**: printer page description language

These languages have been designed with a specific problem in mind. The programmer will have a specific software in mind when writing in a domain specific language, such as a web browser for HTML.

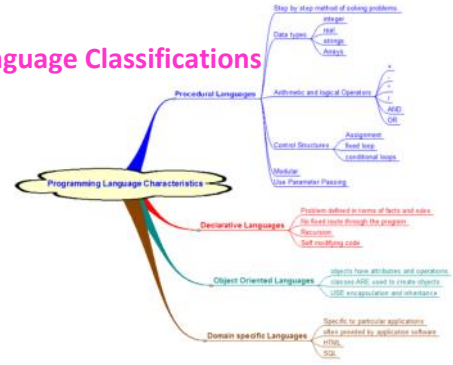
Scripting Languages

- Sometimes called macro languages
- Are often provided as part of an application.
- Are used to automate data processing using an applications package
- Are similar in syntax to Procedural Languages

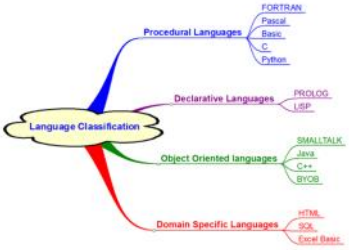
Object Oriented Language

- **Object-Oriented** programs are made up of re-useable, self-contained modules (or objects)
- **Objects** can be:
  - feature that appear in the user interface such as **windows**,
  - data structures such as strings/arrays,
  - graphic objects such as pictures.
  - Programmers may also define their own objects within a program.
- Each object has a **state** and **behaviors**
- New Objects can be created from existing objects and while old behaviors and state are retained (**inherited**), new behaviors can be added and its state altered.
- The **state** of an object is set by its **properties** e.g. a button, may have, its position, its size, its color, graphics, is it pressed or released? defined as properties.
- The **behavior** of an object is set by its **methods.** A method is program code (**procedure**) associated with an object when a certain event is triggered in the object. E.g. clicking on a button.
- When an object is copied, within a program or to a different program, its methods and properties are copied along with it. (They are said to be **encapsulated** within it)
- Unlike programs built with procedural languages, programs built with object-oriented languages do not have a single starting point or predictable route through the program for a given set of data.

Language Classifications



Again, colour coding but also clipping of useful diagrams from another resource e.g. SCHOLAR



Example of the use of tags and how to search using the tags.

Development Overview:

- This Traditional method is called the **waterfall model** as it is like a sequence of developments that 'flow' from **Analysis** to the **Evaluation** stages.
- Over time the model has evolved and has been adapted by Software Developers that try to reduce **time** and **money** spent creating and maintaining their programs.
- This model uses revision and evaluation at every stage, so it is an **iterative** process.
- This plays an important part as software development is done by a **group of people working together** and they need to co-operate in a structured and time efficient way.

Analysis Stage:

This stage involves taking an initial, brief description of a problem to be solved and turned into a more detailed one which outlines what the **program should be able to do**. The analysis is done by a **Systems Analyst** who takes the problem description, given by client, and creates a **software specification.**

Requirements of a 'Systems Analyst':

- Must be able to **effectively communicate** with client to find out precisely what the problem is
- Must be able to communicate with the development to accurately **relay the problem** that needs solved

Difficulties with Identifying/Passing on Problem:

- Client may **not describe problem in enough detail** so is hard to create specification
- Client may **not realize what is and isn't possible** to achieve
- Within a large organization there **isn't someone who knows how every part works** so may not relay all the details required

The **'Systems Analyst'** collects as much details about the problem and the Organization as they need to know how that **Organization's systems work** so the program can be designed to **work with it.**

- The **software specification** created outlines what the software should do, the timescale and cost.
- This specification is **legally binding** which can be used to resolve disputes in the future.
- The Specification outlines **what it can do,** not **how it does it.**

Quiz:

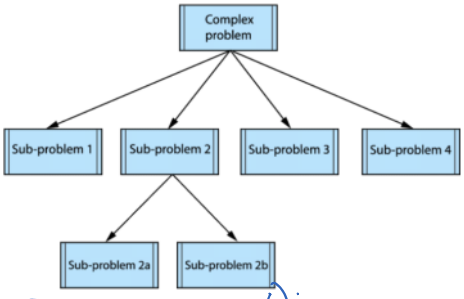
1. Why is the analysis stage of software development important?
   Answer
2. The Systems Analyst will create a software specification at the end of the Analysis stage of software development. What is a software specification?
   Answer

Design Stage:

The design stage is when the **software specification** is turned into a design which can then be used to write the code.

- Technically any software problem can be broken down into **smaller more simpler problems.**
- These smaller problems can then be broken down further to create some simple steps.
- This is called: **Top Down Design and Stepwise Refinement.**

A **structure diagram** can be created to show how sub-problems relate to each other:



Structure Diagram

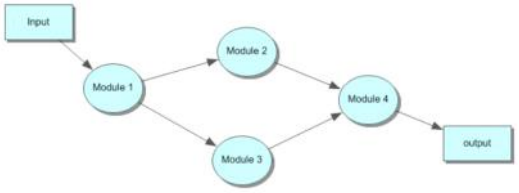
When a problem is broken down into small sub-problems the tasks become more manageable.

This is called **modular design**.
There are several advantages to this:

- Different modules can be **worked on simultaneously** by separate teams
- Each module can be **tested independently**
- Modules can represent the structure of data be processed. For instance, School Management System has a
  - Timetable Module
  - Registration Module
  - Assessment Module

As well as **a structure diagram,** this stage will also create a **data dictionary.**
This details all the data structures which will be used and they are related. Such considerations include what arrays will be needed, what size and of what type they will be.

The flow of data in a program can be shown in a **data flow diagram:**



Data Flow Diagram

Once the structure of the program has been decided upon, it can be designed in detail using pseudocode.

Stepwise Refinement

The process of designing the logic of each module is known as **stepwise refinement.** This is a process of breaking the module down which results in pseudocode instructions that can be used with any programming language.

```
PROCEDURE module1()
  <menu>
  <step_2>
  <step_3>
  <step_4>
END PROCEDURE

PROCEDURE menu()

        SEND "Menu: press H for help or C to continue"
        RECEIVE{userInput FROM  (STRING) KEYBOARD)
        WHILE userInput ≠ ["H"] AND userInput ≠ ["C"] DO
                SEND "Please press H or C " TO DISPLAY
                RECEIVE userInput FROM (STRING) KEYBOARD
        END WHILE

END PROCEDURE
```

Implementation Stage:

How well the implementation stage goes depends on how clear the design is. If a problem is found during this stage then the original design may need tweaked.

The choice of High Level Programming depends on a number of factors:

- What problem the software needs to solve, since many languages are domain specific
- What language the dev. Team are familiar with
- What OS the software will run on as some programming languages are more portable than others

The design stage will have identified sub-problems that the Dev. Team need to complete, as several people will be working on the same project communication between them is important.

Code Readability:

The code the team writes must be readable. Readable code makes it easier for a new programmer to take over from someone who has moved or is ill.

Readable code is achieved by:

- using meaningful identifiers (variable and procedure names),
- inserting internal documentation,
- white space and indentation to make the logic of the code clear,
- using local variables and creating modular code - this makes the modules re-usable in other parts of the program and on subsequent projects.

From <https://courses.scholar.hw.ac.uk/vle/scholar/session.controller?

Debugging:

This is the process of finding and fixing errors in the code, when code is readable it is easier to do this.

Some errors will be found during the implementation stage but some will be found during **testing** which requires the **implementation** stage to re-visited.
One example is that the algorithm runs too slowly so the designer will need to construct a faster one. This might be down to slow hardware, not poorly written algorithms, which requires re-visiting the **analysis** stage to re-consider the specifications of hardware.

After the **implementation** stage a **'structured listing'** is produced which include internal documentation. This is then checked against the original specification to ensure the project is on track.

- using local variables and creating modular code - this makes the modules re-usable in other parts of the program and on subsequent projects.

From <https://courses.scholar.hw.ac.uk/vle/scholar/session.controller?action=viewContent&back=topic&contentGUID=0a2ef32d-a887-28a6-d1ff-c8edef5d3ec2>

The readability of code is so important that companies will use a **'house'** style which describes how the employees should format and layout their code so as to make it easier for the whole workforce to use this code.

Testing Stage:

Testing a piece of software has several purposes. It should check that:

- The software meets the specification
- It is **'robust'** - **can handle problems from outside the program, should not crash**.
- It is **'reliable'** - **it runs well and doesn't stop due to a design flaw**

At the **design** stage, a set of test data will have been created that could be used to determine if the software meets the specification or not, it also shows if the program functions as planned.

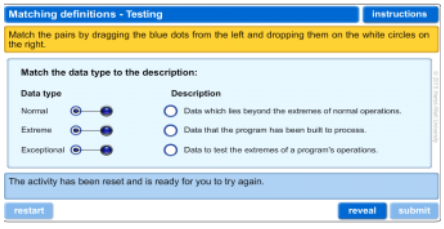
Modern programs are so complex that testing is unable to cover every circumstance. After **extensive** testing it can be assumed that errors still exist.

Testing should, as far as possible, be systematic, done in a logical order, and comprehensive, testing every possible scenario.
When testing you use three types of **'Test Data'**:

- **Normal Data:** data that the program is expected to deal with
- **Extreme Data:** data that represents the values at the boundaries of the range of data it should accepts. Ex. If a program should **only** accept numbers between 1 and 100 then it should be tested with 1 and 100
- **Exceptional Data:** data that is outside of what the program would normally expect, this should include data that might be entered by accident or misunderstanding, so a program that only accepts whole numbers should be tested with text and decimal values.
    - Exceptional should also include data that is just **outside** the boundaries of normal data

Example of inserting a hyperlink to go to a dynamic activity on another resource e.g. SCHOLAR.

- **Online Activity: - Click Here**



Testing should be **systematic** and the results should be recorded so work isn't done twice, and notes should be kept about what hasn't been done yet.

This kind of testing is **'alpha'** testing.

- Alpha Testing should find any logical errors that can then be amended and then re-tested.
- Alpha Testing doesn't need to wait until the whole applications is finished, small sections can be tested as the developers move along.
- Once the software has been tested and corrected it can then be tested in its intended environment.

The second stage is **Beta Testing.**

This is important as:

- It allows the client to test the program to see if it meets their initial specification.
- It is difficult for the programming team to pretend they are a user unfamiliar with program and then test it as so.

Programs developed for a client are installed on their site. The clients will use it and tell the developers of any errors that should be fixed. It could involve re-doing **(iterative)** some stages in order to finish testing.

Programs that are developed by Software Companies that are to be released for sale will release alpha-tested versions to **experts**, such as computer journalists. This allows them to get their program tested and allows others to know of their upcoming release.

These people send back error reports which allow the dev. Team to find any faults and malfunctions and then fix them.

Documentation Stage

Documentation Stage- Stage where the guides that show you how to install and use the software are created. Other documents such as the software specification and test history are gathered so they can be referred to in case of change or problems .

User Guide - this should include a detailed guide to menu options and how each part works. On-line guides are useful for both the user and developer. This allows the users to use a search function to access the guide whenever they use the software. It also allows the guide to be updated whenever there are changes made.

Help - Online help can be presented in three sections, Contents, Index and Search.

Technical Guide - this should include the minimum specification for hardware required such as

- RAM

- Processor Clock Speed
- Hard Disk Capacity
- Graphics Card Specs

It should also detail what platforms/Operating Systems it is compatible with along with any other software requirements.

Evaluation Stage

This stage is where the software is critically examuned by the client and developer. The most important point is whether it is fit for purpose, does it match the original specification.

It should be evaluated against the following:

- Robustness
- Reliability
- Maintainability
- Efficiency
- User Interface

Robustness

The software is robust if it can handle mistakes from the user or unexpected conditions. Mistakes should not lead to wrong results or cause the program to freeze.

Some unexpected conditions are:

- Printer Problem (jams, no paper)
- Disc Drive not available/Not there at all
- Wrong input of data

Reliability

Software is reliable if the desired result is given when expected data is input. It shouldn't stop due to design faults.

Maintainability

Software is **maintainable** if it can be changed/adapted easily. It is important for code to be **readable** and why **modularity** is so important. Whoever is maintaining the software may not be the same person as the author, also the author may find it difficult to read their code after a while.

Modularity is important as separate functions can be tested and changed without causing problems elsewhere in the program.

Efficiency

Software is efficient if it doesn't use resources unnecessarily. Such resources include:

- Processor Time
- RAM
- Hard Disk Space
- Internet Bandwidth

There may be a trade-off between programmer time and efficiency. The increased performance of newer machines allows the programmer to save time but this means the software may be less efficient.

User Interface

This part has the most influence over how the users react.
A user interface should be:

- Customizable
- Appropriate
- Consistent
- Provide Protection from Error
- Accessible

Customizable - It should allow the users to alter the look/their use of the program to how they prefer.

Appropriate - It should be suited to the expertise of the user that may use the software. It could provide different levels of interface so different users can suit the interface to themselves.

Consistent - Users should find similar functions grouped together and functions such as 'Cancel' or 'Ok' should be in the same place.

Protection from Error - The UI should protect the user from error **so critical** events like data deletion will warn the users before they perform the action.

Accessible - It should not disadvantage those with disabilities. It could do thing such as:

- Allow Use of Text Reader
- Customizable color settings, e.g. Color Blind Users
- Optional Large Icons/Toolbars

Maintenance

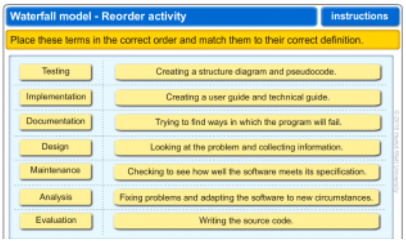
There are **three** types of maintenance:

- Corrective
- Adaptive
- Perfective

Corrective Maintenance - this involves finding errors that were not found during program testing, but are found during the use of the program. If the users encounter a problem it is helpful if they send an error report which details how the error may have occurred along with any error messages.
The development team use this to recreate the error and try to correct the problem in the software.
Cost - Likely to come from the developer.

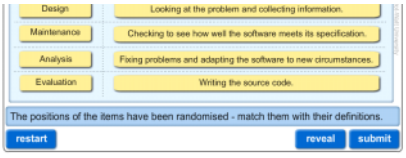
Adaptive Maintenance - this is necessary when the program's environment changes. Such examples include when a new operating system is to be used or new drivers need to be installed and incorporated. These may require the code to be adapted so that the software runs on the new system.

? **Activity 1:** Click Here



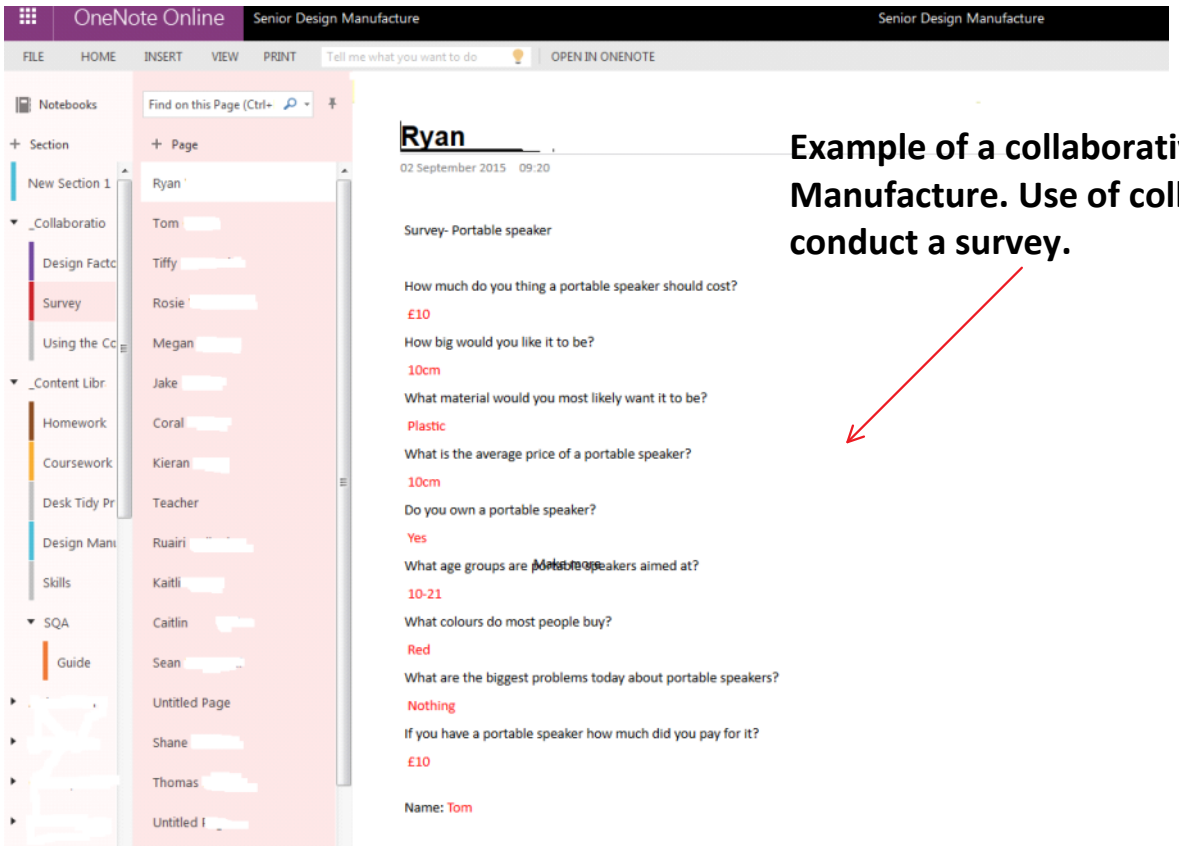
Adaptive Maintenance - this is necessary when the program's environment changes. Such examples include when a new operating system is to be used or new drivers need to be installed and incorporated. These may require the code to be adapted so that the software runs on the new system.
Cost- Likely to come from the client, some negotiations though.

Perfective Maintenance - this is when the client require changes or improvements that weren't originally designed for. This could be due to changes in requirements or legislations. This can involve changes to the entire system and can be costly.
Cost - Likely to come from the client.



Collaborative Task - DM

20 September 2015 09:34



Example of a collaborative task in Design Manufacture. Use of collaborative area to conduct a survey.

Collaborative Task - CS

22 June 2015 09:44

Type of Device	Audio Presentation
Desktop	  <u>Desktop Computer</u> Desktop computer is a personal computer that fits on a table. A desktop computer has a monitor, a keyboard and a mouse. All desktop computers have either a hard disk drive or a solid-state. Many desktop computers have a DVD-rewriter drive which can read and write. Some desktop computer may have a Blu-Ray drive. All desktop must have a Network Interface Card in order for the computer to a local network. All desktop computer have one or more speakers and may also have a microphone for sound input. Other devices may be attached to desktop computer system such as a printer, scanner and a webcam.
Smart Phone	A smartphone is a mobile phone with an advanced mobile operating system. They typically combine the features of a cell phone with those of other popular mobile devices. Most smartphones have a touchscreen user interface. A smartphone shares many of its features with a table computer, except for its main function of making and receiving telephone calls. Like tables smartphones can run a wide variety of applications designed to run on their mobile operating systems. The range of applications available for smartphones is vast, from games to office programs, from satellite navigation to shopping. 
Laptop	

Example of a collaborative task in Computing Science. Use of text, graphics audio.

Note: can see who student is and when they contributed.

	 Laptop Summary
Mainframe	Audio Recording ☎ Mainframe computer: ☎ Mainframe computers also allows multi-tasking or multi-programming which allows several different tasks or applications to available at the same time. ☎ Mainframe computers are multi-processor, there is also a vast amount of RAM and extra peripherals. ☎ a dumb terminal has no processor or local storage. ☎ 
Super Computer	 Supercomp uter. 
Tablet	

Tablet	  This is my audio file on Tablet Computers Group 1 - Types of ... Audio recording started: 14:28 24 June 2015

Peer Review (from Group 3)

- Read and listen to the descriptions of the different types of devices above.
- Describe below two things you particularly liked or informed you.
- Write down below one question you would like to ask and/or something you would like to see expanded on.

Jack :

Good balance of text, audio and graphics.
Good clear graphics.
Make sure all are finished.

Lewis:

Good clear graphics relating to the subject.
Clear easy to read text.

Make sure everyone in the group is finished.	

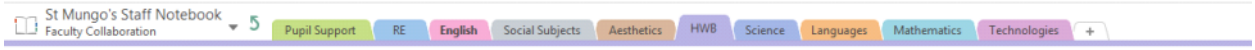
Stacey

Good mixture of everything
Lots of good information about each device
Finish next time .

Peter
Nice Balance of facts and good pictures
Good quality information.
Plz Finish.

Teacher Toolkit

20 September 2015 12:56



'Working with others' and 'Communication'

MJ

TASK 1: As a department/faculty please list the criteria that you would use to demonstrate these skills (as many as you can)
TASK 2: In order to report to parents that a pupil is confident within these skills which of the list would you deem as essential (please put a * or highlight in someway the essential criteria)

Example of collaboration space within a shared Staff Notebook. Divided into Faculties - example of faculty return for in-service task.

Working with others

- I can cooperate effectively within pairs/small groups
- I can listen and value other peoples opinions
- I can be respectful to others in the group
- I can identify strengths and weaknesses of

MJ
MW

Communication

- I can listen to others
- I can demonstrate non verbal communication
- I can use effective questioning

MJ
MW

Impact on Learning

20 September 2015 12:25

one note

- How easy do you find OneNote to use?
- How easy was it to locate your class notebook?
- How has using a Collaborative Notebook helped your learning?

Impact on Teaching

20 September 2015 12:25

"I also found those who were not as confident to speak in class would type the response in OneNote in a more detailed way.

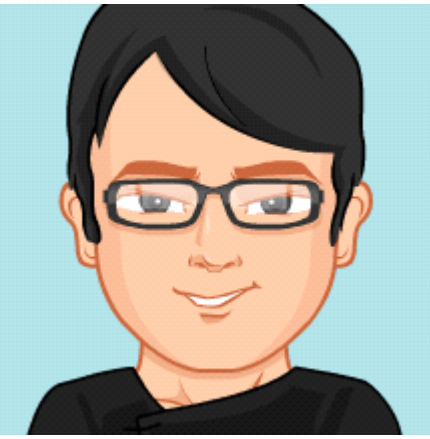
I can add a variety of different resources all in the same place for my students to access.

Learning doesn’t end when they leave the classroom.

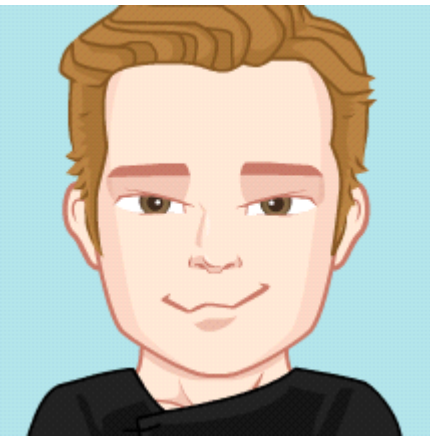
This means that learning is a constant process and students can continue to learn in a variety of different situations.

All my students can share their work with me and with each other"

Declan



Andrew



Hannah