Acle Academy

YEAR 7, FURTHER CODING (Term 3), ICT and Computing (Tech Fac)

Rationale and Context of Unit:	Core curriculum content:	Tier 2 & Tier 3 vocabulary explicitly taught:
This unit builds on knowledge learned in the 'Coding' unit. Students are expected to have knowledge of x2 coding languages at KS3 and Python is a text coding language and is very versatile. It can be used to code many different things. Knowledge from this unit will be built upon in year 8 unit when we look at Networks and then in year 9 when we look at binary. At the end of year 9 students will have a knowledge of a variety of different ways to code. There is also a careers lesson at the end of this unit where students cant think about what they have learned in ICT and Computing this year and think about how ICT skills can be useful in the job market.	**Students will be taught:** What Python is, how to use variables, do calculations and Inputs. Similar skills have been learned in Scratch with block coding but this enables students to see what text code looks like and deepen their knowledge. These skills will be further applied in year 9 units and beyond. These skills could also be built upon at Al level and uni. These skills are the foundations of coding and programming.	Pseudocode (3) Algorithm (3) NB. Each lesson has a key words list to accompany the students' learning and more words may be explicitly taught than the above but these are obligatory.

Challenge and Support:	World wide learning/ links to 21st century:	Cultural capital/ Industry/ Enrichment:
Each lesson has EDSM descriptors and there are tasks in each lesson which target HAPs. This scheme gives students an opportunity to develop their coding skills to a higher level. There is optional project for students to take home to stretch and extend them. Students will be taught how to change the colours of documents. A list of key words/ word bank is available for every lesson with definitions. Tasks are chunked with step by step instructions and the lessons powerpoints are saved on the public area. Students who need to, can save a copy to their areas so they can refer back to it. They can print the document if needed and make notes (or do this electronically). Extra help guides are also available in both electronic and printed out formats for various pieces of software. Students are given plenty of time (a fortnight) to complete any homework tasks. They are encouraged to complete this at lunchtime or at homework club, giving them access to computers, if they do not have IT access at home. Lessons will be further differentiated in accordance with SEND and PP passports. Seating plans will be annotated based on passports.	Each lesson has either a 'real life link' or a 'link to careers' section, depending on which one is relevant to the lesson. Nearly every student of this age plays video games of some sort so it is helpful for them to see how much work and coding a game takes and what type of code is used. There is a careers lesson at the end of this unit so students can see how their skills in ICT can be applied in the work of work. If there are any budding games designers or programmers in the group, then this will be an excellent opportunity to look at coding in greater deal and see if this particular area is something which would interest them in terms of further study or for a career.	See previous section for links to careers / job markets.

To support SEND students further, scaffolding, cognitive and metacognitive strategies, explicit Instruction and flexible grouping are used, along with the aid of technology.		
Historical, Social, Moral, Spiritual, Cultural context:	**Cross curricular links/ literacy/numeracy:**	**Common misconceptions:**
Personal development will be promoted in the careers lesson. Students will explore different jobs in IT and think about whether they are suited to them.	Links to maths when completing calculations. Extended writing opportunity in the careers lesson. Opportunities to read aloud in class.	"Python isn't used widely" – This unit will seek to ensure that students know that many companies choose to use Python to build large scale web apps. "Python is hard to learn" – Python is a relatively easy code to learn. It is estimated that it takes around 6 months in total to master Python. This unit will give students a good introduction.

Assessment timeline:

- Skills will be assessed on a lesson by lesson basis using AB tutor to monitor students' progress with the development of their Python skills.
- There is a baseline coding test at the start of the unit and then a final end of unit quiz on google forms.
- The test at the start assesses prior knowledge.
- There are vocab matches at the end of some lessons to help students get used to using the correct terminology.
- All lessons show examples of what students are aiming for.
- EDSM criteria included in all lessons so students can self assess each lesson
- Assessment scores will be converted into end of unit percentages. A spreadsheet will be generated for every single student and every single answer they gave so I can see which questions / topics they have struggled with and take that into the next unit / recap.

Home learning

HMK focusses on PiXL unlock sheets and literacy tasks. One HMK is given per term in KS3 for IT.

Further reading:

https://realpython.com/best-python-books/ - gives students a list of books so they can research more
https://www.learnpython.org/ - Students can get ahead and practice with this site.

Feedback
In KS3, marking is via self-marking google quizzes. Students will have at least two of these per unit. (Mid unit and end of unit) Feedback for HMK is given via google classrooms. There is one HMK per term. Class discussions used regularly. Online Quizzes. Test buddy feedback (peer assessment) used in class with criteria.

Length of unit (duration indicated in lessons)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Unit: Further Coding (Term 3 of Year7)																													