

ASHTON COMMUNITY SCIENCE COLLEGE: COMPUTING CURRICULUM

| Year 9 | | | | | | |
|---|--|---|--|---|--|---|
| | Half term 1 | Half term 2 | Half term 3 | Half term 4 | Half term 5 | Half term 6 |
| Knowledge | <u>Topic:</u> <ul style="list-style-type: none"> ▪ Data representation | <u>Topic:</u> <ul style="list-style-type: none"> ▪ Digital graphics | <u>Topic:</u> <ul style="list-style-type: none"> ▪ Python programming | <u>Topic:</u> <ul style="list-style-type: none"> ▪ Python Programming ▪ Ethical, legal, cultural and environmental issues in computing | <u>Topic:</u> <ul style="list-style-type: none"> ▪ Memory and storage | <u>Topic:</u> <ul style="list-style-type: none"> ▪ Spreadsheet skills |
| Skills/ application of knowledge | <ul style="list-style-type: none"> ▪ Converting binary, denary and hexadecimal numbers ▪ How do computers represent images? ▪ How do computers represent sound? ▪ What is compression and what effect does it have on storage. | <ul style="list-style-type: none"> ▪ What is the purpose & what are the properties of digital graphics. ▪ Be able to plan a digital graphic ▪ Be able to create a digital graphic ▪ Be able to review a digital graphic | <ul style="list-style-type: none"> ▪ How do I make programs in python? ▪ What are data types and why do computers need them? ▪ How can I make my programs more efficient? ▪ How can I make my programs robust? | <ul style="list-style-type: none"> ▪ How do I make programs in python? ▪ What are data types and why do computers need them? ▪ How can I make my programs more efficient? ▪ How can I make my programs robust? ▪ What are some of the ethical, legal, cultural and environmental issues that computer shave on society | <ul style="list-style-type: none"> ▪ Why does a computer need memory? ▪ Why does a computer need different types of memory? ▪ Why are some of the different types of memory faster than others? | <ul style="list-style-type: none"> ▪ Be able to use a range of appropriate formulas to produce key findings ▪ Be able to produce professional looking spreadsheets that contain advanced features such as charts and graphs |
| Links to prior learning | <ul style="list-style-type: none"> • Year 7- under the hood of a computer • Year 8- logic gates and truth tables | <ul style="list-style-type: none"> ▪ All lessons in year 7 & 8 contain aspects of the topic in addition to those specifically named below ▪ Year 7- IT skills, under the hood of a computer ▪ Year 8- multimedia products | <ul style="list-style-type: none"> • Year 7- Micro:bits, small basic • Year 8- computational thinking, python introduction | <ul style="list-style-type: none"> • Year 7- E-safety, Micro:bits, small basic • Year 8- computational thinking, artificial intelligence, system software, python introduction | <ul style="list-style-type: none"> • Year 7- Under the hood of a computer, types of storage | <ul style="list-style-type: none"> • Year 7 – IT skills • Year 8- multimedia products • Year 9- digital graphics |
| Assessment | <ul style="list-style-type: none"> • Mid unit assessment • End of topic test | <ul style="list-style-type: none"> • Mid unit assessment • End of topic test • Creation of a digital graphic to meet a brief | <ul style="list-style-type: none"> • Mid unit assessment • End of topic test • Programming skills | <ul style="list-style-type: none"> • Mid unit assessment • End of topic test • Programming skills | <ul style="list-style-type: none"> • Mid unit assessment • End of topic test | <ul style="list-style-type: none"> • Mid unit assessment • End of topic test • Creation of spreadsheets to meet a brief |