

**ICT KS3 Tracking Booklet**

**2018/19**

**Year 8**

|  |  |
| --- | --- |
| **Name**  |  |
| **Group** |  |
| **Teacher** |  |

**Tracking Data**

**My end of KS3 TARGET is:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Report Cycle** | **Working At (WA)** | **Working Towards (WT)** | **Learning Profile****(LP)** | **On Target?** |
| Autumn 1 |  |  |  |  |
| Autumn 2 |  |  |  |  |
| Spring 1 |  |  |  |  |
| Spring 2 |  |  |  |  |
| Summer 1 |  |  |  |  |
| Summer 2 |  |  |  |  |

**Leading learning questions**

What have you learnt?

What level are you working at?

How can you improve your level?

What is your learning profile?

How many house points do you have?

**Literacy marking codes**

sp Word *underlined* for spelling correction.

(Correct spelling is written in the margin or at the bottom of the page. Pupils to write the correct spelling 5 times on the spelling page at the back of their book / folder)

P Insert missing punctuation / correct punctuation

// New paragraph needed

?? This does not make sense / check for grammatical errors

^ Insert missing word

Pr Have you proof read this / need to proof read

**Unit 1 – The Internet and the WWW**

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| --- | --- | --- | --- |
| **No.** | **Lesson** | **Software** | **Homework** |
| 1 | Folder management, General Internet knowledge: Bookmarks, Copyright | IEWord/PPT | Research on Geolocation and the security effects |
| 2 | The World Wide Web, the difference between The Internet and WWWHow data travels on the Internet | IEWord/PPT | How the Internet works- Presentation/ Video |
| 3 | URL | IEWord/PPT | Research on Future Technology- |
| 4 | Search Engines: How to search effectively | IE/PPT | Research on Future Technology- continued |
| 5 | Reliability of Websites | IEOutlook | Poster on Cloud Services |
| 6 | Email, Cloud Computing | IE | Exam Question – Research is allowed! |
| Ext | Assessment | PPT |  |
| 7 | Digital DivideSocial / Moral / Cultural | IEWord/PPT | Completion of the Digital Divide Essay (1000 words) |

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| **National Curriculum Level Criteria** |
| Grade 3 | • I have shown that I can create browser bookmarks.• I know how the internet works• I can research information safely.• I produced a presentation with some content, on any of the Technology topics given. |  |
| Grade 4 | •I have shown that I can research safely and effectively.•I have used appropriate keywords to search effectively using advance search when necessary•My browser bookmarks used sub-folders and were very well organised.•My presentation ensured consistency; background on slides, bullet points, pictures to illustrate points with references of sources•I can explain the dangers of cloud computing and how to be e-safe using privacy settings |  |
|  | •I am able to accurately compare and contrast the benefits of using different search engines (such as Google and Yahoo) for advanced searches.•I can explain the advantages and disadvantages of cloud computing  |  |

**Keywords**

Bookmark Internet WWW URL Website Webpage Packet Switching Browser Search Engine Reliability Copyright Geolocation

**Unit 2 – Web Programming-Band Live Tour**

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| --- | --- | --- | --- |
| **No.** | **Lesson** | **Software** | **Homework** |
| 1 | Graphics: Types of Graphics: Bitmap & Vector Graphics, Logo design | Word/PPT | Plan Logo Design |
| 2 | Graphics: Selection and cropping tools, inserting into new layers | Adobe Fireworks/PPT | Complete Logo Design  |
| 3 | HTML Introduction: First HTML page | Notepad++ | Research on basic HTML skills- using w3schools |
| 4 | HTML- Formatting Text & Images | Notepad++ |  |
| 5 | HTML-What makes a good website, Debugging | Notepad++/Word | Planning the design of 3 webpages- sitemap, layout, content, page design, colour scheme |
| 6 | HMTL- Designing a homepage | Notepad++/Vimeo/Windows Movie Maker | Video Advert: To promote the World Tour of your band, produce a short web based video advert of your Band/Artist |
| 7 | HMTL- Duplicating pages / consistent theme / adding information | Notepad++ | Self assessment / evaluation of the project – What have you learnt? What went well? What did you enjoy? What would you do differently next time? |
| 8 | Introduction to CSS, JavaScript | Notepad++ | Create a Guide to teach Year 7s HTML. It will need to include at least 3 chapters. It should cover every tag, keyword we have used in lessons with screenshots to show demonstration of how to use them. |
|  | Assessment |  |  |

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| **National Curriculum Level Criteria** |
| Grade 3 | * Create a simple Webpage.
* Add some basic text and Headings
* Format the page by changing the colour
* Use Paragraphs or new lines.
 |  |
| Grade 3.5  | * I have few Spelling, Grammar and Punctuation. Pages are easy to read with clear communication with paragraphs
* I have hyperlinked all 3 pages as well as have a hyperlink to an external website
* I have provided detailed feedback on another student’s webpage.
* I have used more than 5 formatting techniques to style different webpage elements such as paragraphs and headings( text colour, font size, alignment, background colour)
* I have detailed design of all webpages created
 |  |
| Grade 4 | * Excellent Spelling, Grammar and Punctuation. Pages are easy to read with clear communication using paragraphs
* I have added table or a navigation bar
* All webpage elements including embedded code and linked objects display correctly and are all styled consistently- with the same layout, background colour.
* I have created at least 3 professionally looking pages, well-structured layout
 |  |
| Grade 5 | * I independently researched two other HTML tags and included them on my website.
* I have created at least 3 webpages all linked together by hyperlink or buttons.
* I have used external style sheet to design the layout of my pages
* I have used some interactive elements to my page (JavaScript- date, user input)
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**Keywords**

Graphics Resolution Pixilation HTML Hyperlink Attribute Tag Attribute

Element Debug Format Header Stylesheet Body Script Navigation

**Unit 3 – Data Handling**

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| **No.** | **Lesson** | **Software** | **Homework** |
| 1 | Basic Formulae, Formatting | Excel/Word | Think of three different businesses that would use a spreadsheet. For each explain how they use it, what they use it for and the advantages that it brings.  |
| 2 | Functions- Excel functionsSum, Average, Minimum, Maximum | Excel |  |
| 3 | Charts/Graphs | Excel | Find out what is meant by conditional formatting. Research then write down in your own words what is meant by infographicThen find two examples of an infographic and write down what they are meant to show. |
| 4 | Conditional Formatting | Excel |  |
| 5 | IF Function | Excel | Organise a booking for a Family Events |
| 6 | Infographics | Excel | Create a song or Poem about what you have learned in this topic so far. It will need to include at least five verses and have a chorus. Cover every topic, formulae, keyword, use etc. |
| 7 | VLookup | Excel | Create a simple guide to using if statements and lookups |
|  | Assessment |  |  |

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| **Grade** | **Spreadsheet Skill** | **Fine Grade** | **Tick (Y/N)** |
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| **3** | 1. Work out the totals for each item ordered. | 2.2 |   |
| 2. Calculate the total cost of the order,  | 2.5 |   |
| 3. Use Average Function to Work out the average cost of a sandwich. | 2.8 |   |
| 4. Use Functions to find the most expensive and the cheapest item on the menu | 3 |   |
| **4** | 5. Create a chart in the are below to work out the most popular Sandwiches by proportion |    | 3.2 |   |
| 6. Create a Chart to Compare the number of drinks sold of the drinks. | 3.2 |  |
| 7. Add Suitable Titles and Labels to the Charts.  | 3.5 |   |
| 8. The teacher only has £100 to spend on lunch, use an IF Function in Cell I12 to say "Too Expensive if the total is above £100 and "Keep the change" if the total is less than £100.  | 3.8 |   |
|
| 9. Use Conditional Formatting to highlight in Red, the Price for any sandwich above the average. | 4 |   |
| 10. Use conditional Formatting to highlight in Green, the price for any sandwich less than the average. |
| **5** | 11. What would happen if four kids changed their order from Tuna Sandwich to Steak and Cheese? Write your answer in the Blue box below. | 4.2 |   |
|
| 12. Format the Worksheet to make it look professional, add an image of the Subway logo. | 4.5 |   |

**Keywords**

Table Form Average Sum Function Maximum Minimum

Record Field Data Row Column Reference Formula Cell

Spreadsheet Function Graph Statement Reference Lookup

**Unit 4 – Data Representation**

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| **No.** | **Lesson** | **Software** | **Homework** |
| 1 | Binary / DenaryWhat is BinaryConversions | Word/PPT/ Excel | Binary conversions worksheet |
| 2 | Hexadecimal | Word/PPT | Hexadecimal worksheet |
| 3 | Binary to ASCII |  | Binary Text Worksheet- decode the secret message |
| 4 | Images | Excel/Word | Create a poster* Summarize how images are stored in a computer
* Use a single side of A4 to explain:
	+ How an image as a series of **pixels** represented in binary
	+ how binary data can hold **information about the colour** of a pixel - **colour depth**
	+ The effect of **resolution** on an image - **pixilation**
	+ The effect of **colour depth** and **resolution** on the size of an image file
 |
| 5 | Sound | Audacity/PPT |  |
| 6 | Boolean Operators | IE/Word |  |
| 7 | Boolean Logic – AND/OR/NOT gates | Word | Logic gates worksheet |
|  | End of Unit Assessment |  |  |

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| **National Curriculum Level Criteria** |
| Grade 3 | * Explain why computers can only understand Binary
* Explain how binary is used to represent numbers.
* Explain how binary is used to create images and sound.
* Know the different number Bases: Binary, Denary, Hexadecimal
* Know the 3 main Logic gates
 |  |
| Grade 4 | * Convert from Binary to Denary and vice versa
* Explain the use of Hexadecimal in Computer
* Know the definitions of resolution, pixilation, colour depth, bit rate, sample rate
* Apply understanding to create an image using binary.
* Convert an analogue sound wave to digital (Binary)
* Draw and complete truth tables for each logic gate
 |  |
| Level 5 | * Convert Binary, Denary to Hexadecimal and vice versa
* Explain the keywords pixel, resolution, pixilation, colour depth, bit rate, sample rate
* Explain the effect of resolution, colour depth, bit rate, sample rate on the file size of images and sound files.
* Draw combined logic gates from expressions given and give output to combined logic gates
 |  |

**Keywords**

Binary Denary/Decimal Hexadecimal Circuit On/Off Images

Resolution Pixel Pixilation Colour Depth Bit rate Bit Depth Sample rate

Boolean Logic Logic Gates AND OR NOT AC/DC

**Unit 5 – Python**

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| **No.** | **Lesson** | **Software** | **Homework** |
| 1 | Learn about python as a programming language, basic python syntaxWrite simple expressions in python | Python 3.5 | Download Python on Computer at home |
| 2 | Create a ChatbotUnderstand that languages have different data typesKnow how to create and assign a variableConcatenating strings | Python 3.5 | Complete 3 questions on Python Challenges |
| 3 | Create a Guessing gameSelection Statements- if statements | Python 3.5 |  |
| 4 | Iteration- While & For LoopAdvanced features of the Guessing game | Python 3.5 | Complete the Python Loops Worksheet |
| 5 | Random Generating number game  | Python 3.5 |  |
| 6 | Functions | Python 3.5 |  |
|  | End of Unit Assessment | Python 3.5 |  |

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| **National Curriculum Level Criteria** |
| Grade 3 | * Write simple programs using a high level programming language
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| Grade 4 | * Know the different data types
* Be able to write output statements using the Python GUI
* Know how to create and assign a variable.
* Design and create simple programs
* Debug programs that accomplish specific goals
* Use the Programming Constructs: Sequence, Selection and Iteration in programs
 |  |
| Grade 5 | * Solve problems by decomposing them into smaller parts
* Use logical reasoning to explain how some simple algorithms work
* Use logical reasoning to detect and correct errors in algorithms
 |  |
| Grade 6 | * Use procedures and functions with parameters in your programs.
* Use computational abstractions
* Model state of real world problems
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**Keywords**

String Integer Float Syntax Variable Editor

Casting Debug Programming Constructs Sequence Selection

Iteration Functions/Subroutine Procedure Boolean Data types

**Unit 6 – Networks**

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| --- | --- | --- | --- |
| **No.** | **Lesson** | **Software** | **Homework** |
| 1 | Explain what is a networkDescribe the Benefits and Drawbacks of a networkDescribe and give examples of the different types of network –LAN, WAN, PAN | PPT/Word | Record or write brief description about the network components used:Your home IT networkYour school IT network |
| 2 | Identify and describe the different components/devices in a networkDesign a wireless network | PPT/Word |  |
| 3 | Network Topologies Identify and Draw the Star and Mesh TopologyAdvantages and Disadvantages of each Topology | PPT/Word |  |
| 4 | The Internet –Hardware, software how data is transmitted on the internet | PPT/Word | Create a Poster on how the Internet works |
| 5 | Servers : Explain what is a serverIdentify the types of servers used in IT | PPT/Word |  |
| 6 | Protocols |  |  |
| 7 | Network SecurityExplain what security measures need to be taken to keep a network safe |  | Students to produce a podcast or video for fellow students on computer security and the different types of security used |
|  | End of Year Assessment |  |  |

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| **National Curriculum Level Criteria** |
| Grade 4 | * Know the benefits and drawbacks of computer networks
* Know the different types of networks
* Knows the names of hardware e.g. hubs, routers, switches, server
* Know that computers use protocols to communicate
 |  |
| Grade 5 | * Explain the benefits and drawbacks of computer networks
* Explain and give examples of the different types of networks
* Explain the purpose of hardware e.g. hubs, routers, switches, servers
* Know the names of protocols e.g. SMTP, iMAP, POP, FTP, TCP/IP, associated with networking computer systems
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| Grade 6 | * Justify the benefits and drawbacks of computer networks
* Explain the purpose of protocols e.g. SMTP, iMAP, POP, FTP, TCP/IP, associated with networking computer systems.
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**Notes**

**Computer Science Keywords**

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| **Keyword / Term** | **Definition** |
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