Y7 syllabus / revision topic checklist (last updated Feb 2015)

Topic 1 – Intro to Camp Hill Systems

- School network rules;
- Use of school email;
- Use of Moodle

Topic 2 – Touch-typing

- Awareness that that there are different keyboard layouts (e.g. Dvorak, AZERTY) and advantages of these.

Topic 3 – Spreadsheets & modelling

- Be able to explain what a model is and why modelling is useful.
- Spreadsheet skills including:
    - Identifying where labels, values & formulas are
    - Changing cell data type (e.g. from number to currency)
    - replication,
    - simple functions (SUM, MIN, MAX, AVERAGE),
    - more complex functions (being able to use IF; being aware of COUNT & RANK functions);
    - goal seek;
    - relative & absolute cell references.

Topic 4 – Flowcharting/Logicator (Control)

- Be able to define 'control' in an ICT sense, and give advantages, disadvantages and real-life examples of where it is used
- Be able to draw/describe the input-process-output model and name some input and output devices
- Be able to reflect on uses of ICT at Jaguar Land Rover (including for 'control', communication and organisation/logistics)
- Be able to draw and understand flowcharts, correctly using decision diamonds
- Be able to define feedback and give an example
- Be able to describe the use of subroutines, and why this is useful
- Vocabulary including: iteration/loop; IF statement & idea of selection; variable; subroutine; flowchart; sequence; input; output.
- Be able to understand the usefulness of variables when used to count things (e.g. the car-park exercise)
- Be able to describe at least one example of where the use of computer technology has changed the way people lead their lives

Topic 5 – Databases

- Be able to select appropriate data types for fields

- Understand the purpose of tables, queries, forms and reports
- Be able to create simple queries, and complex queries (those using both AND or OR)
- Understand types of validation and how to create validation rules
- Vocabulary including: field; record; validation; form; table; report; query; verification; primary key

Topic 6 - Binary

- To understand terms such as binary, denary, bit, byte & nibble
- To know and be able to use the common computer prefixes kilo-, mega-, giga- & tera- as related to bytes (it is acceptable to use this as multiples of 1000 or of 1024)
- To be able to convert between denary & binary (in either direction)
- To be able to add and subtract any two binary numbers (marks given for showing working)
- Some may be able to do similar with octal, but this will not be tested in the end of year test

Topic 7 – the Internet

- To be able to describe the internet, including the distinction between the internet and the world wide web
- To be able to describe URLs, IP addresses (IP4) and what a DNS does
- To be able to describe what happens 'behind the scenes' when we choose to view a web page
- To be able to describe data transfer in terms of data packets, and to describe and compare circuit switching with packet switching
- To be able to define what a protocol is, and to give examples of at least two different protocols used on the internet
- To be able to describe the server-client model
- To be able to describe what a proxy server is, and how using one benefits the school
- To be able to describe what the simple network commands PING and TRACEROUTE do

Not to be covered in May exam (summer term topics):

Topic 8 – HTML5

- To be able to describe what HTML is
- To be able to explain the differences between a word processor and a text editor
- To be able to recall the structure of an HTML5 file
- To be able to use common HTML5 tags, including nesting tags inside one another
- To be able to describe the benefits of using styles rather than applying formatting directly
- To be able to create simple websites including multiple pages, using only a simple text editor

Topic 9 – e-safety

- Basics of staying safe online
- Understand that people may not be who they say they are