

CURRICULUM MAP: Year 12, Autumn Term 1

1.1 Computer hardware, i.e.:

- input devices
- output devices
- communications devices
- benefits (e.g. integrated devices make portable devices simpler to use)
- limitations (e.g. voice recognition performs poorly in noisy environments)
- uses (e.g. membrane keyboard could be used in harsh physical environments)

1.2 Computer components, i.e.:

- processors
- motherboards
- storage (i.e. hard drive, solid state, flash, internal, removable, SAS, SCSI, portable, Cloud)
- ports (i.e. USB, Firewire, SATA, Network, Fibre Channel)
- memory (i.e. RAM, ROM, cache)
- expansion cards (i.e. sound, network, graphics, storage controller, fibre channel)
- power supplies
- characteristics
- purpose

1.3 Types of computer system, i.e.:

- desktop/server
- tablet/hybrid
- smartphone
- embedded system/Internet of Things (e.g. cars, home appliances, etc.)
- mainframe
- quantum
- uses (e.g. tablet device can be used when travelling due to physical properties)
- benefits (e.g. desktop computer can have a large screen which can improve productivity)
- limitations (e.g. mainframes can be expensive to purchase and maintain)

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 1 The Fundamentals of IT
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT Dept / Network manager Brunel where possible Visiting speakers/ covid accepting
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Mock paper and practice questions.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students will Understand the topic computer hardware and its components.

CURRICULUM MAP: Year 12, Autumn Term 1

1.4 Connectivity methods, i.e.:

- copper
- fibre
- wireless technologies (i.e. Bluetooth, WiFi, microwave, infrared, laser, Satellite, GSM, 3G/4G and future technologies)
- characteristics
- purpose

1.5 Communications hardware, i.e.:

- hub
- switch
- router
- modem
- wireless access point
- combined/hybrid devices
- characteristics
- purpose and use

1.6 Hardware troubleshooting, i.e.:

- identifying hardware faults
- troubleshooting tools
- documentation/fault management

1.7 Units of measurement, i.e.:

- bit, nibble, byte
- metric (i.e. kilo, mega, giga, tera, peta)
- binary (i.e. kibi, mebi, gibi, tebi, pebi)
- comparison in sizes between metric and binary measurements. e.g. 1 kilobyte = 1000 bytes vs 1024 bytes

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CURRICULUM MAP: Year 12, Autumn Term 1

1.8 Number systems, i.e.:

- binary
- decimal
- hexadecimal

1.9 Number conversion, i.e.:

- converting between binary, decimal and hexadecimal

2.1 Types of software, i.e.:

- open source
- closed source
- off the shelf
- bespoke
- shareware
- freeware
- embedded
- characteristics
- use

2.2 Applications software, i.e.:

- productivity software (i.e. word processor, spreadsheet, database, email)
- development tools (i.e. compiler, debugger, translator, integrated design environment)
- business software (i.e. MIS, multimedia, collaboration, project management, manufacturing, CAD/CAM, publishing, expert systems, healthcare)

2.3 Utility software (i.e. backup, anti-virus, compression):

- purpose
- advantages and disadvantages

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CURRICULUM MAP: Year 12, Autumn Term 1

Term Autumn 12 weeks	Mastery Year 12
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Homework Microsoft Teams	.
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers <u>Assessments:</u> Mock paper and practice questions.
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2.4 Operating systems, i.e.:

- single user/multiuser
- single processor/multiprocessor
 - off the shelf/open source/bespoke
- Functions
- Benefits and limitations

2.5 Communication methods, i.e.:

- SMS
- email
- messaging software
- social networking/social media
- VoIP
- personal assistants (e.g. Siri, Cortana)
- teleconference
- video conference
- cellular/satellite
- instant messaging
- characteristics
- purpose
- advantages and disadvantages

2.6 Software troubleshooting, i.e.:

- common faults (i.e. unexpected software behaviour, software freeze, unexpected rebooting)
- troubleshooting tools to investigate a problem (i.e. logs, installable tools, baselines)
- documentation (i.e. types of documentation)

CURRICULUM MAP: Year 12, Autumn Term 1

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2.7 Protocols, i.e.:

- popular protocols
- IP (Internet Protocol)
- TCP (Transmission Control Protocol) UDP (User Data Protocol)
- SMTP (Simple Mail Transfer Protocol)
- FTP (File Transfer Protocol)
- HTTP (Hyper Text Transfer Protocol)
- SNMP (Simple Network Management Protocol) o
- ICMP (Internet Control Message Protocol)
- POP (Post Office Protocol)
- features
- purpose
- common usage scenarios

3.1 Types of servers, i.e.:

- file/print
- application
- database
- web
- mail
- hypervisor

3.2 Virtualisation, i.e.:

- server
- client
- storage
- cloud
- hybrid
- benefits and limitations

CURRICULUM MAP: Year 12, Autumn Term 1

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3.3 Networking characteristics, i.e.:

- peer to peer
- client server (i.e. DNS)
- bus/star/ring/mesh
- addressing (i.e. default gateway, IP address, subnet mask)
- diagrammatical representation
- linking to given context

3.4 Connectivity methods, i.e.:

- LAN (i.e. Ethernet, Token Ring)
- WAN (i.e. ADSL, leased line, ISDN)
- MAN • voice (i.e. PSTN, cellular)
- satellite (i.e. voice, data)
- characteristics
- purpose

3.5 Business systems, i.e.:

- MIS (Management Information System)
- CRM (Customer Relationship Management)
- SOP (Sales Ordering Process, Standard Operating Procedures)
- helpdesk
- purpose
- benefits and limitations

CURRICULUM MAP: Year 12, Autumn Term 2

Term Autumn 12 weeks	Mastery Year 12
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4.1 Communication skills, i.e.:

- interpersonal skills (i.e. eye contact, body language)
- questioning techniques
- verbal (i.e. meetings, telephone, group discussions)
- written (i.e. reports, letters, emails, social networking)
- non-verbal (i.e. body language)
- barriers (i.e. language, distraction, noise, lack of concentration)
- appropriate use of language (i.e. formal, informal, technical, non-technical)

4.2 Communication technology, i.e.:

- presentation software
- word processing
- email
- web
- blogs/vlogs
- instant messaging
- use

4.3 Personal attributes .:

(i.e. self-motivation, leadership, respect, dependability, punctuality, problem solving, determination, independence, time management, team working, written numerical and verbal skills, planning and organisation skills)

4.4 Ready for work, i.e.:

- dress (i.e. appropriate clothing depending on situation)
- presentation (i.e. personal grooming, appearance etc.)
- attitude (i.e. can do attitude, responsive)

CURRICULUM MAP: Year 12, Autumn Term 2

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4.5 Job roles, i.e.:

- Network manager
- IT technician
- Programmer
- Web designer
- Animator
- Key skills required for each (i.e. technical and non technical)

4.6 Professional bodies (e.g. BCS):

- purpose
- benefits and limitations

4.7 Industry certification :

- benefits to individual and employer
- current vendors (e.g. CompTia[®], Cisco[®])

CURRICULUM MAP: Year 12, Autumn Term 2

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5.1 Ethical issues, i.e.:

- whistle blowing
- disability/gender/sexuality discrimination
- use of information
- codes of practice
- staying safe online
- bias

5.2 Operational issues, i.e.:

- security of information
- health and safety
- disaster planning and recovery
- organisational policies (i.e. acceptable use policy, code of conduct, etc.)
- change management
- scale of change: o drivers (i.e. change in business practice, legislation, competition)
- needs (i.e. improved networking, remote access for employees)

5.3 Threats, i.e.:

- phishing
- hacking
- virus
- Trojan
- interception
- eavesdropping
- data theft
- social engineering

CURRICULUM MAP: Year 12, Autumn Term 2

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5.4 Physical security, i.e.:

- locks
- biometrics
- RFID
- tokens
- privacy screens
- shredding
- characteristics

5.5 Digital security, i.e.:

- anti-virus
- firewalls
- anti-spyware
- username/passwords
- permissions
- encryption
- characteristics

5.6 Safe disposal of data and computer equipment, i.e.:

- legislation
- overwrite data
- electromagnetic wipe
- physical destruction

CURRICULUM MAP: Year 12, Autumn Term 2

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- 1.1 Computer hardware, i.e.:
- 1.2 Computer components, i.e.:
- 1.3 Types of computer system, i.e.:
- 1.4 Connectivity methods, i.e.:
- 1.5 Communications hardware, i.e.:
- 1.6 Hardware troubleshooting, i.e.:
- 1.7 Units of measurement, i.e.:
- 1.8 Number systems, i.e.:
- 1.9 Number conversion, i.e.:
- 2.1 Types of software, i.e.:
- 2.2 Applications software, i.e.:
- 2.3 Utility software (i.e. backup, anti-virus, compression):
- 2.4 Operating systems, i.e.:
- 2.5 Communication methods, i.e.:
- 2.6 Software troubleshooting, i.e.:
- 2.7 Protocols, i.e.:
- 3.1 Types of servers, i.e.:
- 3.2 Virtualisation, i.e.:
- 3.3 Networking characteristics, i.e.:
- 3.4 Connectivity methods, i.e.:
- 3.5 Business systems, i.e.:
- 4.1 Communication skills, i.e.:
- 4.2 Communication technology, i.e.:
- 4.3 Personal attributes.:
- 4.4 Ready for work, i.e.:
- 4.5 Job roles, i.e.:
- 4.6 Professional bodies (e.g. BCS):
- 4.7 Industry certification:
- 5.1 Ethical issues, i.e.:
- 5.2 Operational issues, i.e.:
- 5.3 Threats, i.e.:
- 5.4 Physical security, i.e.:
- 5.5 Digital security, i.e.:
- 5.6 Safe disposal of data and computer equipment, i.e.:

CURRICULUM MAP: Year 12, Spring Term 1

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests Homework Microsoft Teams Revisiting, revising, remembering opportunities Starters Exam paper questions DATA: Year 12 Data snapshot	<p><u>Topic:</u> Unit 1 The Fundamentals of IT</p> <p>Revision</p> <p><u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers</p> <p><u>Assessments:</u></p> <p>Mock paper and practice questions.</p> <p><u>Endpoint:</u> Students prepare for Mock, revision sessions.</p>

- 1.1 Computer hardware, i.e.:
- 1.2 Computer components, i.e.:
- 1.3 Types of computer system, i.e.:
- 1.4 Connectivity methods, i.e.:
- 1.5 Communications hardware, i.e.:
- 1.6 Hardware troubleshooting, i.e.:
- 1.7 Units of measurement, i.e.:
- 1.8 Number systems, i.e.:
- 1.9 Number conversion, i.e.:
- 2.1 Types of software, i.e.:
- 2.2 Applications software, i.e.:
- 2.3 Utility software (i.e. backup, anti-virus, compression):
- 2.4 Operating systems, i.e.:
- 2.5 Communication methods, i.e.:
- 2.6 Software troubleshooting, i.e.:
- 2.7 Protocols, i.e.:
- 3.1 Types of servers, i.e.:
- 3.2 Virtualisation, i.e.:
- 3.3 Networking characteristics, i.e.:
- 3.4 Connectivity methods, i.e.:
- 3.5 Business systems, i.e.:
- 4.1 Communication skills, i.e.:
- 4.2 Communication technology, i.e.:
- 4.3 Personal attributes.:
- 4.4 Ready for work, i.e.:
- 4.5 Job roles, i.e.:
- 4.6 Professional bodies (e.g. BCS):
- 4.7 Industry certification:
- 5.1 Ethical issues, i.e.:
- 5.2 Operational issues, i.e.:
- 5.3 Threats, i.e.:
- 5.4 Physical security, i.e.:
- 5.5 Digital security, i.e.:
- 5.6 Safe disposal of data and computer equipment, i.e.:

CURRICULUM MAP: Year 12, Autumn Term 1

Term Autumn 12 weeks	Mastery Year 12
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1.1 Holders of information, i.e.:

- categories of holders (individual citizens, businesses, educational institutions, governments, charities, healthcare services and community organisations)
- location (e.g. developing country, developed country, urban, rural, home, workplace)
- comparison of technologies available and access issues across the global divide (e.g. between developed and developing countries)

1.2 Types of information storage media, i.e.:

- paper (e.g. forms, handwritten notes, maps, telephone directories)
- optical media (e.g. CD and DVD)
- magnetic media (e.g. magnetic hard drives and tapes)
- solid state media (e.g. SSD hard drives, memory cards)
- characteristics
- purpose
- advantages and disadvantages

1.3 Types of information access and storage devices, i.e.:

- handheld device (e.g. small tablet, smart phone, wearable device, eBook readers)
- portable devices (e.g. laptop, large tablet)
- fixed devices (e.g. desktop computer, smart TV, games consoles)
- shared devices (e.g. database server, data centre, cloud storage devices)
- characteristics
- purpose
- advantages and disadvantages

CURRICULUM MAP: Year 12, Autumn Term 1

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests Homework Microsoft Teams Revisiting, revising, remembering opportunities Starters Exam paper questions DATA: Year 12 Data snapshot	<p><u>Topic:</u> Unit 2 Global Information</p> <p><u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers</p> <p><u>Assessments:</u> Mock paper and practice questions.</p> <p><u>Endpoint:</u> Students will understand where information is held globally and how it is transmitted.</p>

1.4 The internet, i.e.:

- a network of interconnected networks, spanning the world
- internet connections o type (e.g. copper-cable, optical-fibre, satellite, microwave, mobile data networks) o characteristics (e.g. speed, range (distance), storage capacity)

1.5 World Wide Web (www) technologies, i.e.:

- types of networks that use www software: internet (e.g. public, open access) intranet (e.g. private, closed access) extranet (e.g. private, part shared access) comparison of networks (e.g. suitability for given uses, issues related to access to the network)
- characteristics of networks
- purpose of networks

1.6 Information formats, i.e.:

- webpages (static and dynamic)
- blogs
- podcasts
- streamed audio and video (e.g. internet radio, catch-up TV)
- social media channels (e.g. Twitter, LinkedIn, discussion boards)
- document stores (upload and download)
- RSS feeds: purpose & accessibility

1.7 Advantages:

- for individuals (e.g. speed of personal communication, easy access to large amounts of information for research, access to internet banking 24/7)
- for organisations (e.g. share large amounts of information quickly between different countries; charity websites accepting donations 24/7)

1.8 Disadvantages:

- for individuals (e.g. potential for identity theft, cost of data connection)
- for organisations (e.g. threats caused by malicious attacks, cost of maintaining websites and data stores)

CURRICULUM MAP: Year 12, Autumn Term 1

Term Autumn 12 weeks	Mastery Year 12
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2.1 Information styles and their uses, i.e.:

- text (different character sets, e.g. Western, Cyrillic, Arabic, etc.)
- graphic (e.g. logo, photograph, diagram)
- video (e.g. instructions on how to carry out a software update, live broadcast of a music festival)
- animated graphic (e.g. pop-up book character, operation of the human heart)
- audio (e.g. spoken instructions, music track)
- numerical (e.g. profit, date and time)
- Braille text (e.g. written report printed on a Braille printer)
- tactile images (e.g. NASA's Hubble Space Telescope images converted into tactile images for people who cannot explore the images by sight)
- subtitles (e.g. translated speech for a film in a foreign language)
- boolean (e.g. yes or no answer on a form)
- tables and spreadsheets (e.g. simple database tables and spreadsheets) • charts and graphs (e.g. identifying trends, making comparisons)

2.2 Information classification, i.e.:

- sensitive
- non-sensitive
- private
- public
- personal

2.4 Information management, i.e.:

- business
- confidential
- classified
- partially anonymised
- completely anonymised
- impacts on different stakeholders

CURRICULUM MAP: Year 12, Autumn Term 1

2.3 Quality of information, i.e.:

- characteristics (e.g. valid, bias, reliable, comparable)
- importance of good quality information to stakeholders (e.g. innovation, agility, improved strategic decision making and focus)
- consequences of poor quality information on stakeholders (e.g. misinformation, reputational damage)

2.3 Quality of information, i.e.:

- collecting, storing and retrieving (e.g. adding a new member to a cycling club membership database)
- manipulating and processing (e.g. producing a graph from a table of data)
- analysing (e.g. looking for patterns in annual rainfall in an area)
- securing (e.g. storing patient records on an encrypted hard drive)
- transmitting (e.g. posting a printed school report to a parent)
- impact on individuals and organisations (e.g. additional costs associated with keeping sensitive information secure)

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests Homework Microsoft Teams Revisiting, revising, remembering opportunities Starters Exam paper questions DATA: Year 12 Data snapshot	<p><u>Topic:</u> Unit 2 Global Information</p> <p>Understand the styles, classification and the management of global information.</p> <p><u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers</p> <p><u>Assessments:</u></p> <p>Mock paper and practice questions.</p> <p><u>Endpoint:</u></p> <p>Students are able to understand the styles, classification and the management of global information.</p>

CURRICULUM MAP: Year 12, Autumn Term 1

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3.1 Data versus information, i.e.:

- data-raw, unorganised facts that needs to be processed information-data which is processed, organised and structured into a meaningful context.

3.2 Categories of information used by individuals, i.e.:

- communication (e.g. to send an email to a relation living overseas)
- education and training (e.g. by a student to check their current grades on a hand written feedback sheet from their teacher)
- entertainment (e.g. to read a film review in a magazine)
- planning (e.g. to use a shared electronic diary to arrange meeting dates)
- financial (e.g. to use a bank statement to help plan saving for a holiday)
- research (e.g. to look up a recipe online)
- location dependent (e.g. to search for emergency dental care when on holiday)
- benefits and limitations

3.3 Categories of information used by organisations, i.e.:

- knowledge management and creation (e.g. to create an accurate model of key markets)
- management information systems (MIS) (e.g. to monitor staff training in a hospital; the location and contact details of each charity worker in a disaster area; personnel record of all staff)
- marketing, promotion and sales (e.g. to identify patterns or trends in sales figures)
- financial analysis and modelling (e.g. to determine the top selling products; cash flow each week over a year)
- contact management (e.g. to keep track of appointments at a doctor’s surgery)
- decision making (e.g. to decide the number of tents to be sent to a disaster area by a charity; the percentage of faulty items made each month by a manufacturer)
- internal and external communication (e.g. to inform all staff of office closures over the Christmas period)
- big data, i.e.: o any data that is either too large or too complex for traditional data analysis techniques to be used, e.g. the annual web clicks of a major online retailer, health data on the population of an entire country
- benefits and limitations

CURRICULUM MAP: Year 12, Autumn Term 2

Term Autumn 12 weeks	Mastery Year 12
<p>Literacy foci</p> <p>Reading skills</p> <p>Terminology and vocabulary</p> <p>Spelling tests</p> <p>Homework</p> <p>Microsoft Teams</p> <p>Revisiting, revising, remembering opportunities</p> <p>Starters</p> <p>Exam paper questions</p> <p>DATA:</p> <p>Year 12 Data snapshot</p>	<p><u>Topic:</u> Unit 2 Global Information</p> <p>Understand the styles, classification and the management of global information.</p> <p><u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers</p> <p><u>Assessments:</u></p> <p>Mock paper and practice questions.</p> <p><u>Endpoint:</u></p> <p>Students understand the use of global information and the benefits to individuals and Organisations.</p>

3.4 Stages of data analysis, i.e.:

- identify the need (e.g. what information is needed? what do we want to find out?)
- define scope (e.g. content, detail, timescales, constraints)
- identify potential sources (e.g. sales figures, customer surveys)
- source and select information (e.g. determine accuracy and reliability of sources, selecting the best)
- select the most appropriate tools (e.g. charts, graphs, regression, trend analysis)
- process and analyse data (e.g. set up a spreadsheet to produce a graph) • record and store information (e.g. write a report based on the results of the processing)
- share results (e.g. send the report to stakeholders)

3.5 Data analysis tools, i.e.:

- data tables (e.g. a database table of patients)
- visualisation of data (e.g. a pie chart showing sales of five leading trainers)
- trend and pattern identification (e.g. a line graph of last year's sales per month)
- data cleaning (e.g. removing customers who have not made a purchase in the last two years)

3.5 Data analysis tools, i.e.:

- geographic information system/location mapping (e.g. tracking the movement of shipping containers around the world)

3.6 Information system structure, i.e.:

- open systems
- closed systems
- characteristics
- benefits and limitations

CURRICULUM MAP: Year 12, Autumn Term 2

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 2 Global Information
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Mock paper and practice questions.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students understand the legal and regulatory framework governing the storage and use of global information .

4.1 UK legislation and regulation relating to the storage and use of information, i.e.:

- current UK legislation and regulation:
 - o Data Protection Act (DPA) 1998
 - o Regulation of Investigatory Powers Act (RIPA) 2000
 - o Protection of Freedoms Act 2012
 - o Privacy and Electronic Communications Regulations 2003 (amended 2011)
 - o Freedom of Information Act 2000
 - o Computer Misuse Act 1990
 - o Information Commissioner’s Office (ICO) codes of practice
 - o Copyright, Designs and Patents Act 1988
 - o Equality Act (EQA) 2011
- impact and consequences of UK legislation and regulation on organisations operating in the UK and the way they handle information and individuals’ personal data
- actions that can be taken by organisations to comply with legislation and regulatory requirements

4.2 Global information protection legislation and regulation, i.e.:

- regulation relating to data protection outside the UK (e.g. USA, France, Far East and Africa)
- comparison between data protection legislation and regulation in different countries (e.g. similar legislation in many countries, but not all)
- UN Convention on the Rights of Persons with Disabilities (UNCRPD):
 - o (e.g. the UNCRPD specifically recognises (under articles 9 and 21) that access to information, communications and services, including the internet, is a human right)

4.3 Green IT, i.e.:

- global requirements on organisations and individuals
- United Nations Climate Change Summits
- UK Government policy (e.g. Greening Government ICT Strategy (2011))
- reducing carbon footprint
- purpose (e.g. sustainability)
- benefits (e.g. enhanced brand image, reduced energy costs)

CURRICULUM MAP: Year 12, Autumn Term 2

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 2 Global Information
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Mock paper and practice questions.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students understand the process flow of information .

5.1 Information sources and data types, i.e.:

- internal source (e.g. internal financial reports, market analysis)
- external source (e.g. supplier price lists, financial report from a third party)
- primary data (e.g. reports direct from employees, foot measurements taken in a shoe shop)
- secondary data (e.g. survey results received from a market research organisation, interest rate charged on a loan from a bank)
- qualitative data (e.g. the colour of products, the names of employees)
- quantitative data (e.g. expiry date of medicines, the number of staff working in an organisation)
- purpose

5.2 Data flow diagrams (DFDs), i.e.:

- external entities
- processes
- data stores
- data flows
- standard symbols used
- connectivity rules for drawing Level 1 DFDs o at least one input or output for each external entity

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 2 Global Information
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Mock paper and practice questions.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students understand the principles of information security.

CURRICULUM MAP: Year 12, Autumn Term 2

6.1 Principles of information security, i.e.:

- confidentiality – information can only be accessed by individuals, groups or processes authorised to do so
- integrity – information is maintained, so that it is up to date, accurate, complete and fit for purpose
- availability – information is always available to and usable by the individuals, groups or processes that need to use it

6.2 Risks, i.e.:

- unauthorised or unintended access to data (e.g. espionage, poor information security policy)
- accidental loss of data (e.g. human error, equipment failure)
- intentional destruction of data (e.g. computer virus, targeted malicious attack)
- intentional tampering with data (e.g. fraudulent activity, hacking)

6.3 Impacts,, i.e.:

- loss of intellectual property
- loss of service and access
- failure in security of confidential information
- loss of information belonging to a third party
- loss of reputation
- threat to national security
- recent cases of failures of information security

6.4 Protection measures, i.e.:

- Policies, e.g.: o staff access rights to information
- responsibilities of staff for security of information
- disaster recovery
- information security risk assessment
- effectiveness of protection measures
- training of staff to handle information

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 2 Global Information
Homework Microsoft Teams	Revision
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
DATA: Year 12 Data snapshot	<u>Assessments:</u> Mock paper and practice questions.
	<u>Endpoint:</u> Students prepare for Mock, revision sessions.

CURRICULUM MAP: Year 12, Autumn Term 1

- 1.1 Holders of information, i.e.:
- 1.2 Types of information storage media, i.e.:
- 1.3 Types of information access and storage devices, i.e.:
- 1.4 The internet, i.e.:
- 1.5 World Wide Web (www) technologies, i.e.:
- 1.6 Information formats, i.e.:
- 1.7 Advantages:
- 1.8 Disadvantages:
- 2.1 Information styles and their uses, i.e.:
- 2.2 Information classification, i.e.:
- 2.4 Information management, i.e.:
- 2.3 Quality of information, i.e.:
- 2.3 Quality of information, i.e.:
- 3.1 Data versus information, i.e.:
- 3.2 Categories of information used by individuals, i.e.:
- 3.3 Categories of information used by organisations, i.e.:
- 3.4 Stages of data analysis, i.e.:
- 3.5 Data analysis tools, i.e.:
- 3.5 Data analysis tools, i.e.:
- 3.6 Information system structure, i.e.:
- 4.1 UK legislation and regulation relating to the storage and use of information, i.e.:
- 4.2 Global information protection legislation and regulation, i.e.:
- 4.3 Green IT, i.e.:
- 5.1 Information sources and data types, i.e.:
- 5.2 Data flow diagrams (DFDs), i.e.:
- 6.1 Principles of information security, i.e.:
- 6.2 Risks, i.e.:
- 6.3 Impacts,, i.e.:
- 6.4 Protection measures, i.e.:

Term Autumn 12 weeks	Mastery Year 12
<p>Literacy foci</p> <p>Reading skills</p> <p>Terminology and vocabulary</p> <p>Spelling tests</p> <p>Homework</p> <p>Microsoft Teams</p> <p>Revisiting, revising, remembering opportunities</p> <p>Starters</p> <p>Exam paper questions</p> <p>DATA:</p> <p>Year 12 Data snapshot</p>	<p><u>Topic:</u></p> <p>Unit 2 Global Information</p> <p>Revision</p> <p><u>Enrichment/life and work skills:</u></p> <p>Work with ICT dept / Network manager</p> <p>Brunel</p> <p>Visiting speakers</p> <p><u>Assessments:</u></p> <p>Mock paper and practice questions.</p> <p><u>Endpoint:</u></p> <p>Students prepare for Mock, revision sessions.</p>

CURRICULUM MAP: Year 12, Spring 1

- 1.1 Holders of information, i.e.:
- 1.2 Types of information storage media, i.e.:
- 1.3 Types of information access and storage devices, i.e.:
- 1.4 The internet, i.e.:
- 1.5 World Wide Web (www) technologies, i.e.:
- 1.6 Information formats, i.e.:
- 1.7 Advantages:
- 1.8 Disadvantages:
- 2.1 Information styles and their uses, i.e.:
- 2.2 Information classification, i.e.:
- 2.4 Information management, i.e.:
- 2.3 Quality of information, i.e.:
- 2.3 Quality of information, i.e.:
- 3.1 Data versus information, i.e.:
- 3.2 Categories of information used by individuals, i.e.:
- 3.3 Categories of information used by organisations, i.e.:
- 3.4 Stages of data analysis, i.e.:
- 3.5 Data analysis tools, i.e.:
- 3.5 Data analysis tools, i.e.:
- 3.6 Information system structure, i.e.:
- 4.1 UK legislation and regulation relating to the storage and use of information, i.e.:
- 4.2 Global information protection legislation and regulation, i.e.:
- 4.3 Green IT, i.e.:
- 5.1 Information sources and data types, i.e.:
- 5.2 Data flow diagrams (DFDs), i.e.:
- 6.1 Principles of information security, i.e.:
- 6.2 Risks, i.e.:
- 6.3 Impacts,, i.e.:
- 6.4 Protection measures, i.e.:

CURRICULUM MAP: Year 12, Spring Term 1

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 5 Virtual & Augmented Reality
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Ongoing assessment by LO.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students will understand virtual and augmented reality and how they may be used.

1.1. Virtual reality as a concept i.e.:

- pioneers of virtual and augmented reality e.g.:
 - o Douglas Engelbart
 - o Ivan Sutherland
 - o Tom Caudell and David Mizell
- uses of virtual and augmented reality e.g.:
 - o US Military Nuclear Defence systems
 - o pilot training
 - o Mattel “data glove”
 - o personal guidance system for visually impaired
 - o chameleon

1.2. Areas of use, e.g.:

- architecture
- business (marketing, service and planned maintenance)
- education (e.g. textbooks, skills development, remote collaboration)
- entertainment, leisure and the media (tourism, games, museums)
- health care and surgery (training, simulations)
- military (training, simulations)
- sport (live streaming of scores and other statistics, sponsorship images)

1.3. Possible impacts, i.e.:

- visualisation of designs
- simulations
- training
- demonstrations of concepts
- virtual tours

CURRICULUM MAP: Year 12, Spring Term 1 & 2

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 5 Virtual & Augmented Reality
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Ongoing assessment by LO.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students will be able to design virtual and augmented reality resources.

2.1. Technologies, i.e.:

- hardware
 - o processor
 - o display (e.g. handheld device, head mounted display, eyeglasses, head up display)
 - o sound (e.g. speakers, headphones)
 - o sensors (e.g. optical, accelerometer, GPS, compass, RFID)
 - o input devices (e.g. camera, microphone)
- software
 - o range of products available
 - o features of the software
 - o image registration
 - o Augmented Reality Mark-up Language

2.2. Design, i.e.:

- aims of the product (e.g. intended outcome, success criteria, information to be delivered, where the product is to be used)
- financial plan
- quality plan
- target audience (e.g. age, gender, income)
- nature of the product (e.g. single user product, multiuser product)
- content including resource plan
- design tools (e.g. storyboarding, mind mapping, mood boards)
- trigger image(s) and the stage(s) that follow on from the trigger being accessed.
- hardware and software requirements

CURRICULUM MAP: Year 12, Spring Term 2

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests Homework Microsoft Teams Revisiting, revising, remembering opportunities Starters Exam paper questions DATA: Year 12 Data snapshot	<p><u>Topic:</u> Unit 5 Virtual & Augmented Reality</p> <p><u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers</p> <p><u>Assessments:</u> Ongoing assessment by LO.</p> <p><u>Endpoint:</u> Students will be able to create a virtual or augmented reality resource.</p>

3.1. Develop, i.e.:

- create the trigger point of interest
- create the layer(s)/overlay(s)

3.2. Testing, i.e.:

- create a test plan
- testing during development
- end user testing
- review against original success criteria

3.3. Evaluation, i.e.:

- design stage:
has the project:
identified suitable success criteria
- project management stage:
has the project:
deviated from the original scope
deviated from the budget as defined in the financial plan
- creation stage:
has the project:
delivered business benefits identified in the business case
achieved the objectives in the terms of reference
deviated from forecast resource levels as per the resource plan
conformed to the management process as per the execution phase
- identify potential improvements for similar future projects

CURRICULUM MAP: Year 12, Summer Term 1

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 5 Virtual & Augmented Reality
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Ongoing assessment by LO.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students will be able to create a virtual or augmented reality resource.

3.1. Develop, i.e.:

- create the trigger point of interest
- create the layer(s)/overlay(s)

3.2. Testing, i.e.:

- create a test plan
- testing during development
- end user testing
- review against original success criteria

3.3. Evaluation, i.e.:

- design stage:
has the project:
identified suitable success criteria
- project management stage:
has the project:
deviated from the original scope
deviated from the budget as defined in the financial plan
- creation stage:
has the project:
delivered business benefits identified in the business case
achieved the objectives in the terms of reference
deviated from forecast resource levels as per the resource plan
conformed to the management process as per the execution phase
- identify potential improvements for similar future projects

CURRICULUM MAP: Year 12, Summer Term 2

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 5 Virtual & Augmented Reality
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Ongoing assessment by LO.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students will be able to create a virtual or augmented reality resource.

3.1. Develop, i.e.:

- create the trigger point of interest
- create the layer(s)/overlay(s)

3.2. Testing, i.e.:

- create a test plan
- testing during development
- end user testing
- review against original success criteria

3.3. Evaluation, i.e.:

- design stage:
has the project:
identified suitable success criteria
- project management stage:
has the project:
deviated from the original scope
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- creation stage:
has the project:
delivered business benefits identified in the business case
achieved the objectives in the terms of reference
deviated from forecast resource levels as per the resource plan
conformed to the management process as per the execution phase
- identify potential improvements for similar future projects

Term Autumn 12 weeks	Mastery Year 12
<p>Literacy foci Reading skills Terminology and vocabulary Spelling tests</p> <p>Homework Microsoft Teams</p> <p>Revisiting, revising, remembering opportunities Starters Exam paper questions</p> <p>DATA: Year 12 Data snapshot</p>	<p><u>Topic:</u> Unit 5 Virtual & Augmented Reality</p> <p><u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers</p> <p><u>Assessments:</u> Ongoing assessment by LO.</p> <p><u>Endpoint:</u> Students will be able to create a virtual or augmented reality resource.</p>

CURRICULUM MAP: Year 13, Autumn Term 1

3.1. Develop, i.e.:

- create the trigger point of interest
- create the layer(s)/overlay(s)

3.2. Testing, i.e.:

- create a test plan
- testing during development
- end user testing
- review against original success criteria

3.3. Evaluation, i.e.:

- design stage:
has the project:
identified suitable success criteria
- project management stage:
has the project:
deviated from the original scope
deviated from the budget as defined in the financial plan
- creation stage:
has the project:
delivered business benefits identified in the business case
achieved the objectives in the terms of reference
deviated from forecast resource levels as per the resource plan
conformed to the management process as per the execution phase
- identify potential improvements for similar future projects

Term Autumn 12 weeks	Mastery Year 12
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Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 5 Virtual & Augmented Reality
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities	<u>Assessments:</u> Ongoing assessment by LO.
Starters Exam paper questions	<u>Endpoint:</u> Students will be able to predict future applications for virtual and augmented reality.
DATA: Year 12 Data snapshot	

CURRICULUM MAP: Year 13, Autumn Term 1

4.1. Future uses, i.e.:

- possible developments of virtual and augmented reality and how these may impact on society. (e.g. advances in treating injuries or disease, leisure activities, the environment, the home and education).

4.2. Re-purposing, i.e.:

- how existing products may be re-purposed and used in wholly new ways
- benefits of repurposing using current examples of resources in new ways (e.g. medical uses in the field of animal welfare, training uses in the field of education)
- heads up display used to augmented learning in schools

Term Autumn 12 weeks	Mastery Year 12
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Literacy foci Reading skills Terminology and vocabulary Spelling tests Homework Microsoft Teams Revisiting, revising, remembering opportunities Starters Exam paper questions DATA: Year 12 Data snapshot	<p><u>Topic:</u> Unit 13 Social Media & Digital Marketing</p> <p><u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers</p> <p><u>Assessments:</u> Ongoing assessment by LO.</p> <p><u>Endpoint:</u> Students will be able to understand digital marketing.</p>
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CURRICULUM MAP: Year 12, Spring Term 1

1.1 The role of marketing within business, i.e.:

- market research
- raising awareness and affecting perception of need via promotion and advertising
- selling

1.2 Digital marketing as a business tool, i.e.:

- business establishment
- business growth
- business continuity

1.3 The tools of digital marketing, i.e.:

- social media types (e.g. publishing - blogging and wikis, sharing - videos, music, images, discussing, networking - social, business)
- email
- landing page optimisation
- banners and popups/unders
- SEO (search engine optimisation)
- paid and organic search results
- channels (e.g. Facebook, paid advertisements on search engines, Twitter advertisements)

1.4 Digital marketing

- strategies towards identified marketing goals, i.e.:
 - o identifying potential customers and markets
 - o setting short term and long term goals (e.g. raise awareness, increase sales, gaining information)
 - o creating a marketing and sales funnel (e.g. awareness, interest, action)
 - o developing a call to action
 - o gathering data
 - o creating traffic

1.5 Digital marketing life cycles

- stages of the digital marketing life cycle (e.g. setup, traction, positioning, expansion, viral growth)

CURRICULUM MAP: Year 12, Spring Term 1

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 13 Social Media & Digital Marketing
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Ongoing assessment by LO.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students will be able to understand the use of social media in a business.

2.1 Research, i.e.:

- primary data
- secondary data

2.2 Data as a resource, i.e.:

- data management
- sources of data (e.g. relationship status, cookies)
- collection of data
- analysis of data (e.g. establishing patterns and trends)
- sale of data

2.3 Use of data, i.e.:

- identification of gaps in markets
- identification of changes in customer habits and tastes
- targeted marketing
- planning campaigns

2.4 Communication, i.e.:

- between staff
- with customers (e.g. one way and two way)

2.5 Legislation and business policy and practice i.e.:

- legislation (e.g. Data Protection Act 1998, other legal restrictions (e.g. specific restrictions due to the nature of a person's job),
- business policy and practice (e.g. acceptable use policy, social media policy, recruitment policy)

2.6 Ethical and moral issues, i.e.:

- bias (e.g. personal opinion versus fact, sponsorship, product placement, declaration of interest)
- integrity (e.g. not disparaging the competition, honesty/misrepresentation, response to customers, misuse of free expertise (e.g. competitions))

CURRICULUM MAP: Year 12, Spring Term 2

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests Homework Microsoft Teams Revisiting, revising, remembering opportunities Starters Exam paper questions DATA: Year 12 Data snapshot	<p><u>Topic:</u> Unit 13 Social Media & Digital Marketing</p> <p><u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers</p> <p><u>Assessments:</u> Ongoing assessment by LO.</p> <p><u>Endpoint:</u> Students will be able to plan content and propose appropriate social media channels for digital marketing campaigns.</p>

3.1 Social media channels

(e.g., Twitter, Instagram, Facebook, Snapchat, blogs (e.g. including Wikipedia))

3.2 Potential outcomes, i.e.:

- planning techniques:
- o positive outcomes:

increased market share (e.g. customer engagement, customer awareness, brand awareness)
 increased customer loyalty (e.g. impact of social media on the digital marketing life cycle)
 improved customer service (e.g. ease of access to customer data, speed and quality of advice and information to the customer via social media)
 effect on product life cycle (e.g. stages of the product life cycle and potential positive and negative impacts of social media)
 financial impacts

- potential negative impact of social media on businesses and individuals:

- o work rate
- o bullying
- o threats
- o employability
- o business image

3.3 Possible restrictions, i.e.:

- legislation
- technological constraints
- skills constraints

3.4 Target audience, i.e.:

- market segmentation

CURRICULUM MAP: Year 12, Spring Term 2

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 13 Social Media & Digital Marketing
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Ongoing assessment by LO.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students will be able to develop social media digital marketing campaigns.

4.1 Features of a social media marketing campaign, i.e.:

- appropriate staffing mix
- clear objectives and shared targets
- core message
- unique selling point
- company image
- social media channels
- timescales and review dates
- social marketing funnel
- social media tools e.g.:
 - o social media measurement
 - o social network aggregation
 - o social media mining

4.2 Campaign considerations, i.e.:

- business objectives
- alignment with wider organisational marketing programme
- format and restrictions on content
- channels
- frequency
- image
- bias
- benefits
- disadvantages

CURRICULUM MAP: Year 12, Spring Term 2

Term Autumn 12 weeks	Mastery Year 12
<p>Literacy foci Reading skills Terminology and vocabulary Spelling tests</p> <p>Homework Microsoft Teams</p> <p>Revisiting, revising, remembering opportunities Starters Exam paper questions</p> <p>DATA: Year 12 Data snapshot</p>	<p><u>Topic:</u> Unit 13 Social Media & Digital Marketing</p> <p><u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers</p> <p><u>Assessments:</u> Ongoing assessment by LO.</p> <p><u>Endpoint:</u> Students will be able to develop social media digital marketing campaigns.</p>

4.3 Effectiveness of digital marketing campaigns, i.e.:

- comparison to original targets
- feedback from the client or other suitable source
- assessment against measurable outcomes e.g.
 - o effect on sales and income (maintained, increased or decline slowed)
 - o effects on customer loyalty (increased repeat sales)
 - o effects on customer service (feedback to surveys, responses to popups)

4.4 Recommend improvements to business processes to support digital marketing campaigns, i.e.:

- analyse assessment of measurable outcomes
- review business processes in order to identify source of failure or short coming
- make recommendations to identified business processes in order to improve effectiveness of digital marketing campaigns

CURRICULUM MAP: Year 12, Summer Term 1

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 16 Developing a Smarter Planet
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Ongoing assessment by LO.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students will be able to understand what is meant by a Smarter Planet.

1.1 Evolution of a Smarter Planet, i.e.:

- improvements to original developments e.g.:
 - o radio to DAB
 - o telephones to mobile
 - o manual to automated machinery
 - o greener IT
- purpose to, e.g.:
 - o speed processes
 - o improve efficiency
 - o reduce waste and inefficiency
 - o harness natural resources
- human factors, e.g.:
 - o reduce manpower requirements
 - o improve quality of life

1.2 Importance for a global society, i.e.:

- principles, e.g.:
 - o information
 - o instrumented
 - o interconnected
- focus/objectives (e.g. why do we need it?)

CURRICULUM MAP: Year 12, Summer Term 1

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 16 Developing a Smarter Planet
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Ongoing assessment by LO.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students will be able to understand what is meant by a Smarter Planet.

1.3 Impacts, i.e.:

- environmental, e.g.:
pollution
food miles
increased energy consumption
- ethical, e.g.:
health and transplants
the internet
data privacy
- social, e.g.:
acceptance
communication
exposure to threat
reduced face-to-face communication
- individuals, e.g.:
health
labour saving
time saving
flexibility
accessibility
- life styles, e.g.:
health
comfort
travel
communication
social

CURRICULUM MAP: Year 12, Summer Term 2

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 16 Developing a Smarter Planet
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Ongoing assessment by LO.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students will be able to understand what is meant by a Smarter Planet.

1.4 Business sectors, e.g.:

- healthcare
- environmental
- engineering
- manufacturing
- IT, retail
- electronics
- transport

1.5 Sectors with applications of a Smarter Planet, e.g.:

- banking
- construction
- towns and cities
- computing and data storage
- education
- energy
- healthcare
- infrastructures
- oil
- products
- regulatory bodies
- retail
- telecoms
- transport/traffic
- water
- e-commerce
- environmental

CURRICULUM MAP: Year 12, Summer Term 2

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 16 Developing a Smarter Planet
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Ongoing assessment by LO.
DATA: Year 12 Data snapshot	<u>Endpoint:</u> Students will be able to propose ways to extend the scope of the Smarter Planet .

2.1 Features for extension to Smarter Planet developments, i.e.:

- use of information
- instrumented, i.e.:
measure, sense and monitor conditions
- interconnected, i.e.:
people, systems and objects can communicate in new ways
- intelligent, i.e.:
infuse intelligence into systems and ways of working
models to manage massive amounts of data generated by the end-user devices
sensors

• use of analytics, i.e.:

to translate data into making systems, processes and infrastructures more efficient, more productive and responsive and ultimately, making them smarter

2.2 Feasibility study, i.e.:

- scope
- cost/benefit analysis
- viability
- technology
- stakeholder and global impact

CURRICULUM MAP: Year 12, Year 13, Autumn Term 1

Term Autumn 12 weeks	Mastery Year 12
<p>Literacy foci Reading skills Terminology and vocabulary Spelling tests</p> <p>Homework Microsoft Teams</p> <p>Revisiting, revising, remembering opportunities Starters Exam paper questions</p> <p>DATA: Year 12/13 Data snapshot</p>	<p><u>Topic:</u> Unit 16 Developing a Smarter Planet</p> <p><u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers</p> <p><u>Assessments:</u> Ongoing assessment by LO.</p> <p><u>Endpoint:</u> Students will be able to propose ways to extend the scope of the Smarter Planet .</p>

2.3 Concept proposal, i.e.:

- identification of concept, i.e.:
purpose
Objectives
- stakeholders, i.e.:
people involved
companies
manufacturers
- requirements, i.e.:
technology
sectors
- deliverables, i.e.:
what is achievable
benefits

CURRICULUM MAP: Year 13, Autumn Term 2

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 16 Developing a Smarter Planet
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Ongoing assessment by LO.
DATA: Year 12/13 Data snapshot	<u>Endpoint:</u> Students will be able to present, refine and evaluate Smarter Planet Concepts.

3.1 Present concept proposal, i.e.:

- audio/video
- questionnaire
- interview
- pitch
- focus group

3.2 Refining concept proposal, e.g.:

- taking account of stakeholder feedback
- consider viability of options
- reduce costs
- extend scope

3.3 Evaluation of concept proposal to sustainability of the Smarter Planet, i.e.:

- speed processes
- improve efficiency
- reduce waste and inefficiency
- harness natural resources
- reduce manpower requirements
- improve quality of life

CURRICULUM MAP: Year 13, Autumn Term 2

Term Autumn 12 weeks	Mastery Year 12
Literacy foci Reading skills Terminology and vocabulary Spelling tests	<u>Topic:</u> Unit 16 Developing a Smarter Planet Revision
Homework Microsoft Teams	<u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers
Revisiting, revising, remembering opportunities Starters Exam paper questions	<u>Assessments:</u> Ongoing assessment by LO.
DATA: Year 12/13 Data snapshot	<u>Endpoint:</u> Students prepare for Mock, revision sessions.

1.1 Evolution of a Smarter Planet, i.e.:

1.2 Importance for a global society, i.e.:

1.3 Impacts, i.e.:

1.4 Business sectors, e.g.:

1.5 Sectors with applications of a Smarter Planet, e.g.:

2.1 Features for extension to Smarter Planet developments, i.e.:

2.2 Feasibility study, i.e.:

2.3 Concept proposal, i.e.:

3.1 Present concept proposal, i.e.:

3.2 Refining concept proposal, e.g.:

3.3 Evaluation of concept proposal to sustainability of the Smarter Planet, i.e.:

CURRICULUM MAP: Year 13, Autumn Term 2

Term Autumn 12 weeks	Mastery Year 12
<p>Literacy foci Reading skills Terminology and vocabulary Spelling tests</p> <p>Homework Microsoft Teams</p> <p>Revisiting, revising, remembering opportunities Starters Exam paper questions</p> <p>DATA: Year 12/13 Data snapshot</p>	<p><u>Topic:</u> Unit 1 The Fundamentals of IT</p> <p>Revision</p> <p><u>Enrichment/life and work skills:</u> Work with ICT dept / Network manager Brunel Visiting speakers</p> <p><u>Assessments:</u> Mock paper and practice questions.</p> <p><u>Endpoint:</u> Students prepare for Mock, revision sessions.</p>

- 1.1 Computer hardware, i.e.:
- 1.2 Computer components, i.e.:
- 1.3 Types of computer system, i.e.:
- 1.4 Connectivity methods, i.e.:
- 1.5 Communications hardware, i.e.:
- 1.6 Hardware troubleshooting, i.e.:
- 1.7 Units of measurement, i.e.:
- 1.8 Number systems, i.e.:
- 1.9 Number conversion, i.e.:
- 2.1 Types of software, i.e.:
- 2.2 Applications software, i.e.:
- 2.3 Utility software (i.e. backup, anti-virus, compression):
- 2.4 Operating systems, i.e.:
- 2.5 Communication methods, i.e.:
- 2.6 Software troubleshooting, i.e.:
- 2.7 Protocols, i.e.:
- 3.1 Types of servers, i.e.:
- 3.2 Virtualisation, i.e.:
- 3.3 Networking characteristics, i.e.:
- 3.4 Connectivity methods, i.e.:
- 3.5 Business systems, i.e.:
- 4.1 Communication skills, i.e.:
- 4.2 Communication technology, i.e.:
- 4.3 Personal attributes.:
- 4.4 Ready for work, i.e.:
- 4.5 Job roles, i.e.:
- 4.6 Professional bodies (e.g. BCS):
- 4.7 Industry certification:
- 5.1 Ethical issues, i.e.:
- 5.2 Operational issues, i.e.:
- 5.3 Threats, i.e.:
- 5.4 Physical security, i.e.:
- 5.5 Digital security, i.e.:
- 5.6 Safe disposal of data and computer equipment, i.e.: