Cares Curriculum: Computing

Systems and Networks Progression Map KS1

National Curriculum

Pupils should be taught to:

- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school

Y1 Technology Around Us

Vocabulary

technology
computer
mouse
trackpad
keyboard
screen
double-click
typing

Skills

- Classify what is and isn't technology
- Explain how technology helps us
- Switch a computer on and log on
- Mouse skills – double click, click and drag
- Keyboard skills – type, use curser arrows to edit text
- Save work to a file
- Open a saved file

Knowledge

- Identify and name the main parts of a computer (screen, keyboard, mouse, base unit).
- Know what a keyboard is for.
- Know why we save work and why it is important to save it with a sensible name.

Y2 Information Technology Around Us

Vocabulary

Information technology (IT), computer,
barcode, scanner/scan

Skills

- identify examples of computers and information technology
- sort school information technology by what it is used for
- sort information technology by where it is found

Knowledge

- a computer is part of information technology
- some information technology can be used in more than one way *(e.g. can be used to do a job or to talk to people)*
- know how information technology devices work together (e.g. Barcode scanner, till. Bank card, chip and PIN card reader, till. Traffic light, crossing button, crossing signal)
- know why we use information technology (give examples)
- understand rules for information technology and how to keep safe

Systems and Networks Progression Map LKS2

National Curriculum

Pupils should be taught to:

- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

Y3 Connecting Computers

Vocabulary

Digital device
input
process
output
Program
digital/ non-digital
Connection
network
network switch
Server
wireless access point (WAP)
Network cables
network sockets

Knowledge

- a digital device accepts inputs and outputs
- why we need a network switch
- a computer network is made up of a number of devices
- the benefits of a computer network
- computers connected together make a network
- connecting networks makes the internet

Skills

- follow a process (give examples)
- classify input and output devices
- describe a simple process
- design a digital device
- recognise similarities and differences between digital and non-digital devices
- recognise different connections (give examples)
- demonstrate how information is passed between devices
- identify network devices

Y4 The Internet

Vocabulary

Internet
network
router
network security
Network switch
server
wireless access point (WAP)
Website
web page/web address/ web browser
routing
World Wide Web
links
files
download

Knowledge

- The internet is a network of networks
- Why a network needs protecting
- The internet enables websites and webpages to be viewed
- The internet is connected by lots of routers
- The world wide web (WWW) is part of the internet
- What can be shared on WWW
- Websites are hosted in large data centres

Skills

- demonstrate how information is shared across the internet
- Access, add content and share on the WWW
- Explain why some information online may not be honest/accurate/legal
- think carefully before sharing content

Systems and Networks Progression Map UKS2

National Curriculum

Pupils should be taught to:

- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

Y5 Systems and Searching

Vocabulary

System, connection, digital, **input**, **process**, **output**, search, search engine, refine, Index, crawler, bot, ordering, ranking, links, **algorithm**, search engine optimisation (SEO), searching, web crawler, content creator, selection, ranking

Knowledge

- A system is a part of a set of interconnected parts working together
- Devices and processes are connected in systems
- How search engines select results and use an index
- Search engine results are stacked
- Search engines can be influenced
- Search engines have limitations
- Search engines make money

Skills

- Describe the input, process and output of a digital system
- Evaluate the benefits of a computer system
- Use the internet for find specific information
- Refine web searches
- Give examples of criteria used by search engines to rank results

Y6 Communication and Collaboration

Vocabulary

Communication, protocol, **data**, address, Internet Protocol (IP) address, Domain Name Server (DNS), packet, header, data payload, chat, explore, slide deck, reuse, remix, collaboration, communication, **internet**, public, private, one-way, two-way, one-to-one, one-to-many

Knowledge

- What an IP address is
- Data is sent in packets
- Connections between computers allow access to shared files
- internet enabled devices allow people to work together virtually
- Different types of media can be shared through the internet
- Communication and collaboration can be public or private.

Skills

- Choose suitable methods of internet communication and collaboration for given purposes
- Decide what you should and shouldn't share online