Yellow Technology

Computing

-H1

--[] Students recognise that a range of technology is used in places such as homes and schools

--[] Students select technology for particular purposes

--[] Students explore on screen activities – clicking cause and effect

--[] Create a simple algorithm for a floor robot eg Bee Bot

--[] Move the mouse with some control

-H2

--[] Point and click a mouse

--[] Click and drag with a mouse

--[] Use a paint package to draw a picture

--[] Find letters of their name on a keyboard and type name

--[] Identify some simple personal information

--[] Recognise some rules to keep them safe when using technology

--[] Say no or stop if something happens online that they are not happy with and tell an adult

--[] Talk about how to use the internet to find things out

--[] Identify devices to access the internet

-H3

--[] Give examples of technology in and out of school

--[] Save work on simple programs eg Purple Mash

--[] Recognise some people online may upset or embarrass

--[] Describe what information can and cannot go online, begin to give reasons why

--[] Understand code are a set of instructions to make something happen

--[] Know that code is a program for a computer

--[] Find problems in a simple set of code

--[] Retrieve saved work

--[] Follow instructions to access online resources

-H4

--[] Retrieve information using a search engine

--[] Explain how to stay safe when using technology

--[] Know how to report inappropriate content

--[] Recognise information put online stays there and can be copied

--[] Navigate a simple web page to find information needed

--[] Know computer need precise instructions in the form of code

--[] Explain code is a set of instructions

--[] Identify and correct some coding errors

--[] Add clipart to documents (eg Purple Mash/Word)

--[] Add photos to documents

--[] Compose and send an email

-**H5**

--[] Understand importance of safety when emailing

--[] Know how to report unacceptable content

--[] Explain differences between bullying and cyberbullying

--[] Recognise spending too much time online can have a negative effect

--[] Use logic to explain what will happen next in code

--[] Solve problems by splitting into smaller parts

--[] Use and edit a program to achieve an outcome involving code

--[] Read others code and predict what might happen

--[] Collect and present data using software (2database/Excel)

--[] Use the right software for a task

--[] Attach content to emails as attachments

-**H6**

--[] Explain online identity can be different to that in real life

--[] Describe strategies for safe and fun experiences online

--[] Understand others can pretend to be other people online

--[] Understand when copying work online this can cause problems without permission

--[] Use key phrases in search engines

--[] Debug own programs

--[] Use timers in code to repeat effects

--[] Make user inputs and outputs in code

--[] Create a short animation on a storyboard

--[] Take a series of pictures to form an animation

-H7

--[] Have a secure knowledge of online safety rules and begin to apply them

--[] Create and use strong and secure passwords

--[] Apply knowledge of coding to create a game around a theme

--[] Make improvements to a document based upon feedback from another

--[] Search for information on a database

--[] Create a database around a topic

--[] Contribute to a database

--[] Search a database to answer a question

-H8

--[] Describe how media can shape ideas about gender

--[] Describe how to capture bullying content as evidence (screen grab, url, profile) and share with others who can help

--[] Describe systems regulating age related content (PEGI, parental warnings) and know why they are used

--[] Make good attempts to read code and predict what will happen in a program

--[] Explain the difference between the internet and world wide web

--[] Know what WAN and LAN are and describe how they are used to access the internet

--[] Design and create own blogs

--[] Consider audience and add information to blogs based upon this

--[] Choose appropriate software for questions they want to ask

Design Technology

-H1

--[] Explain what they are making and which materials they are using.

--[] Select materials from a limited range that will meet a simple design criteria e.g. shiny.

--[] Select and name the tools needed to work the materials e.g. scissors for paper.

--[] Explore ideas by rearranging materials.

--[] Describe simple models or drawings of ideas and intentions.

--[] Discuss their work as it progresses.

--[] Start to build structures, joining components together.

--[] Look at simple hinges, wheels and axles.

--[] Begin to use scissors to cut straight and curved edges and hole pinches to punch holes.

--[] Explore using/ holding basic tools such as a saw or hammer.

--[] Use adhesives to join material.

--[] Say what they like and do not like about items they have made and attempt to say why.

--[] Begin to talk about their designs as they develop and identify good and bad points.

--[] Start to talk about changes made during the making process.

-H2

--[] Begin to draw on their own experience to help generate ideas and research conducted on criteria.
• Begin to understand the development of existing products: Explain what they are for, how they work, what materials have been used.

--[] Start to suggest ideas and explain what they are going to do.

--[] Understand how to identify a target group for what they intend to design and make based on a design criteria.

--[] Begin to develop their ideas through talk and simple drawings

--[] Begin to make their design using appropriate techniques.

--[] Begin to build structures, exploring how they can be made stronger, stiffer and more stable.

--[] Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

--[] With help measure, mark out, cut and shape a range of materials.

--[] Explore using tools e.g. scissors and a hole punch safely.

--[] Begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape.

--[] Attempt to make their model stronger if it needs to be

--[] Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria).

--[] When looking at existing products explain what they like and dislike about the Products and why.

--[] Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make next time.

-H3

--[] Begin to develop their design ideas through discussion, observation, drawing and modelling.

--[] Identify a purpose for what they intend to design and make.

--[] Understand how to identify a target group for what they intend to design and make based on a design criteria.

--[] Develop their ideas through talk and drawings and label parts.

--[] Make templates and mock ups of their ideas in card and paper or using ICT (if relevant)

--[] Begin to explain why they chose a certain material

--[] Begin to select tools and materials; use correct vocabulary to name and describe them.

--[] Build structures, exploring how they can be made stronger, stiffer and more stable.

--[] With help measure, cut and score with some accuracy.

--[] Learn to use hand tools safely and appropriately.

--[] Start to assemble, join and combine materials in order to make a product – e.g. a pop up card

--[] Demonstrate how to cut, shape and join fabric to make a simple product.

--[] Use basic sewing techniques.

--[] Start to choose and use appropriate finishing techniques based on own ideas.

--[] Be able to join things (materials/ components) together in different ways

--[] Measure materials to use in a model

--[] Attach features to a vehicle (eg axel and wheels)

--[] Join fabric using a running stitch, glue and tape

--[] Evaluate their work against their design criteria.

--[] Look at a range of existing products explain what they like and dislike about Products and why.

--[] Start to evaluate their products as they are developed

--[] With confidence talk about their ideas

-H4

--[] Start to order the main stages of making a product.

--[] Identify a purpose and establish criteria for a successful product.

--[] Understand how well products have been designed, made, what materials have been used and the construction technique.

--[] Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.

--[] Start to understand whether products can be recycled or reused

--[] Put together a step-by-step plan which shows the order and also what equipment and tools they need

--[] Select a wider range of tools and techniques for making their product i.e. construction materials and kits, textiles, food ingredients, mechanical components and electrical components.

--[] Explain their choice of tools and equipment in relation to the skills and techniques they will be using.

--[] Start to understand that mechanical and electrical systems have an input, process and output.

--[] Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement.

--[] Know how simple electrical circuits and components can be used to create functional products.

--[] Measure, mark out, cut, score and assemble components with more accuracy.

--[] Start to work safely and accurately with a range of simple tools

--[] Use equipment safely

--[] Attempt to make sure that their product looks attractive

--[] Make choices of material both for its appearance and qualities

--[] Make a product which uses both electrical and mechanical components

--[] Work accurately to make cuts and holes – e.g. to measure and then use equipment to cut

--[] Try alternative ways of fixing something if the first attempt is not successful

--[] Join fabrics using a running stitch

--[] Create and use simple gears, pulleys, cams, levers and linkages

--[] Build models incorporating circuits with buzzers and bulbs

--[] Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose

-H5

--[] Confidently make labelled drawings from different views showing specific features.

--[] Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail.

--[] Identify the strengths and areas for development in their ideas and products.

--[] Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.

--[] Start to join and combine materials and components accurately in temporary and permanent ways.

--[] Know how mechanical systems such as cams or pulleys or gears create movement.

--[] Understand how more complex electrical circuits and components can be used to create functional products.

--[] Understand how to reinforce and strengthen a 3D framework.

--[] Sew using a range of different stitches to weave and knit

--[] Demonstrate how to measure, tape or pin, cut and join fabric with some accuracy.

--[] Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.

--[] Measure carefully and show initiative to check so as not to make mistakes

--[] Persevere with their product even though their original idea might not have worked

--[] Use pulleys, levers and linkages in their product

--[] Build a model which incorporates a motor

--[] Use a glue gun with close supervision (one to one)

--[] Use a simple pattern to create a life-sized item of clothing

--[] Begin to explain how they can improve their original designs

--[] Evaluate their product, thinking of both appearance and the way it works

-H6

--[] With growing confidence apply a range of finishing techniques, including those from art and design

--[] Start to understand how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.

--[] Produce a range of ideas after collecting information

--[] Explain how their product will appeal to the audience

--[] Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.

--[] Understand how mechanical systems such as cams or pulleys or gears create movement.

--[] Know how more complex electrical circuits and components can be used to create functional products

--[] Understand that mechanical and electrical systems have an input, process and output

--[] Demonstrate how to use skills in using different tools and equipment safely and accurately

--[] With growing confidence cut and join with accuracy to ensure a good-quality finish to the product

--[] Use a range of tools and equipment expertly

--[] Make up a prototype first

--[] Evaluate appearance and function against original criteria

-H7

--[] Plan the order of their work, choosing appropriate materials, tools and techniques.

--[] Suggest alternative methods of making if the first attempts fail. Identify the strengths and areas for development in their ideas and products.

--[] Know how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.

--[] Use market research to inform plans

--[] Show consideration to culture and society in a design

--[] Work within a given budget

--[] Use tools safely and accurately

--[] Assemble components to make working models.

--[] Aim to make and to achieve a quality product.

--[] With confidence pin, sew and stitch materials together to create a product.

--[] Demonstrate when make modifications as they go along.

--[] Construct products using permanent joining techniques.

--[] Understand how mechanical systems such as cams or pulleys or gears create movement.

--[] Know how more complex electrical circuits and components can be used to create functional products

--[] Use a craft knife, cutting mat and safety ruler with close supervision

--[] Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests.

--[] Evaluate their work both during and at the end of the assignment