Birches First School

Believe, Grow, Succeed to be the best ‘me’ I can be

Curriculum Pathways – Computing Themes

Our curriculum aims to equip children to use computational thinking and creativity to change and understand the wider world. This will result in fun and engaged learners who are not afraid to ask why as well as how. We aim for our children to confidently discuss their online leaning and be able to reflect and appreciate the impact that computing has on them in society. Through wellbeing links, children will be able to find a balance between technology and a healthy lifestyle. Our Computing curriculum equips our learners for their next stage in education by ensuring they are competent and confident to apply and use their transferable skills in different ways. Our curriculum also enables our children to understand the importance of Online Safety to themselves and others to keep safe.

**Artificial Intelligence**

How to use AI safely and effectively

**Making Music**

Create simple rhythm, change tempo, melodic pattern

**Hardware Investigator**

Parts of desktop computer

**Effective Searching**

Using a search engine, reliable information (credibility)

**Animation**

Animation frames, onion skin tool, backgrounds/ sounds, stop motion

**Logo**

Follow instructions, pu/ pd, predict outcome, repeat, procedure feature

**Micro:bits**

Random numbers, variables, logic, games

**Writing for Different Audiences**

Font styles, news report, persuasive letter

**Coding**

Design/code/test/debug, if/ else statements, co-ordinates, repeat until, number variables

**Online Safety**

Protect identity, phishing, malware, plagiarism, healthy screen time

**Coding**

Algorithms, collision detection, using a timer, object types, buttons

I Wonder What Makes Me Special:Become familiar with different types of technology in role play situations.

The World Around Us

Consider how technology is used in the wider world and its role in society.

Traditional Tales

Program bee bots to follow a route around a map.

Me and My School

Further explore tools for a purpose on the IWB by moving items and drawing on the screen.

Come Outside

Begin to understand My Mini Mash and navigate around a website safely.

**Spreadsheets**

Rows, columns, enter data, add image, speak/ count tools

**Animated Story Books**

Drawing tools, animation, sounds, background, copy and paste

**Lego Builders**

Following instructions, algorithms, order of instructions

**Grouping and Sorting**

Sorting using a criteria: online and offline

Once Upon a Time:

Begin to operate bee bots around a story map using simple instructions.

‘Out of This World’

Explore sensible screentime and understand internet safety rules and reasons why.

All Creatures Great and Small

Use iPads to make digital art and understand how to use different tools on the iPad for a purpose.

People Who Help Us

Learn simple rules for staying safe online.

Out and About:

Manipulate the pen on the IWB and use Tux Paint using different tools for a purpose.

Celebrations

Use an iPad by taking photos safely and using QR codes to achieve an outcome.

Special Times:

Explore technological toys and begin to understand how things work.

**Spreadsheets**

Bar charts, pie charts, more than/ less than/ equal to, ‘spin’ tool, cell location

**Presenting**

MS PowerPoint

**Online Safety**

Strong password, fact or fiction, spoof webpage, appropriate content/ ratings

**Graphing**

Set up graph, enter data, solve investigation, presenting data

**Simulations**

Computer simulations, testing predictions, evaluation

**Branching Databases**

Yes/ no questions, create a branching database

**Email (Online Safety)**

Strengths/ weaknesses, composing emails, email safety, attachments CC/ BCC

**Touch Typing**

Names of fingers, key names, touch type using two hands

**Coding**

Using flowcharts, timers, repeat, code/ test/ debug, make interactive scene

Year R

**Making Music**

Speed up/ slow down motif, change volume, record own sound

**Effective Searching (Online Safety)**

Searching on the internet

**Spreadsheets**

Copy and paste, total tools, adding amounts, creating a table

**Creating Pictures**

Impressionism, pointillism, Piet Mondrian, William Morris, surrealism

**Questioning**

Using/ creating pictograms, yes/ no questions, binary trees

**Online Safety**

Searching and sharing, email using 2Respond, digital footprint

**Technology Outside School**

What is technology?

**Coding**

Instructions, object/ action, events, scenes, using a plan

**Maze Explorers**

Direction keys, debug algorithm, change background

**Pictograms**

Class data, class pictogram, recording results

**Online Safety**

Purple Mash log ins, online work area, tools

**Presenting Ideas**

Mind map, quiz, e-book, fact file, presentation

Year N

Year 4

Year 3

Year 2

Year 1