**Foundation subject: Computing Year 3**

**EP 1. Algorithms**

All pupils must know how algorithms are used to write programs

**EP 2. Designing Programs**

All pupils must know that programs are designed to accomplish specific goals

**EP 3. Setting Goals for Programs**

All pupils must know how programs are designed to accomplish specific goals

**EP 4. Debugging Simple Programs**

All pupils must know how to solve problems with algorithms and programs

**EP 5. Applying and using Technology Purposefully**

All pupils must know that programs control and simulate physical systems

**EP 6. Using Search Technologies**

All pupils must know how to use search technologies safely, effectively, appreciate how results are selected and ranked

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| **Units of work** | **End Point 1**  **Algorithms** | | | | **End Point 2**  **Designing** | | | | **End Point 3**  **Setting goals** | | | | **End Point 4**  **Debugging** | | | | **End Point 5**  **Applying Tech** | | | | **End Point 6**  **Searching** | | | |
|  | **1.0** | **1.1** | **1.2** | **1.3** | **2.0** | **2.1** | **2.2** | **2.3** | **3.0** | **3.1** | **3.2** | **3.3** | **4.0** | **4.1** | **4.2** | **4.3** | **5.0** | **5.1** | **5.2** | **5.3** | **6.0** | **6.1** | **6.2** | **6.3** |
| **Programming scratch** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** |  |  |  |  |  |  |  |  |
| **Network and internet** | **√** | **√** | **√** |  |  |  |  |  |  |  |  |  |  |  |  |  | **√** | **√** | **√** | **√** | **√** |  | **√** | **√** |
| **Emailing** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** |
| **Journey inside a computer** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** |  |  |  |  | **√** |  | **√** | **√** |
| **Digital literacy** | **√** | **√** | **√** | **√** | **√** |  | **√** | **√** |  |  |  |  | **√** |  |  | **√** |  |  |  |  | **√** | **√** | **√** | **√** |
| **Top trumps database** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **√** | **√** | **√** | **√** | **√** | **√** | **√** | **√** |
| **Online safety** |  |  |  |  | **√** | **√** | **√** | **√** |  |  |  |  |  |  |  |  |  |  |  |  | **√** | **√** | **√** | **√** |

EP1. **ALGORITHMS**

All pupils must know how programs are designed and written

**Additional End Points**

1.1) Most pupils should know how to design programs

1.2) Most pupils should know how to write programs

1.3) Most pupils should know how to evaluate the effectiveness of programs

EP2. **DESIGNING PROGRAMS**

All pupils must know how simple algorithms work

**Additional End Points: Most pupils should know**

2.1) how to use logical reasoning to explain how some simple algorithms work

2.2) how simple programs are devised to accomplish specific goals

2.3) that programs have different purposes including storing and sorting information, controlling, simulating physical systems and solving problems

EP3.**SETTING GOALS FOR PROGRAMS**

All pupils must know how programs are designed to accomplish specific goals

**Additional End Points**

3.1) Most pupils should know how to apply logical reasoning to create programs

3.2) Most pupils should know how to use sequence, selection, and repetition in programs

3.3) Most pupils should know how to work with variables and various forms of input and output

EP4. **DEBUGGING SIMPLE PROGRAMS**

All pupils must know how to solve problems with algorithms and programs

**Additional End Points**

4.1) Most pupils should know how to detect errors in algorithms and programs

4.2) Most pupils should know how to correct errors in algorithms and programs

4.3) Most pupils should know how solve problems by decomposing them into smaller parts

EP5. **APPLYING AND USING TECHNOLOGY PURPOSEFULLY**

All pupils must know that programs control and simulate physical systems

**Additional End Points**

5.1) Most pupils should know and understand that the internet is a computer network.

5.2) Most pupils should know that internet networks provide multiple services, such as the world wide web;

5.3) Most pupils should know the opportunities that internet offers for communication and collaboration and they must be made aware of the safety issues around them.

EP6. USING SEARCH TECHNOLOGIES

All pupils must know how to use search technologies safely, effectively, appreciate how results are selected and ranked

**Additional End Points**

6.1) Most pupils should know about safety and how to be discerning in evaluating digital content

6.2) Most pupils should know how to safely, select, use and combine a variety of software (including internet services) on a range of digital devices

6.3) Most pupils should know how to safely, collect, analyse, evaluate and present data and information