Key Vocabulary and Definitions:

|  |  |
| --- | --- |
| Moving  | Moving an object in any direction.  |
| Sprite | A toy that moves once programmed with instructions |
| Program | Software used to input instructions into which then moves the object |
| Debugging | The process of identifying and removing errors from computer hardware or software. |
| Editing | Revisiting our work and looking for marvelous mistakes. |
| Instructions | A direction or order. |
| Algorithm | A process or set of rules to be followed in calculations or other problem-solving operations, especially by a computer. |
| Precise | The quality, condition, or fact of being exact and accurate. |
| Predict | To say or estimate what will happen in the future or will be a consequence of something. |
| Problem Solving | The process of finding solutions to difficult or complex issues. |

Progression

This unit progresses learners’ knowledge and understanding of the programming and algorithms. This unit aims to advance students' comprehension of programming and algorithms. It extends upon the direction and planning proficiencies acquired earlier in the academic year during the Programming A unit. Consequently, students should already be proficient in employing directional commands like right, left, up, and down, as well as utilizing programs such as Scratch to reinforce these skills.

Furthermore, this unit will introduce concepts of sizing, adaptation, and color manipulation. Students will be expected to demonstrate competence in controlling multiple sprites concurrently, mirroring the functionality commonly encountered in Scratch.

Top of Form

Curriculum Links:

* Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.
* Use technology safely, respectfully and responsibly.

Teaching Sequence

1. To explain how a sprite moves in an existing project.
2. To create a program to move a sprite in four directions.
3. To a new program to a new context.
4. To develop my program by adding features.
5. To identify and fix bugs in a program.
6. To design and create a maze-based challenge.

Online Safety – Managing Online Information; Copyright and ownership.

1. To explain how the internet can be used to sell and buy things.
2. To explain the difference between a ‘belief’, an ‘opinion’ and a ‘fact’ and can examples of how and where they might be shared online, e.g in videos, memes, posts, news stories etc.
3. To explain that that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed).
4. To explain why copying someone else’s work from the internet without permission isn’t fair and can explain what problems this might cause.
5. To recap the SMART rules and describe and demonstrate how we can get help from a trusted adult if we see content that makes us feel sad, uncomfortable worried or frightened.

Blooms Taxonomy – Specific Verbs to Use in Lesson Aims

Knowledge: Describe, find, identify, list, locate, name, recognise, retrieve Comprehension: Classify, compare, explain, infer, interpret, paraphrase, summarise Application: Carry out, implement, use Analysis: Deconstruct, Organise, outline, structure Synthesis: Construct, design, devise, invent, make, plan, produce, Evaluation: Appraise, assess, choose,

|  |  |
| --- | --- |
| Aims | Advice |
| 1. To explain how the internet can be used to sell and buy things.
 |  |
| 1. To explain the difference between a ‘belief’, an ‘opinion’ and a ‘fact’ and can examples of how and where they might be shared online, e.g in videos, memes, posts, news stories etc.
 |  |
| 1. To explain that that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed).
 |  |
| 1. To explain why copying someone else’s work from the internet without permission isn’t fair and can explain what problems this might cause.
 |  |
| 1. To recap the SMART rules and describe and demonstrate how we can get help from a trusted adult if we see content that makes us feel sad, uncomfortable worried or frightened.
 |  |