Prior Learning

Prior learning will be the children's knowledge of databases and spreadsheets specifically what is meant by 'field', 'record' and 'data' as well as how to input values, sort, filter and interpret data in a spreadsheet. They will also use their knowledge of the water cycle from last term.

Key vocabulary for this unit

Accurate Backdrop Climate zone Collaboration Condensation Cylinder Degrees Evaporation Extreme weather Forecast Heat sensor	Pinwheel Satellite Script Sensitive Sensor data Solar panel Temperature Thermometer Tornado Weather Weather forecast

Learning Sequence

What is weather?	• To log data taken from online sources in a spreadsheet.
Weather stations	• To design a weather station.
Extreme weather	• To design an automated machine to respond to sensor data.
• Satellites and forecasts	• To understand how weather forecasts are made.
• Presenting forecasts	• To use tablets or digital cameras to present a weather forecast.

Assessment milestones

Key ICT Skills:	Key ICT Knowledge:
• To create a video which includes weather forecast information.	• To understand that weather stations use sensors to gather and record data that predicts the weather.

• To use keywords to effectively search the web to find temperatures of different cities and record this accurately. • To recording data in a spreadsheet independently. • To sort data in a spreadsheet to compare using the 'sort by…' option.	• To understand that data is used to forecast weather. • To understand that weather forecasters use specific language, expression and pre-prepared scripts to help create weather forecast films.

Programming: Computational Thinking

Prior Learning	
Prior learning will be the children's knowledge of coding and the program Scratch particularly beginning to create and predict algorithms, understand what decomposition is and being able to use loops.	
Key vocabulary for this unit	
Abstraction Algorithm Code Computational thinking Decomposition Input	Logical reasoning Output Pattern recognition Script Sequence Variable
Learning Sequence	
What is computational thinking?	• To understand that computational thinking is made up of four key strands.
Decomposition	• To understand what decomposition is and how to apply it to solve problems.
Abstraction and pattern recognition	• To understand what pattern recognition and abstraction mean.
Algorithm design	• To understand how to create an algorithm and what it can be used for.
Apply computational thinking	• To combine computational thinking skills to solve a problem.
Assessment milestones	
Key ICT Skills: • To use decomposition to understand what the different	**Key ICT Knowledge:** • To know that combining computational thinking skills can

code blocks do. • To create algorithms to draw a square and at least one other shape. • Using abstraction and pattern recognition to modify code.	help you to solve a problem. • To understand the terms ‘pattern recognition’ and ‘abstraction’ and how they help to solve a problem.