

## What should I already know?

- Following instructions. Creating simple programs. Computer simulation of real life events.
- Understanding the term 'technology'. Recognising the use of technology around them.
- Algorithms. Collision detection - simulating air traffic control. Object types. De-bugging.
- Flowcharts. Timers and sequence. Simulation of lightning strike. Code, test, debug process..
- Use of 2Dos. Saving, opening and editing work. Sharing work. Copying and pasting. Mouse, keyboard and device skills.

## Key Vocabulary

- **Analysis** A detailed examination of something.
- **Evaluation** To judge the value, condition or effectiveness of something.
- **Decision** The act or result of making a choice after careful thought.
- **Modelling** The act of representing something, often on a smaller scale.
- **Simulation** A program that models a real-life situation. They let you try things out that would be too difficult or dangerous to do in real life

## What will I know by the end of the unit?

## What is a simulation and what is the purpose of simulations?

- You will know that a computer simulation can represent real and imaginary situations.
- You will give some examples of simulations used for fun and for work.
- You can give suggestions of advantages and problems of simulations.

## How can I explore a simulation, making choices and discussing their effects?

- You will explore a simulation.
- You will use a simulation to try out different options and to test predictions.
- You will begin to evaluate simulations by comparing them with real situations and considering their usefulness.
- You will analyse choices made using a branching database.

## How do I work through and evaluate a more complex simulation?

- You will recognise patterns within simulations and make and test predictions.
- You will identify the relationships and rules on which the simulations are based.
- You will evaluate a simulation to determine its usefulness for purpose.
- You will create their own simple simulation.

## Key Questions

- What is a computer simulation?

A program that models a real-life situation. They let you try things out that would be too difficult or dangerous to do in real life.

- What kind of simulations are there?

Some simulations represent dangerous situations for training such as flying in space, carrying out medical operations or piloting an aeroplane. Others simulate activities for fun, such as racing simulations.

- Are there any problems with simulations?

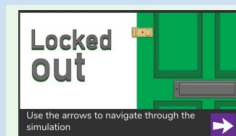
Simulations are often too simple; and unexpected problems can still occur in real life that are difficult to simulate. Simulations can also be very expensive.

## Purple Mash Resources

- 2Simulate

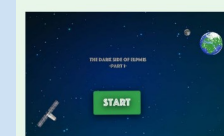


2Simulate



**Locked Out**  
A lively dog causes problems for Mariza, her baby brother Sam and her mum.

Use the arrows to navigate through the simulation



**The Dark Side of Elpmis**  
Trainee astronauts get ready for a mission to the planet Elpmis.