And use algorithms involving a sequence of steps and decisions...

create and use algorithms involving a sequence of steps and decisions that use rules to generate sets of numbers; identify, interpret and explain emerging patterns

Learning intention

- create and use algorithms involving a sequence of steps and decisions that use rules to generate sets of numbers; identify, interpret and explain emerging patterns

Teach and model

- using an algorithm to create extended number sequences involving rational numbers, using a rule and digital tools, explaining any emerging patterns
- designing an algorithm to model operations, using the concept of input and output, describing and explaining relationships and any emerging patterns; for example, using...
- designing an algorithm or writing a simple program to generate a sequence of numbers based on the user’s input and a chosen operation, discussing any emerging patterns...

Check understanding

- Explain the main idea in and use algorithms involving a sequence of steps and decisions... using an example.
- Show the idea in a second way: with words, a model, a diagram or symbols.
- Apply the idea to a short unfamiliar situation and justify the result.

Teaching cautions

- Ask the student to explain their choice, not only state an answer.
- Check that key vocabulary is understood in a new example.
- Mix representations so the skill is transferred rather than copied.

Quick lesson sequence

- Connect to prior knowledge and introduce the key vocabulary.
- Model one clear example, then solve a second example together.
- Finish with an independent check and a short student explanation.