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| Algorithms and coding in the Victorian Curriculum Mathematics F–6 |
| Strand: Number and Algebra sub-strand: Patterns and algebraInstructions: The following document can be used as a planner to summarise a brief description of suitable activities related to the elaborations for the content descriptions for algorithms and coding. |
| Level | **Content description** (mandatory) | **Elaborations** (optional/advisory)<Insert a brief description of a sample activity below each elaboration > |
| F | Follow a short sequence of instructions[(VCMNA077)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA077) | Carrying out a specified sequence of actions to move an object from one location to another | Playing a simple rule-based game moving a specified number of places according to the result on a die in a chance-based game |
| 1 | Recognise the importance of repetition of a process in solving problems [(VCMNA094)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA094)  | Using one-to-one correspondence to determine which of two sets is larger, or if they are of equal size | Dividing a set of blocks in a simple ratio such as ‘2 for me’, ‘1 for you’ |
| 2 | Apply repetition in arithmetic operations, including multiplication as repeated addition and division as repeated subtraction[(VCMNA114)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA114)  | Using technology to construct a sequence of numbers based on constant addition or subtraction from a given starting value | Sharing a set of objects equally between a small number of groups |
| 3 | Use a function machine and the inverse machine as a model to apply mathematical rules to numbers or shapes[(VCMNA139)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA139) | Finding and describing simple rules in words to solve problems | Using simple function machines to represent and apply a process or the inverse process, such as increase or decrease the value of a number by a specified amount |
| 4 | Define a simple class of problems and solve them using an effective algorithm that involves a short sequence of steps and decisions [(VCMNA164)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA164) | Constructing and applying an algorithm for multiplication of two-digit numbers | Partitioning and ordering a set of Australian coins by denomination |
| 5 | Follow a mathematical algorithm involving branching and repetition (iteration) [(VCMNA194)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA194) | Simulating a simple random walk | Manipulating sets of numbers using a given rule, for example, if a number is even halve it; if a number is odd, subtract 1 then halve it |
| 6 | Design algorithms involving branching and iteration to solve specific classes of mathematical problems[(VCMNA221)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMNA221) | Implementing algorithms such as the Euclidean division algorithm | Devising flowcharts to represent algorithms for a common processes such as adding two fractions |