BOARD AND CARD GAMES FOR EXPLORING DIGITAL TECHNOLOGIES CONCEPTS

To implement the Australian Curriculum: Digital Technologies, equipment or materials that will allow students to identify and discuss core concepts and related ways of thinking are required. The following list is an indicative sample only*. ACARA advises teachers to use their own judgement as to the value of the references for their teaching context and, also, to use the list as a model for identifying other appropriate materials.

Game details	Age group	Technologies/ Digital Technologies core concepts
Name: Bits & Bytes **Made by:** Ironic Thought **Description:** A card-based coding game where the goal is for each player to guide their character (program) to their home by issuing instructions (turn right, turn left, move forward, turn around). At the same time, players have to avoid walls, bugs and the dreaded Seepeeu (pronounced 'CPU').	4–10 years	• algorithms *computational thinking (CT)*
Name: Guess Who? /Who's Who? **Made by:** Hasbro **Description:** A computational thinking and algorithmic thinking game where players flip and find the face of one of the characters in this fun guessing game. After playing, students could design an algorithm to identify the best way to determine the identity of a character.	4 years+	• abstraction • algorithms • specification *computational thinking (CT)*
Name: Robot Turtles **Made by:** Thinkfun **Description:** Helps children learn programming one turtle move at a time using a game board and a series of cards.	4 years+	• abstraction • algorithms • specification *computational thinking (CT)*
Name: Potato Pirates **Made by:** Thinkfun **Description:** A combination of potatoes, programming and piracy rolled into a unique card game.	6 years+	• abstraction • algorithms *computational thinking (CT)*

Game details	Age group	Technologies/ Digital Technologies core concepts
Name: codingFarmers **Made by:** Mathandcoding.org **Description:** A board game that teaches children programming concepts with Java. Players must make their way to a farmhouse by navigating obstacles on the farm. The game is played with action cards which describe an action in two ways: English and Java code.	7 years+	• abstraction • algorithms • implementation • specification *computational thinking (CT)*
Name: Bloxels Builder **Made by:** Pixel Press **Description** A hands-on platform for children to build, collaborate, and tell stories through using a mix of physical and digital tools to create video games. See http://edu.bloxelsbuilder.com/ for teaching ideas and resources.	8–12 years	• abstraction • algorithms • digital systems • implementation • interactions and impacts • specification *computational thinking (CT)* *design thinking (DT)* *systems thinking (ST)*
Name: Circuit Maze **Made by:** Thinkfun **Description:** An electric current logic game to build logic and sequential reasoning skills. The goal is to arrange the tokens to create a real circuit that lights up the different coloured beacons.	8 years+	• algorithms • specification *computational thinking (CT)*
Name: Code Master **Made by:** Thinkfun **Description:** A fun programming logic board game and STEM toy.	8 years+	• algorithms • specification *computational thinking (CT)*
Name: Conditionals with Cards **Made by:** Code.org with Thinkersmith **Description:** Teaching conditionals using a traditional deck of playing cards. Lesson plan: https://code.org/files/ConditionalsHoC.pdf Tutorial: https://www.youtube.com/watch?v=TbUaEnAYPjI	8 years+	• algorithms • data acquisition • data representation *computational thinking (CT)*
Name: Laser Maze **Made by:** Thinkfun **Description:** A logic maze game that teaches STEM skills. The game requires players to use mirrors, beam-splitters, a little science and brainpower to direct the laser through a series of mind-challenging mazes to light up the target.	8 years+	• abstraction • algorithms • specification *computational thinking (CT)* *systems thinking (ST)*

Name: Cat Stax and Dog Pile Made by: Gamewright Description: Players use cats/dogs of different shapes and sizes, a series of challenge cards and computational thinking to work out the correct way to stack the cats/dogs together. They must be fitted precisely into the supplied grid in order to solve a range of easy to difficult puzzles. This game provides an opportunity to discuss branching in algorithms. An individual or multiplayer game.	10 years+	• algorithms • specification *computational thinking (CT)*

Search online for more information about these games such as more detailed descriptions, reviews and videos of the games being explained or played*.