## <u>Nim-7</u>

This is a basic form of the ancient game of Nim.

You will need seven objects, such as counters or blocks. It is a game for two players.

Place the 7 counters in a pile and decide who will go first. (In the next game, the other player will have the first turn.)

Each player takes turns to take away either one or two counters. The player who takes the last counter wins.



Keep playing until you work out a winning strategy. Does it matter who has the first turn? What happens when you start the game with more counters?

## <u>Notes</u>

Help them to articulate their ideas about strategy with sentences such as, 'I noticed that when I ..., xxxx happened'. Encourage them to think more than one step ahead: 'If I do this, then xxxx may happen and then I can xxxx. This would be useful because ...'.

Articulate a hypothesis of 'how to win' and then try out their hypothesis a number of times. If it fails, they need to develop a new hypothesis. Children / adults who think they have different winning hypotheses could play against each other and see what happens.