

Week 3

Nice or Nasty for Two

Age 7 to 14

Here's a game to play with an adult!

How do you play?

You'll need an adult to play with.

You'll also need a 1 to 6 dice, or even a 0 to 9 dice if you have one. You could use a spinner instead of a dice. (You might like an interactive dice/spinner)

Scoring sheet:

Player 1	Player 2		P1 Score		P2 Score
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Each of you draw a set of four boxes like this:

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Or print off the scoring sheet above.

Game 1

Take turns with the adult to roll the dice and decide which of your four boxes to fill. Do this four times each until all your boxes are full. Read the four digits as a whole number.

Whoever has the larger four-digit number wins.

There are two possible scoring systems:

- A point for a win. The first person to reach 10 wins the game
- Work out the difference between the two four-digit numbers after each round. The winner keeps this score. First to 10000 wins.

There are also some variations...

Game 2

Whoever makes the smaller four-digit number wins. See if you can come up with a suitable scoring system.

Game 3

Set a target to aim for. Then throw the dice four times each and work out how far each of you is from the target number. Whoever is the closer, wins.

There are two possible scoring systems:

- A point for a win. The first person to reach 10 wins the game
- Work out the difference between the two four-digit numbers and the target number after each round. Keep a running total. First to 10000 loses.

Game 4

This game introduces a decimal point. The decimal point will take up one of the cells so this time the dice only needs to be thrown three times by each player. The winner is the one closer to the target. Choose a target.

Two possible versions:

- each player decides in advance where they want to put the decimal point before taking turns to throw the dice
- each player throws the dice three times and **then** decides where to place the digits and the decimal point.

Again, two different scoring systems are possible.

Game 5

This is the nasty version!

Play any of the games above. This time you can choose to keep your number and put it in one of your cells, **OR** give it to the adult and tell them which cell to put it in! It's really important to take turns to start each round if this game is going to be fair.

What winning strategies can you come up with?
Why are some cells more significant than others?

Notes for adults

These games are thought provoking and very engaging. They encourage discussion of place value and strategic mathematical thinking.

Easier version: start with two or three boxes. Choose the easiest scoring system or use a calculator to keep score.

Harder version: try using more than four boxes, or use more complicated scoring systems.