



# It takes two

## Introduction

**This activity aims to stimulate thinking about why cooperation and collaboration are often better than just doing what's best for yourself.**

## You'll need

At least 50 reward tokens (you could use counters, chocolate money or beans, pennies or whatever else you think would be good rewards);

Two children as players; you to run the game (but you could also swap roles with the children in turn);

Four pieces of card, two with a red spot on one side and two with a green spot on one side.

## To play

Each player has a card with a red spot and a card with a green spot which they hold so that the other player can't see which is which. Tell the players that to play a turn, each player puts down one of the cards in front of them, face down, so that the spot can't be seen, and they'll get rewards depending what colour card they both put down. Then, the person who is running the game turns the cards over and gives rewards to each player as follows:

- both show green: both get 3
- one shows green and the other shows red: green gets 1, red gets 4
- both show red: both get 2

You can tell the players that these are the rules, or you can let them work it out...that may take longer!

Keep playing the game until the players have found the best strategy. Discuss!

## The explanation

This activity is based on a classic situation which has been much researched by psychologists and games theorists; it's called 'Prisoner's Dilemma' and was invented by a mathematician called Albert Tucker. It's an interesting game because it's a 'non-zero sum' game.

Most games are 'zero-sum', like noughts and crosses...what one person loses, the other gains. These games encourage a competitive approach. But non-zero sum games reward cooperation; each player can gain if they work together rather than compete.

In the classic Prisoner's Dilemma, you and another person are picked up by the police, thrown into two separate cells and asked to confess to a crime. You're both told that:

- If you both confess, you'll each get four months in jail
- If neither of you confess, you'll each get two months in jail
- If one of you confesses, and the other doesn't, the one who confesses will get off free and the other will go to jail for five months

Don't assume that the other person will necessarily always think of you as well as themselves, and think about what would be your best choice of action depending on whether the other person is selfish or not...this isn't as simple as it seems!

Once you and your children have got the idea that games don't have to be zero sum, you could talk about whether life is like this...when is it best to cooperate?

Some topics might include: sorting rubbish for recycling when it's a bit of trouble; giving thoughtful birthday presents to people, and so on.