

## **CARD GAMES FOR MATHS**

### **Principles**

A normal deck of cards, with the pictures removed, can be used; or four sets of numbers 1-9; or four sets of 1-9 items, plus their associated number.

The games are presented in order of difficulty for the pupils in terms of the concepts required.

Make sure they verbalise numbers and vocalise what they are doing - e.g. 7 take away 3 is 4. This way you can, for example, stipulate the language to be used to practise familiarity with the various terms for subtract - minus/take away/difference.

### **Games to develop a sense of number**

- 1) Deal 7 cards to each player and put the remaining cards, face down, in a central pile. The top card from the central pile is turned over and the first player tries to follow with either the same number or the number above or below. The players take it in turns to try and put down a card with the same number or the number above or below each time. When they are unable to follow, they must pick up a card from the central pile. The winner is the first to get rid of all his/her cards.
- 2) Each player picks a card from a central pile. The biggest/smallest number wins the trick. When all the cards in the central pile are gone, the game is ended. Person with the most cards at end wins.
- 3) Play snap, where half of the cards are number symbols and the other half, groups of items.
- 4) Pelmanism - place about ten pairs of cards face down. Cards can be either same number or a number matched to a quantity. Can start with low number pairs then gradually add in higher numbers

### **Games to help with learning about place value**

- 1) Each player picks two/three/four cards and organises them into what they consider to be the biggest number. Winner of the trick is the one who creates the biggest number. Overall winner is the player with the most tricks.
- 2) Each player picks two/three/four cards/ one at a time and tries to predict which value to give the number by placing them in place value position in order to create the biggest number. Winner of the trick is the one who creates the biggest number. Overall winner is the one with the most tricks.

### **Games to develop computation skills**

- 1) Each player picks up two cards from the central pile and adds the numbers - player with biggest number wins the trick.
- 2) This is a solo challenge to practise number bonds to 10. The objective is to get rid of the whole pack in your hands. Lay out eight cards. When you find a pair that makes 10, (and there are only 6 pairs  $10+0$ ,  $9+1$ ,  $8+2$ ,  $7+3$ ,  $6+4$ ,  $5+5$ ) then they are removed and replaced with cards from your hand. It's important to vocalise throughout so that the echo in the head for the pairings such as 5 and 5 makes 10, develops to fluency. When, and if, all cards are used, it is possible to create a further challenge by playing again but with only 7 cards to choose from ...
- 3) Each player picks up two cards from the central pile and calculates the difference. Smallest/largest difference wins the trick.
- 4) Each player picks up two cards and multiplies them - person with the highest number wins the trick.
- 5) Each player picks up two cards and divides them - note students will need to re-organise the numbers to ensure they divide the biggest number by the smallest. There will inevitably need to be some understanding of remainders.

### **Games to develop knowledge and understanding of fractions and decimals**

- 1) Players pick up pairs of cards and organise into a fraction of a whole. The winner of the trick is the one with the largest fraction. Initially some cards can be removed so that the comparison between fractions is easier to judge.
- 2) Each player picks two/three/four cards and using a large red decimal point card, organises them into what they consider to be the biggest/smallest decimal number. Winner of the trick is the one who creates the biggest/smallest number. Overall winner is the player with the most tricks.
- 3) Players take it in turns to pick two/three/four cards, and using a large red decimal point card, place cards one at a time in place value position in order to create the biggest/smallest number. Once placed, a card cannot be moved. Winner of the trick is the one who creates the biggest/smallest number. Overall winner is the player with the most tricks.