**Place Value: teen numbers.**

**Background information:**

Place value is a concept that requires several understandings. Students need to be able to identify a group as a countable unit. They need to see ten dots as a unit of 1 ten and know that you can have multiples of these units e.g. 4 tens. By using ten frames to represent a unit of ten students can see the ten dots with the frame helping them to be see the group as a unit. A ten-frame that is not full is not a ten. Therefore partly filled ten-frames represent the extra ones. Teen numbers have a 1 ten and 0 to 9 extra ones.

This game practises the ability to identify teen numbers by focusing on the number of tens represented as full ten frames and the number of ones as the extras. By representing the numbers using ten-frames and as numerals students practise connecting the value and the place of the digits in the number. Each teen number has a 1 ten in the tens place and a number of extra ones in the ones place. For example the value of the 1 in the tens is 1 tens or 10. The value of a 4 in the ones place is 4. Together cards showing 1 ten and 4 ones represent the number 14. While the numbers 11 and 12 are not always referred to as ‘teen numbers’ because their names do not end in ‘teen’, they are included in this game as it is the structure of these numbers as having 1 ten and some extra ones (not enough to make another ten) that is the focus of this game.

**Equipment needed per 2 or 3 players:**

* 1 game board
* 1 set of cards (numbers 11-19 represented using ten-frames)
* About 10 counters the same colour per player

**Preparation of each game:**

* Copy 1 game-board for each 2-3 players
* Copy 1 set of cards for each game (3 rows per game). (Master makes cards for 2 games)
* Game boards and cards can be laminated if desired.
* Check the website [www.makingmathsreasonable.com.au](http://www.makingmathsreasonable.com.au) for copies of games for sale already prepared and packaged into class sets.

**How to play:**

* Place the cards face down on the desk.
* Players take turns to select one of the cards.
* Each player matches the number represented with the ten-frames on the card chosen to one of the corresponding numbers on the game board and place one of their counters on the number.
* After each turn replace the selected cards face down and mix up each group so every selection is random choosing from the full set of cards.
* The first player with 3 of their colour counters in a row (horizontally, vertically or diagonally) wins.
* If all of a particular number are covered players can either miss a turn, have another turn or players can share the space (as long as students are practising the maths concept in focus the specifics of the game can be worked by agreement)

Place Value: Teen numbers. Game-board

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 16 | 11 | 19 | 17 | 15 |
| 12 | 18 | 13 | 16 | 19 |
| 17 | 14 | 15 | 11 | 13 |
| 15 | 19 | 18 | 13 | 12 |
| 14 | 11 | 17 | 16 | 18 |
| 18 | 12 | 14 | 15 | 11 |

Place Value: Teen numbers. Game cards (Use 3 rows per game)

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