

## MATHEMATICAL TIC-TAC-TOE

Strands: Number and Shape and Space

Mathematical Processes: connections, communication, and reasoning

Goal: To cover 3 numbers in a row on the board.

Number of players: 2 per group

Materials per group: a Tic-Tac-Toe number board.

a number cube

a symbol cube

chips in 2 different colours

Rules of the game: The first player rolls the cubes to start a number sentence. For example, if the player rolls "3" and "one more than" then the number to be cover must be "4". If the cubes read "5" and "less than", then the numbers can be anything less than 5 but only one number may be covered. If the player cannot cover a number then she misses a turn and play passes to the partner. The first player to cover 3 in a vertical, horizontal, or diagonal wins the game.

Variations: Vary the cubes or the board by using different values or symbols.

Change the game to 4 in a row.

Use only one cube with even or odd on the sides.

Discussion: Ask students, after they have played the game for a while, why are numbers such as 10 or 11 on the board?

How do you decide which number to cover?

What strategies do you use to play this game?

# TIC - TAC - TOE

<b>3</b>	<b>1</b>	<b>0</b>	<b>8</b>
<b>4</b>	<b>2</b>	<b>9</b>	<b>2</b>
<b>10</b>	<b>11</b>	<b>7</b>	<b>4</b>
<b>5</b>	<b>6</b>	<b>1</b>	<b>3</b>

one less than	2 more than	2 less than
> greater than	< less than	One more than

one less than	2 more than	2 less than
> greater than	< less than	One more than

one less than	2 more than	2 less than
> greater than	< less than	One more than

one less than	2 more than	2 less than
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> greater than	< less than	One more than