

### 3b. Transformations (Gr 2)

#### Activity i

##### **Materials:**

- 1) 10x10 grid on learning carpet
- 2) Arrows
- 3) Cartesian plane mapped out on learning carpet to demonstrate turns
- 4) Mini 10x10 grid booklet

##### **Steps:**

- 1) Model for the children what the turns at different degrees look like using the Cartesian plane on the learning carpet. The types of turns include: “quarter-turn”, “half-turn”, “three-quarter turn” (?)
- 2) Tell the children, “Using this arrow, I wonder what a “\_\_\_\_\_” would look like if the arrow starts at this position (provide reference point”
- 3) Before the children are allowed to demonstrate the move from Step 2, ask them to visualize it and then draw where the arrow would end up in the mini 10x10 grid booklet
- 4) After drawing the move, have the children show it on the learning carpet
- 5) Repeat steps 2-4

##### **Sequence of Transformations:**

- 1) 1 Translation
- 2) 2 Translations
- 3) 1 Rotation
- 4) 2 Rotations
- 5) Combination of 2-4 translations and rotations

##### **Question for Deb and Charlene:**

- Setting up a fixed point of reference?

#### Activity ii: Pairs Practice

##### **Materials:**

- 1) Two 10x10 grids
- 2) Cards describing different transformations
- 3) Arrows
- 4) Popsicle sticks labeled ‘Visualize’, ‘Verbalize’, ‘Verify’

##### **Steps:**

- 1) One partner chooses a card.
- 2) The child visualizes the transformation, explain how he/she would make the move on the 10x10 grid
- 3) The child would then trace where the arrow starts on the grid by identifying the reference point, perform the transformation and glue the arrow in its final position
- 4) Both partners would then verify the move
- 5) The other partner repeats steps 1-4