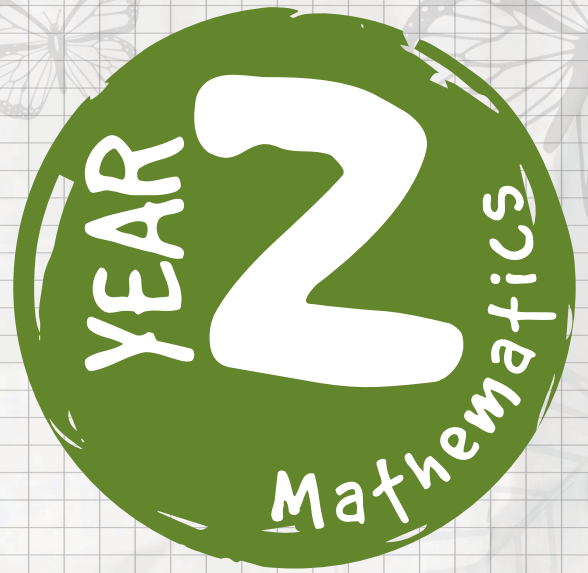# Outdoor Learning Lesson Plan
by Nature Play QLD

Measurement and Geometry - Location and Transformation

- Identify and describe half and quarter turns (ACMMG046)

YEAR 2 Mathematics

Class: ....

Date: ....

Time: ....

Weather: ....

Introduction: (10 mins)

Look at the clocks and understand that clockwise shows the direction of a clock's hands, and the opposite for anti-clockwise. First practise turning together in the directions of whole turns clockwise and whole turns anti-clockwise with one arm held straight out in front.

Once the children understand which direction to turn for each turn, practise making half turns in the same way.

Discuss together in which directions they have all ended up pointing their arms.

Once understood, practise quarter turns clockwise and anticlockwise and discuss any landmarks they faced after each turn.

Main Activity: (20 mins)

In groups of 4 or 5 children, hand out each group a variety of directional cards (See Mathematics Resources cards to print below).

Each card will list up to 5 directions involving both an addition or subtraction problem and a turn (adult support with reading where needed).

Although each card has different instructions, each group will start and should end at the same location. The end mark should be marked with an X using 2 sticks by each group.

Discussion (10 mins):

Find the accurate location for the X by running through 1 set of the directions with the whole class. The group whose X is the closest to the correct location is the winner of the challenge.

Group 1 instructions:

1. Take 15-5 = ... steps forward and make a ¼ turn clockwise

2. Take 5+3 = ... steps forward and make a ¼ turn clockwise

3. Take 14 – 7 = ... steps forward and make a ¼ turn anticlockwise

4. Take 20 – 11 = ... steps forward and make a ¼ turn anticlockwise

5. Take 11+6 = ... steps forward and mark your location with an X

Group 2 instructions:

1. Take 15- = ... steps forward and make a ¼ turn anticlockwise

2. Take 1+3 = ... steps forward and make a ¼ turn clockwise

3. Take 13 – 7 = ... steps forward and make a ¼ turn clockwise

4. Take 18+3 = ... steps forward and make a ¼ turn clockwise

5. Take 11+6 = ... steps forward and mark your location with an X

Group 3 instructions:

1. Take 10-3 = ... steps forward and make a ¼ turn clockwise

2. Take 20+3 = ... steps forward and make a ¼ turn anticlockwise

3. Take 11-5 = ... steps forward and make a ¼ turn anticlockwise

4. Take 4+2 = ... steps forward and make a ¼ turn clockwise

5. Take 11-9 = ... steps forward and mark your location with an X

Group 4 instructions:

1. Take 20-5 = ... steps forward and make a ¼ turn clockwise

2. Take 5+2 = ... steps forward and make a ¼ turn clockwise

3. Take 18-4 = ... steps forward and make a ¼ turn anticlockwise

4. Take 20 – 10 = ... steps forward and make a ¼ turn anticlockwise

5. Take 11+3 = ... steps forward and mark your location with an X

Group 5 instructions:

1. Take 12+8 = ... steps forward and make a ¼ turn clockwise

2. Take 15-5 = ... steps forward and make a ¼ turn clockwise

3. Take 12+3 = ... steps forward and make a ¼ turn anticlockwise

4. Take 10-3 = ... steps forward and make a ¼ turn anticlockwise

5. Take 6+6 = ... steps forward and mark your location with an X