



Makes Maths Fun

Level 3 POSITION

Bloomsmath is a comprehensive mathematics program which provides a fun way for every student to be learning to the best of their ability.

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Position

Students will represent the position of objects using models and drawings and describe these using everyday language.

Knowledge: Students will add elements to a picture using the given position directions



Students who demonstrate proficiency in this activity move on to Comprehension.



Students stop here as they require additional teacher support to master this activity.

Comprehension: Students will follow the given directions to find items on a grid.



Students who demonstrate proficiency in this activity move on to Application.



Students stop here if time has run out or they require additional support with this activity.

Application: Students will use beebots or a beebot simulator to write direction code.



Students who demonstrate proficiency in this activity move on to Analysis.



Students stop here if time has run out or they require additional support with this activity.

Analysis: Students will write direction code for a partner to reach locations in the room.



Students who demonstrate proficiency in this activity move on to Synthesis.



Students stop here if time has run out or they require additional support with this activity.

Synthesis: Students will use direction code and a letter grid to write words.

Evaluation: Suggested questions provide a starting point for discussions related to position.



Students may complete more or fewer activities for each learning outcome depending on the time allocated and their strength in the area being covered.


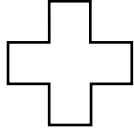






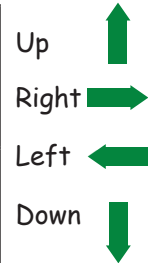
All students should participate in the Evaluation discussion to encourage the use of mathematical language, logical reasoning and reflection on that which they have completed.

Name: _____

Knowledge

Follow the directions below to colour a shape or add a new picture to the grid.



1. Start at the heart. Move Up 2 boxes. Move Left 2 boxes. Draw a Tick.
2. Start at the star. Move Right 5 boxes. Move Up 2 boxes. Write the number 1.
3. Start at the lightning bolt. Move Down 1 box. Move Left 2 boxes. Move Up 4 boxes. Colour this shape red.
4. Start at the Cross Move Left 1 box. Move Down 5 boxes. Colour this shape yellow.
5. Start at the Tick you drew. Move 5 boxes to the Right. Colour this shape purple.



Let's Try This Again



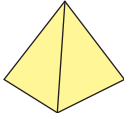







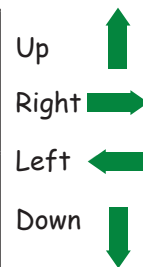
Progress To Comprehension

Name: _____

Comprehension

Follow the directions to find each items on a grid.

							
							
							
							
							
START							



Position - Level 3 - Students will use models and drawings to represent the position of objects.

Knowledge
Comprehension
Application
Analysis
Synthesis
Evaluation

- From start move up 6 boxes, move right 4 boxes, move down 5 boxes. Draw the shape you arrive at.
- From start move right 6 boxes. Move up 4 boxes. Draw the shape you arrive at.
- From start move right 4 boxes. Move up 7 boxes. Move Left 2 boxes. Move down 3 boxes. Draw the shape you arrive at.
- From start move right 2 boxes. Move up 2 boxes. Move right 5 boxes. Move down 2 boxes. Draw the shape you arrive at.
- From start move right 1 box. Move up 5 boxes. Move right 5 boxes. Move up 2 boxes. Move left 3 boxes. Draw the shape you arrive at.



Let's Try This Again

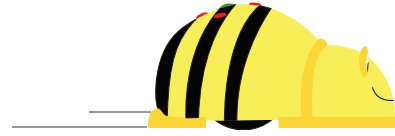


Progress To Application



Name: _____

Application



Use beebots or a beebot simulator such as terrapin to write direction code. You can use a shape mat or a farm mat to find various objects. Use the lines below to help you with your code.

Start Location: _____

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Final Location: _____

Start Location: _____

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Final Location: _____

Start Location: _____

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Final Location: _____

Position - Level 3 - Students will use models and drawings to represent the position of objects.

Knowledge

Comprehension

Application

Analysis

Synthesis

Evaluation



Let's Try This Again



Progress To Analysis

Name: _____

Analysis

Use the lines below to write directions for another student to follow. Choose where you want them to start in the classroom and where you want them to finish - be aware of the furniture that they may need to go around.

Start Location: _____

Number of Toe to Heel Steps: _____ Move Direction: _____

Number of Toe to Heel Steps: _____ Move Direction: _____

Number of Toe to Heel Steps: _____ Move Direction: _____

Number of Toe to Heel Steps: _____ Move Direction: _____

Number of Toe to Heel Steps: _____ Move Direction: _____

Number of Toe to Heel Steps: _____ Move Direction: _____

Number of Toe to Heel Steps: _____ Move Direction: _____

Number of Toe to Heel Steps: _____ Move Direction: _____

Final Location: _____

Remove the final direction from your instructions and see if you got your instructions correct by having a classmate follow your directions.

Position - Level 3 - Students will use models and drawings to represent the position of objects.

Knowledge
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Evaluation




Let's Try This Again




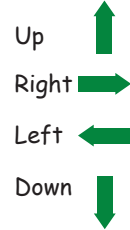
Progress To Synthesis

Name: _____

Synthesis

Use directions to write a 4 letter word using the grid below. Start at the  every time.

F	P	T	D	O
I	A	H	M	W
N	S	U	Y	J
C	L	K	B	V
R	G		Q	E



Start at .

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Letter: _____

Start at .

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Letter: _____

Start at .

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Letter: _____

Start at .

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Move Spaces: _____ Move Direction: _____

Letter: _____



Let's Try This Again



Progress To Evaluation

Position - Level 3 - Students will use models and drawings to represent the position of objects.

Knowledge

Comprehension

Application

Analysis

Synthesis

Evaluation



Evaluation

The following questions and activities are provided as a starting point for fun discussions related to Position. During these conversations students will have an opportunity to use appropriate mathematical language in its correct context, to engage in reflection on the position activities they have completed and to use logical reasoning to tie their in-class mathematics to its everyday context.



These activities are a precursor to programming. When might we need these skills at a more advanced level?



Was it harder or easier to program for a beebot or a person?
Why was this?



What did you need to consider when programming for a person that you did not need to think about when programming for a beebot?



As a class play a game of battle ship but students must give directions to reach the ships rather than just a grid location. Discuss how they can make it easier to reach the ships.

