

## EC4 MATH FRAMEWORK

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### EXPECTATIONS

#### MATH TOOLS

To support curriculum implementation, the Common Core recommends the use of certain math tools at each grade level. CAISL implements these recommendations. See link below:

[https://caislisbon-my.sharepoint.com/:w:/g/personal/Ifernandes\\_caislisbon\\_org/ETYC6RQH\\_TJAsuwFITSerZsBeWDnOidGWgs\\_755HsY6Q?e=3p1MYI](https://caislisbon-my.sharepoint.com/:w:/g/personal/Ifernandes_caislisbon_org/ETYC6RQH_TJAsuwFITSerZsBeWDnOidGWgs_755HsY6Q?e=3p1MYI)

#### INFORMATION TECHNOLOGY EXPECTATIONS

Students will be expected to use a variety of digital tools according to grade level expectations stated in CAISL's Research and Information Technology Integration Scope and Sequence.

## **LEARNING TO LEARN**

Sequence simple steps to move the Bee Bot to destinations on mats that tie in with curriculum content. DOK 1 E

Orient self and objects in space and directionality using directional commands to move the bee bot. DOK 2

Predict floor robot routes by entering step-by-step instructions. DOK 2

## **PERFORMANCE INDICATORS**

### **MATH PRACTICES**

**Explanations of Math Practices:** By the end of the year students will be expected to problem solve, reason mathematically, and communicate efficiently according to grade level expectations. See link below:

[https://caislisbon-my.sharepoint.com/:b:/g/personal/lfernandes\\_caislisbon\\_org/EbbbDlcv8DJBpRGZ0XCSX7UBjBBZvBwBJSfzhM7H7HPOeg?e=fiZG74](https://caislisbon-my.sharepoint.com/:b:/g/personal/lfernandes_caislisbon_org/EbbbDlcv8DJBpRGZ0XCSX7UBjBBZvBwBJSfzhM7H7HPOeg?e=fiZG74)

### **PROBLEM SOLVING**

Make sense of problems and persevere in solving them

Look for and make use of structure (Deductive Reasoning)

Look for and express regularity in repeated reasoning (Inductive Reasoning)

### **MATHEMATICAL REASONING, COMMUNICATION AND MODELING**

Reason abstractly and quantitatively

Construct viable arguments and critique the reasoning of others

Model with mathematics

Use appropriate tools strategically

Attend to precision

### **MATH CONCEPTS**

#### **COUNTING AND CARDINALITY**

Count verbally to 10 by ones. DOK 1 E

Recognize the concept of just after or just before a given number in the counting sequence up to 10. DOK 2

Identify written numerals 0-10. DOK 1

Ability to apply the strategies of touching objects as they are counted and by organizing the objects in a row. DOK 1 E

Knowledge of and ability to apply one-to-one correspondence when counting. DOK 1

Recognize that the last number name said tells the number of objects counted. DOK 1

Recognize that each successive number name refers to a quantity that is one larger. DOK 2

Represent a number (0-5, then to 10) by producing a set of objects with concrete materials, pictures, and/or numerals (with 0 representing a count of no objects). DOK 1 E  
Recognize the number of objects in a set without counting (Use 0-5 objects). DOK 1  
Explore relationships by comparing groups of objects up to 10, to determine greater than/more or less than, and equal to/same. DOK 2  
Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies (includes groups with up to 5 objects). DOK 2

## **OPERATIONS AND ALGEBRAIC THINKING**

Explore addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, or verbal explanations. DOK 3  
Decompose quantity (less than or equal to 5, then to 10) into pairs in more than one way (e.g., by using objects or drawings). DOK 2  
For any given quantity from (0 to 5, then to 10) find the quantity that must be added to make 5, then to 10, e.g., by using objects or drawings. DOK 3

## **NUMBERS AND OPERATIONS IN BASE TEN**

Investigate the relationship between ten ones and ten. DOK 2

## **MEASUREMENT AND DATA**

Describe measurable attributes of objects, such as length or weight. DOK 1  
Directly compare two objects with a measurable attribute in common, using words such as longer/shorter; heavier/lighter; or taller/shorter. DOK 2  
Sort objects into given categories. DOK 1

## **GEOMETRY**

Match like (congruent and similar) shapes. DOK 1  
Group the shapes by attributes. DOK 2  
Correctly name shapes (regardless of their orientations or overall size). DOK 1 E  
Match and sort shapes. DOK 1  
Describe three-dimensional objects using attributes. DOK 2  
Compose and describe structures using three-dimensional shapes. Descriptions may include shape attributes, relative position, etc. DOK 2

## **FURTHER CURRICULAR EXPECTATIONS**

### **For the Performance Indicator (Counting and Cardinality):**

Understand the relationship between numbers and quantities; connect counting to cardinality.

- When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.