

Matatalab

Lesson 2

Ice Cream Cone



Overview

As students learned in the first lesson, the simple shapes coded using Matatabot and the Artist Add-On Set can be connected together to make more complex and interesting objects. Matatabot can be coded to draw a square and a triangle to create a house. The length of the sides of these geometric objects can be increased by changing the coding to create larger objects.

In this lesson, students will alter the coding for a triangle to create a larger triangle which will become the cone of an ice-cream cone. Students will then decorate the top to look like ice cream and embellish the ice cream with sprinkles and other decorations.

Additional resources for this lesson can be found at the end of the lesson.

Essential Objective

- Understand coding and manipulation of Matatabot to create various basic shapes.

Learning Objectives

- Code and manipulate Matatabot in order to create a large triangle.
- Utilize the large triangle to create a large decorated ice cream cone.

Standards

- NCAS: VA:Cr1.1, VA:Cr1.2, VA:Cr2.1 VA:Cr2.3, VA:Cr3.1, VA:Cn10.1, VA:Cn10.2
- CSTA: K-2: 1A-CS-01, 1A-AP-10, 1A-AP-11, 1A-AP-12, 1A-1P-14, 1A-AP-15

Time

60 minutes

Materials

For each student group:

- 1 Matatalab Coding Set - Parts used in this lesson will include:
 - Command Tower
 - Control Board
 - Matatabot
 - Direction, Parameter and Loop Blocks

- 1 Matatalab Artist Add-On Set
- White Cardstock - 2-3 pieces per student
- Scissors
- Markers
- Glitter and/or candy sprinkles
- Glue
- 1 copy of each worksheet per student
- Student journals

Teacher Set-Up and Preparation

- Create a display model of the ice cream cone with one or two scoops of ice cream.
- Charge all Matatalab Command Towers and Matatabots.
- Ensure there are enough copies of worksheets for each student.
- Locate a place for each student group to work.
- Distribute a set of materials for each student group.

Vocabulary

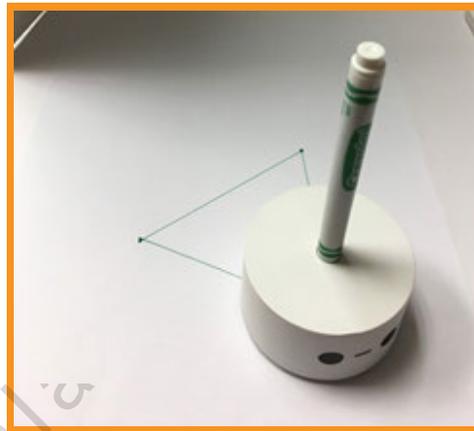
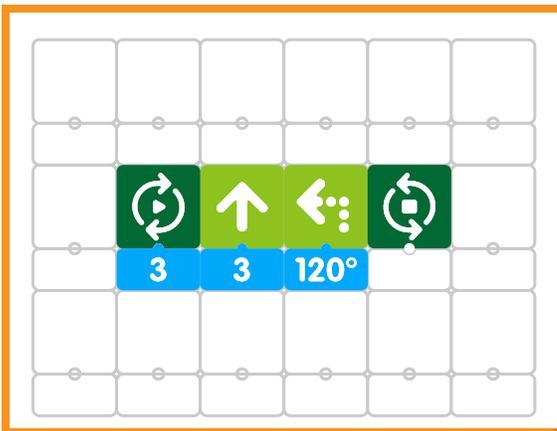
- **Triangle:** A plane figure with three straight sides and three angles.
- **Flavor:** The way something tastes when you eat it.
- **Geometric Objects:** Shapes that include circles, triangles, squares, rectangles and others.
- **Weather:** The condition of the atmosphere in a given area at a given time and date.

Introduction

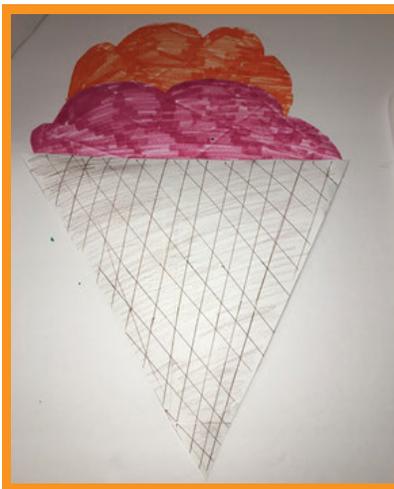
- Ask students to imagine they are outside playing on a hot, hot summer day.
- What would help them cool off? (running through a sprinkler, a dip in a pool, a walk along a beach, maybe an ice cream cone)
- Ask students to name their favorite flavor of ice cream.
- Choose 3-5 flavors and ask students, "Out of these which one do you like the most?"
- Have students stand up, form groups according to their choice and make observations about the number of students who chose each flavor.
- Explain to students that they will code Matatabot to draw an ice cream cone. They will color and cut out the cone, draw and color one or two scoops of ice cream, add sprinkles and assemble their ice cream cone.

Matatalab Activity

- Ask students to take out and examine the triangle shown on the Draw 2 Warm-Up Card. Review the coding blocks with students and discuss how Matatabot drew a triangle by reading the coding blocks.
- Ask students what 1 other block they could add to the line of coding in order for Matatabot to draw a larger triangle. (adding an additional \uparrow block). Explain that this will give them a larger cone to hold more ice cream.



- Tell students to draw a picture of their ice cream cone on the Planning Worksheet and to plan out and write/draw the coding they will use to draw their cone.
- Check coding on the Planning Worksheet and address any misconceptions.
- Using a piece of white cardstock, student groups will program Matatabot to draw a large triangle that students will use for the cone. Circulate to help students with coding questions.
- Ask students to color their cone, draw and color one or two scoops of ice cream on paper and color the scoops. Students will then cut out their cones and ice cream, glue on sprinkles and/or glitter and assemble their ice cream cone using tape and/or glue.



Closing

Assessment

We have planned out, coded, and created a large cone for an ice cream cone. We then decorated the ice cream.

Have students answer the following questions:

- How did you change or modify the coding to enlarge the sides of your triangle cone?
- What surprised you about this project?
- What did you like best about this project?
- What would you change about this project if you could?

Once students have been given a chance to answer and discuss these questions, ask students to draw pictures of each of the shapes they created and write about their experiences with their creations in their journals.

Extensions

An ice cream cone is a favorite snack or dessert for many people. What are some other snacks or desserts that you like? Some examples might be apple pie, cheesecake, chocolate cake, chocolate bars or candy.

Plan out the coding needed to create a different snack or dessert. Write the coding with the number and angle block configurations needed to create the shapes for your snack or dessert in your student journal.

Using the Matatalab Coding Set with the Artist Add-On Set, configure the blocks according to your plan, and create your unique snack or dessert. Decorate your unique creation and add other types of media.

Real World Connections

When eating ice cream, people often like to add additional things like sprinkles, marshmallows, and other types of treats. With what other types of treats do people like to add decorations and other things? Think about the shapes of the things you add on. Think about the shapes of decorations, for example chocolate chips are three dimensional triangles. What other shapes are used for decorations?

Ice Cream Cone Planning Worksheet

*Plan the
shape for
your cone*

*Draw your
ice cream
cone*

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Lesson 2 - Ice Cream Cones

Copy the coding word. Choose a tile that matches each word. Draw the tile next to the word.

Start		
Forward		
Right Turn		
Angle		
Stop		

