Eureka Math

2nd Grade
Module 8
Lesson 5

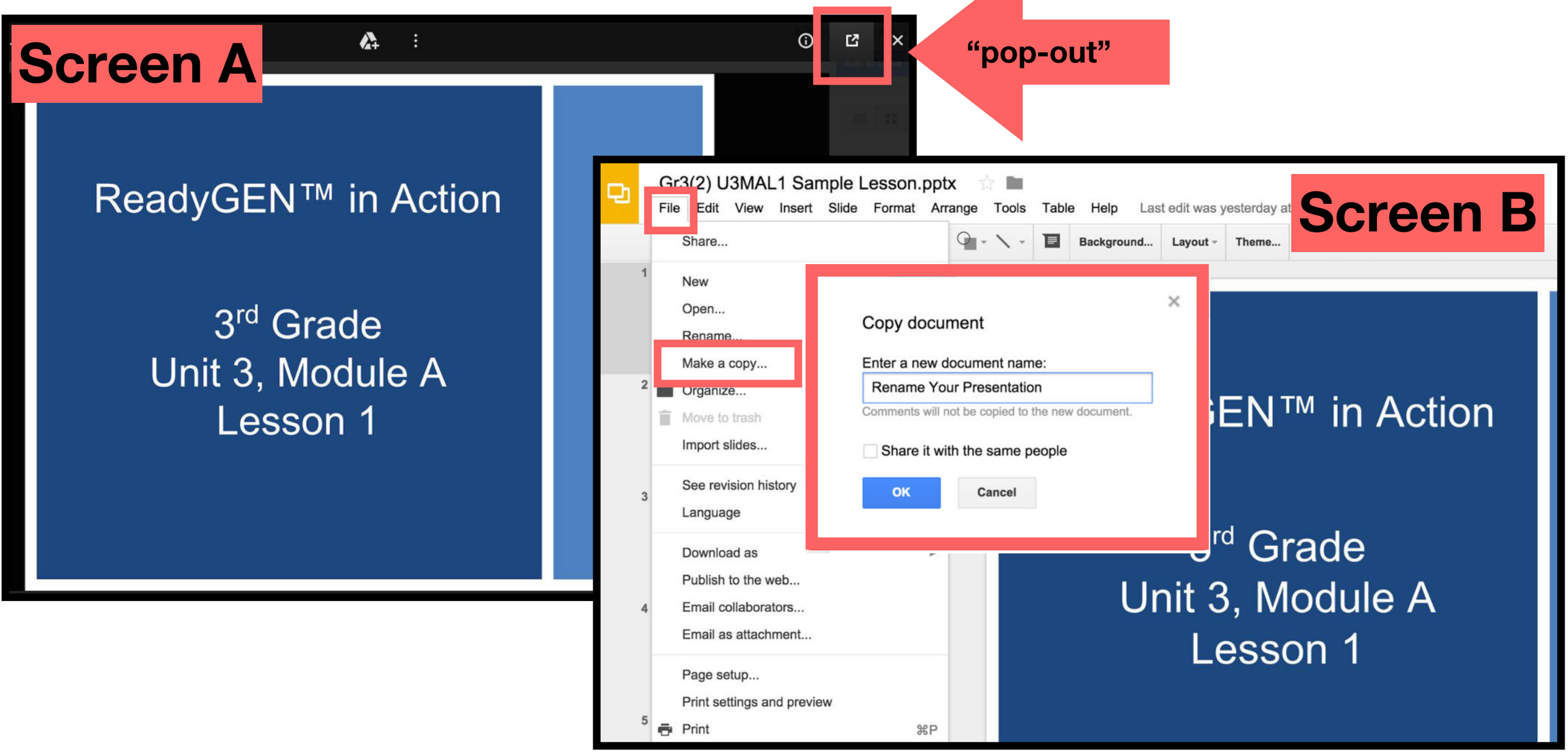
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this project!

Directions for customizing presentations are available on the next slide.

Customize this Slideshow

Reflecting your Teaching Style and Learning Needs of Your Students

- ➢ When the Google Slides presentation is opened, it will look like Screen A.
- ➢ Click on the “pop-out” button in the upper right hand corner to change the view.
- ➢ The view now looks like Screen B.
- ➢ Within Google Slides (not Chrome), choose FILE.
- ➢ Choose MAKE A COPY and rename your presentation.
- ➢ Google Slides will open your renamed presentation.
- ➢ It is now editable & housed in MY DRIVE.



Icons

Read, Draw, Write

Learning Target

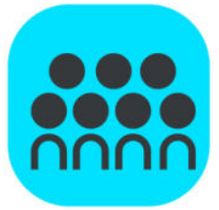
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

Small Group Time

Materials Needed:

Materials:
Fluency - Sprint

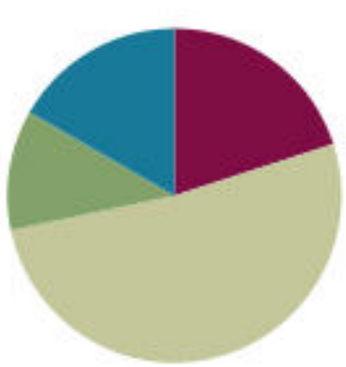
Concept Development:
(T) Cube
(S) 1 bag of 50 toothpicks per 4 students, adhesive material (sticky tack, marshmallows) 2 pieces of 8 ½ x 11 white paper

Lesson 5

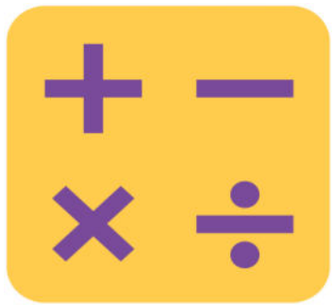
Objective: Relate the square to the cube, and describe the cube based on attributes.

Suggested Lesson Structure

Fluency Practice	(12 minutes)
Application Problem	(7 minutes)
Concept Development	(31 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



I can relate the square to the cube, and describe the cube based on attributes.



Fluency

Rename for the Smaller Unit

I’m going to give you a number in unit form. I want you to rename 1 of the hundreds for 10 tens and then tell me how many hundreds, tens, or ones. Ready?

Say the number sentence

1 hundred 1 ten= ___tens

2 hundreds=1 hundred 9 tens___ones

2 hundreds 1 ten= 1 hundred ____tens

Fluency Sprint

A

Number Correct: _____

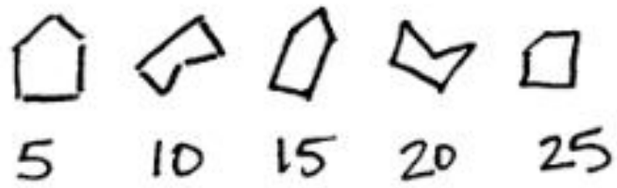
Subtraction Patterns

1.	8 – 1 =	
2.	18 – 1 =	
3.	8 – 2 =	
4.	18 – 2 =	
5.	8 – 5 =	
6.	18 – 5 =	
7.	28 – 5 =	
8.	58 – 5 =	
9.	58 – 7 =	
10.	10 – 2 =	
11.	11 – 2 =	

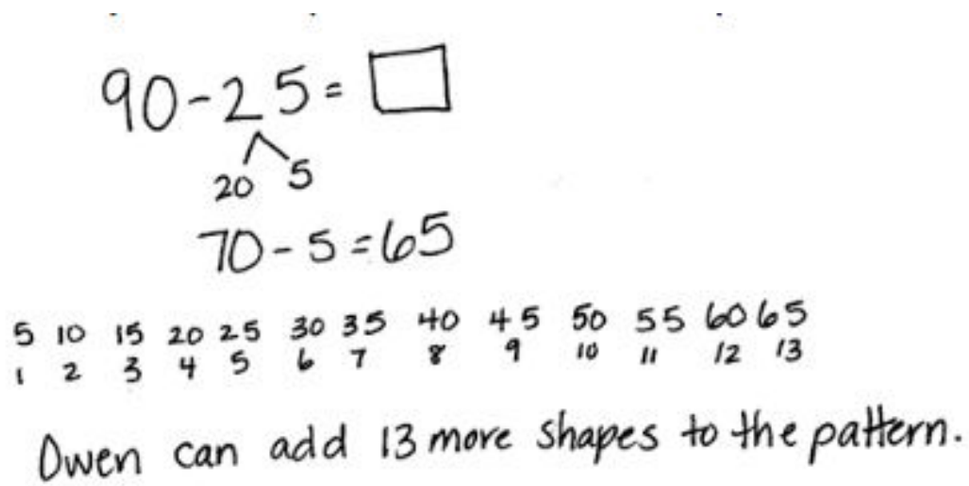
23.	41 – 20 =	
24.	46 – 20 =	
25.	7 – 5 =	
26.	70 – 50 =	
27.	71 – 50 =	
28.	78 – 50 =	
29.	80 – 40 =	
30.	84 – 40 =	
31.	90 – 60 =	
32.	97 – 60 =	
33.	70 – 40 =	

Application Problem

Owen had 90 straws to create pentagons. He created a set of 5 pentagons when he noticed a number pattern.



How many more shapes can he add to the pattern?



Concept Development

Part 1: Constructing a Cube

Watch as I use four toothpicks to build a square.

It’s your turn: Use four toothpicks to build and some sticky tack to build a square.

Using words we have learned in the past week, describe your square to your partner.

Concept Development

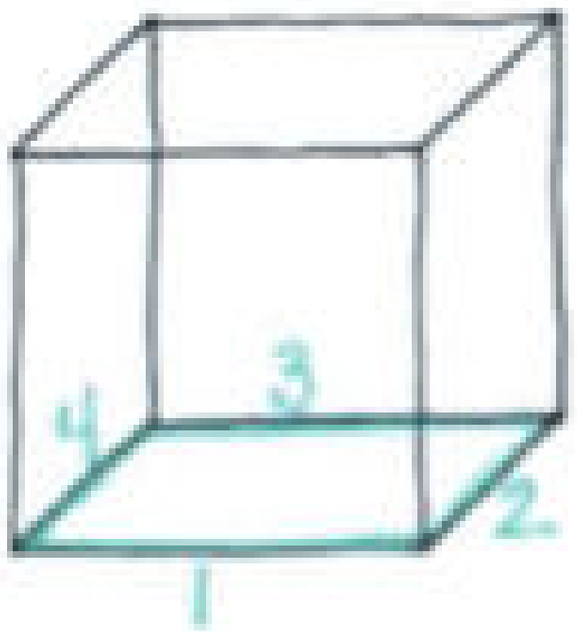
A square can also be used to build a solid shape that has equal edges.

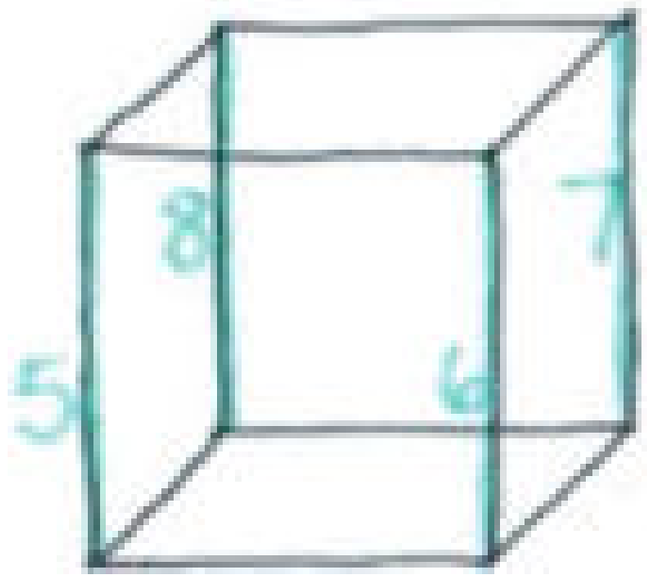
What shape are the faces of my cube?

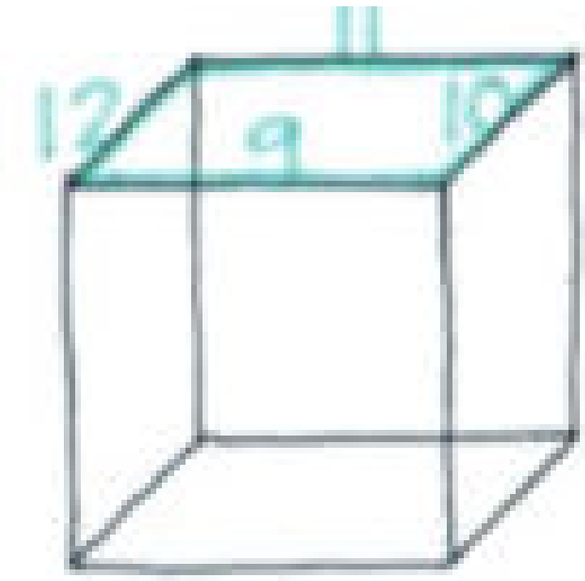
I want to build a cube with toothpicks. How many would I need?

Let’s count the edges to find out...

Concept Development







12 edges!

Concept Development

Talk to your partner. How many more toothpicks to we need to build the cube?

Get eight more toothpicks and some more sticky tack, and see if you can use your square to make a cube that look like my cube.

How can we figure out how many corners does a cube have?

Concept Development

This toothpick cube is missing something….the faces!

Let’s use the paper to create faces for our cubes. How can we make faces the right size?

Let’s trace the bottom of our cubes. Make enough squares to cover all of the faces.

How many squares did it take to make the cube?

Concept Development

With six faces, our cubes would be complete!

Do you remember when we figured out how many toothpicks we needed to build our cubes? How many toothpicks did we need?

That’s right, **12!**

Tell your partner the attributes you know about a cube.

Concept Development

Part 2: Drawing a Cube

Now that we know the attributes of a cube and can build a cube, let's try drawing one.

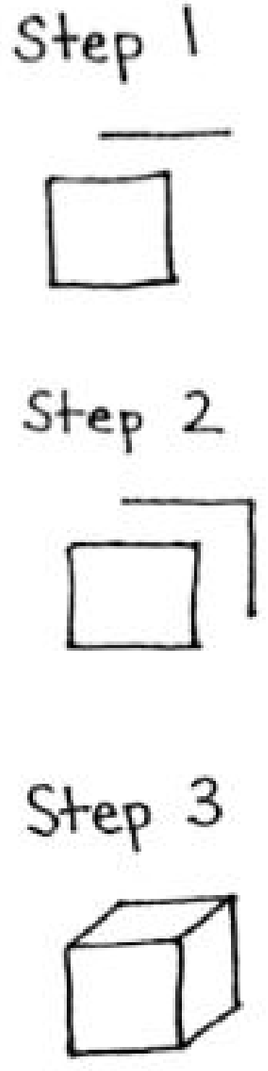
With your pencil, but without a straightedge,draw the best square you can in the middle of the first section on your paper. You've already drawn one face of the cube!

Concept Development

Step 1: Start at the middle of the top edge, but a little above, and draw a straight line parallel to the top edge and about the same length.

Step 2: Make a square corner with the right side parallel to the right edge.

Step 3: Draw three lines to connect the three corners of the square face to the endpoints and corner of the lines you drew.



Some of faces are hiding; we can only see three of them, even though we know there are six.

Concept Development

For the next few minutes, practice drawing a cube in each section of the paper. It will become much easier with practice.

Take a look at all the cubes you've drawn! Put a star next to your best one.

Name _____ Date _____

1. Circle the shape that could be the face of a cube.

2. What is the most precise name of the shape you circled? _____

3. How many faces does a cube have? _____

4. How many edges does a cube have? _____

5. How many corners does a cube have?

Debrief

Review your solutions for the Problem Set

Look at each parallelogram in Problem 1. Could it be the face of an actual cube? Why or why not? Could it be the face of a cube in a drawing?

Look at the cubes your partner drew. Tell your partner which one you like best and why.

A square has four sides and four angles. Does a cube have the same number of faces, corners, and edges?

Tell your partner how the cube you built and the cube you drew are alike? How are they different?

Was it easier to count and see the faces, corners, and edges on the toothpick cube or on the one you drew? Why?

Exit Ticket

Name _____ Date _____

Draw 3 cubes. Put a star next to your best one.
