



Dishing out Division

In this activity, students will be exploring and identifying division facts. Students will use Google Drawings to create division models to show division facts. Students will be able to collaborate and share their drawings with their peers. Students will also be able to practice their division facts by solving one another's problems.

Materials

- Internet access
- Google Drawings
- iPad, Laptop, or other internet-connected device
- Additional workspace for planning out division problems

Student Objectives

- Students will be able to practice division skills
- Students will be able to create division models to show their thinking
- Students will be able to use Google Drawings to create their division models
- Students will collaborate with peers to share their division equations
- Students will learn skills to interact with one another on Google Drawings

Teacher Technology Skills Needed

- Understanding of Google Drawings
- Understanding of how to push out content digitally to students
- Skills for creating content on Drawings

Standards

Common Core State Standards:

- CCSS.ELA-LITERACY.SL.3.- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- CCSS.MATH.CONTENT.3.OA.A.2- Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.
- CCSS.MATH.CONTENT.3.OA.A.3- Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement



quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

- CCSS.MATH.CONTENT.3.OA.C.7- Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Procedure

1. Start the lesson by reviewing key division concepts with students.
2. Next, teacher will provide an example of using Google Drawings to solve math equations. (If needed, teacher can conduct a mini lesson on using Google Drawings for students.)
3. Once this example has been provided, have students begin creating division questions. The questions can be typed out, handwritten, or verbally shared for other students to answer via Google Drawings.
4. This can also be done digitally, depending on available resources. The purpose of this is to get students to plan their division problems.
5. Once the questions have been created, students can use Google Drawings to write down their questions.
6. Next, students will share their questions with a peer. Students can be placed in groups of 2 or 3 for this.
7. Students will then use the space on Google Drawings to create models to show their work. For example, if a division equation is $25/5$, students might use the drawing tools to make 25 cookies and 5 plates and move the cookies around to each plate to find their answer.
8. This can continue until all questions have been answered.
9. This lesson will conclude by having a review of the content learned throughout the activity as well as key concepts and findings while using Google Drawings.

Extension Activity

- Task students with the challenge of developing additional questions for their peers to answer. This can be typed out, handwritten, or verbally shared for students to answer via Google Drawings.
- Challenge students by having them create accompanying word problems to go along with the activity. These word problems can be written by hand or done digitally. Once they are created, students can share them out with their peers and have one another solve them via Google Drawings.