

**Using Google Classroom to Teach Mathematics in Grades 3-5**

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### **Using Google Classroom to Teach Mathematics in Grades 3-5**

In today's world, things have changed tremendously in the education field. In the past six months, teachers around the world have altered their way of teaching. Due to the COVID-19 pandemic, teachers are adapting their teaching methods and materials to accommodate students in the online environment. Teachers may be teaching face-to-face, virtually, or in a hybrid model. Educators have been even more flexible than they were before to provide instruction to their students. Teachers have transformed traditional lessons, activities, and assessments into a digital format. In many cases, educators are using a platform called Google Classroom. During this time of great uncertainty, Google Classroom is an online platform with many different features and tools for educators to instruct their students as if students were in the traditional classroom.

Students in the information age are motivated and intrigued by the use of technology. When technology can be utilized in an educationally-relevant way, students are more engaged in their learning. Technology-based instruction can be used in a variety of ways to challenge, assess, and stimulate student learning. With the rapid growth of technology and a shift from traditional learning methods to technology-based learning, teachers need to adapt their instructional strategies to meet this student need. The following sections in this informative article include a breakdown of the Google Classroom components and four detailed examples of how third-, fourth-, or fifth-grade mathematics teachers can effectively instruct in the online environment. To demonstrate the features of Google Classroom, a sample class has been created for teachers to have a specific example as a guide. Several figures are included throughout the article to provide a visual of an elementary, mathematics Google Classroom. Mathematics

teachers can interact in the sample Google Classroom here:

<https://classroom.google.com/c/NDcxOTI5MjcyODha?cjc=bohvfap>

### **Google Classroom Breakdown**

Google Classroom is a platform that allows educators to create an online Learning Management System (LMS). Google Classroom acts as a course hub where products that Google offers, such as Sheets, Docs, Calendar, Meet, Forms, Slides, YouTube, Drive, and Gmail, can be used for a variety of activities and assignments. When signed in, teachers can see four different tabs: “Stream,” “Classwork,” “People,” and “Grades.” Figure 1 demonstrates a visual of the teacher's view in Google Classroom. When teachers click on the “Stream” tab, they can make announcements and see previously created modules/assignments. This tab is also where classroom discussions take place. Students can access the information needed for the course in the “Stream” tab.

#### **Figure 1**

*Teacher View of Google Classroom*

# Mr. Sapp's Third Grade Math Class

Class code bohvfap

Select theme  
Upload photo

**Upcoming**

Due Friday  
11:59 PM - Subtraction T...

[View all](#)

Share something with your class...

Tyler Sapp posted a new assignment: Subtraction Test  
10:13 PM

Tyler Sapp posted a new question:  $647 - 379 =$   
10:11 PM

Tyler Sapp posted a new material: 3rd Grade Subtraction Jeopardy  
10:10 PM

Tyler Sapp  
9:47 PM

This video will help you review Subtracting 3-digit numbers (regrouping) for the test tomorrow. Take a look!

<https://www.khanacad...>

Add class comment...

Tyler Sapp  
Oct 4 (Edited Oct 4)

Answer the question and write how you arrived at your answer. Use complete sentences!

Number Talk 1.png  
Image

2 class comments

chelsea poole Oct 4  
Demo Student,  
This was a nice way to do this.  
I got the same answer, but I solved it this way:

$$349 + 299 = \underline{\quad}$$

$$3+2+1 = 6 \quad 1 + 4 + 9 = 14 \text{ (Carry the 1)} \quad 9-9 = 18 \text{ (Carry the 1)}$$

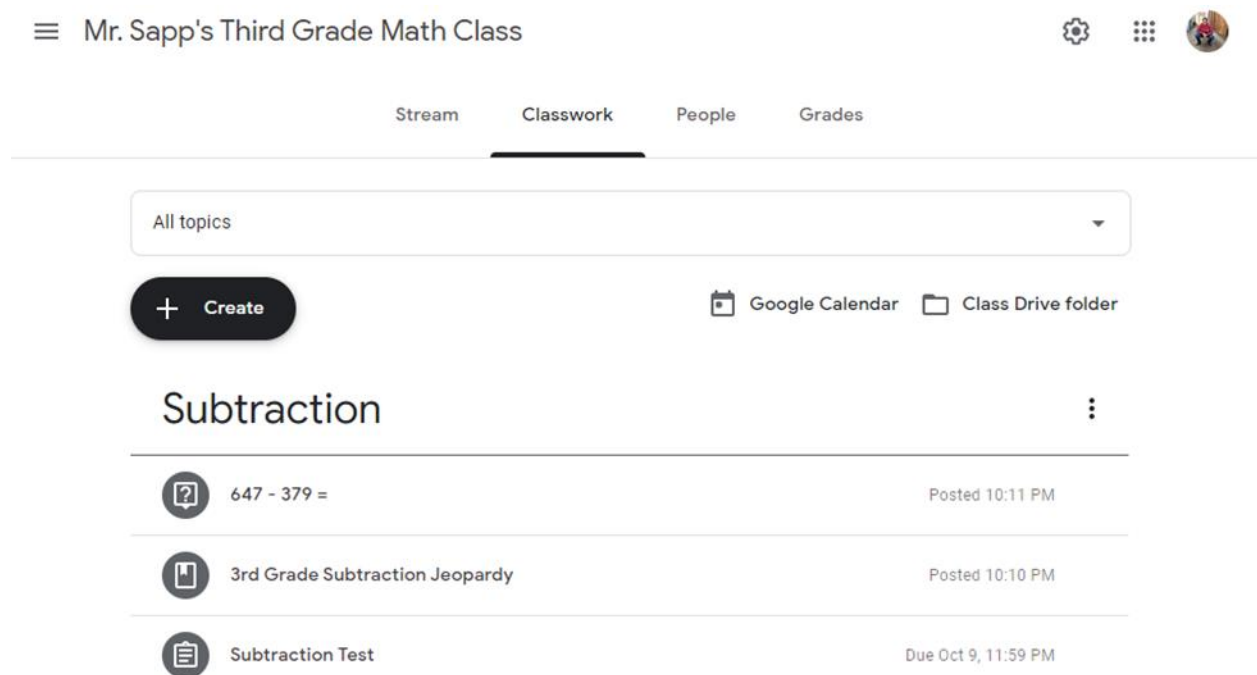
648



The next tab in Google Classroom is the “Classwork” tab. This is where teachers can create assignments, quizzes, questions, and share materials with their students. The class calendar and the classroom Google Drive folder shortcuts can also be found here. The features of the “Classwork” tab are displayed in Figure 2.

## Figure 2

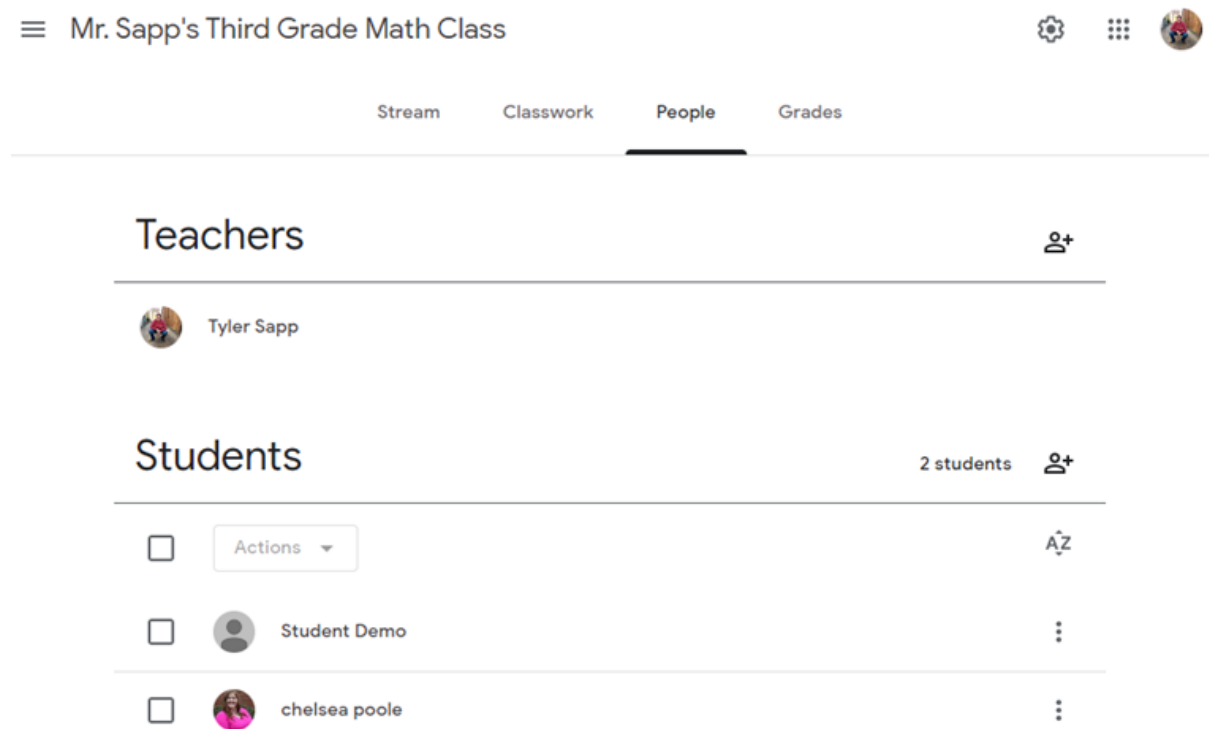
### *Classwork Tab in Google Classroom*



*Note. This figure provides a visual representation of the “Classwork” tab in Google Classroom.*

*Teachers can organize the class materials and content by topics.*

Figure 3 represents the “People” tab in Google Classroom. This tab allows teachers to add students and other teachers to their Google Classroom. The “People” tab houses an easy way to email participants in the class with the “Actions” dropdown menu.

**Figure 3***People Tab in Google Classroom*

*Note. This figure demonstrates the “People” tab in Google Classroom, where teachers can invite or view users.*

The last tab in Google Classroom is the “Grades” tab, which can be seen in Figure 4. In this tab, teachers can grade student work and provide feedback on student work submissions. Google Classroom has countless features, which are perfect for creating an online classroom. Math educators can join a sample Google Classroom to see how to create an effective virtual learning environment by using the class code: bohvfap.

**Figure 4***Grades Tab in Google Classroom*

	Stream	Classwork	People	Grades
Sort by last name ▾	Oct 9 Subtraction Test out of 100	No due date 647 - 379 = out of 100		
Class average	80	50		
chelsea poole	60	100		
Student Demo	100 Not turned in	0		

*Note. This figure highlights the “Grades” tab in Google Classroom. Teachers can assign and view grades for each assignment and student.*

**Online Number Talks**


Number talks are “a brief daily practice where students mentally solve computation problems and talk about their strategies” (Humphreys & Parker, 2015, p. 25). Number talks are becoming more popular in mathematics classrooms. However, in online learning, it may be difficult to have those learning discussions and conversations. Google Classroom can host a number talk to allow students to engage in effective learning discussions. In Google Classroom, an educator can present a problem to the class by posting it to the classroom stream. Then, students can comment on the post to give their answer, explain their reasoning, and outline strategies they used to solve the problem. Students can write comments to other classmates with

a correction, a different approach, or just a simple affirmation. Figure 5 demonstrates how a number talk could be conducted in Google Classroom.

### Figure 5

#### *Number Talk Example in Google Classroom*

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**Tyler Sapp**  
4:41 PM (Edited 4:53 PM)

⋮


Answer the question and write how you arrived at your answer. Use complete sentences!

$$\begin{array}{r} 349 \\ + 299 \\ \hline \end{array}$$

Number Talk 1.png  
Image

---

2 class comments




**Student Demo** 4:55 PM

Hey Everyone,

The answer to this question is 648.  
I know that because I broke the numbers into place value like this:

$$\begin{array}{r} 300 + 40 + 9 \\ + 200 + 90 + 9 \\ \hline 600 + 40 + 8 = 648 \end{array}$$



**chelsea poole** 5:06 PM

Demo Student,  
This was a nice way to do this.  
I got the same answer, but I solved it this way:

$$349 + 299 = \underline{\quad}$$

$$3+2+1 = 6 \quad 1 + 4 + 9 = 14 \text{ (Carry the 1)} \quad 9-9 = 18 \text{ (Carry the 1)}$$

648

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*Note. This figure illustrates an example of a Number Talk in Google Classroom. Students can create an original post and comment on their peers' work.*

### Worksheet Completion

In a traditional classroom, worksheets are often used for students to practice concepts and for educators to assess student knowledge. However, this was something that some educators



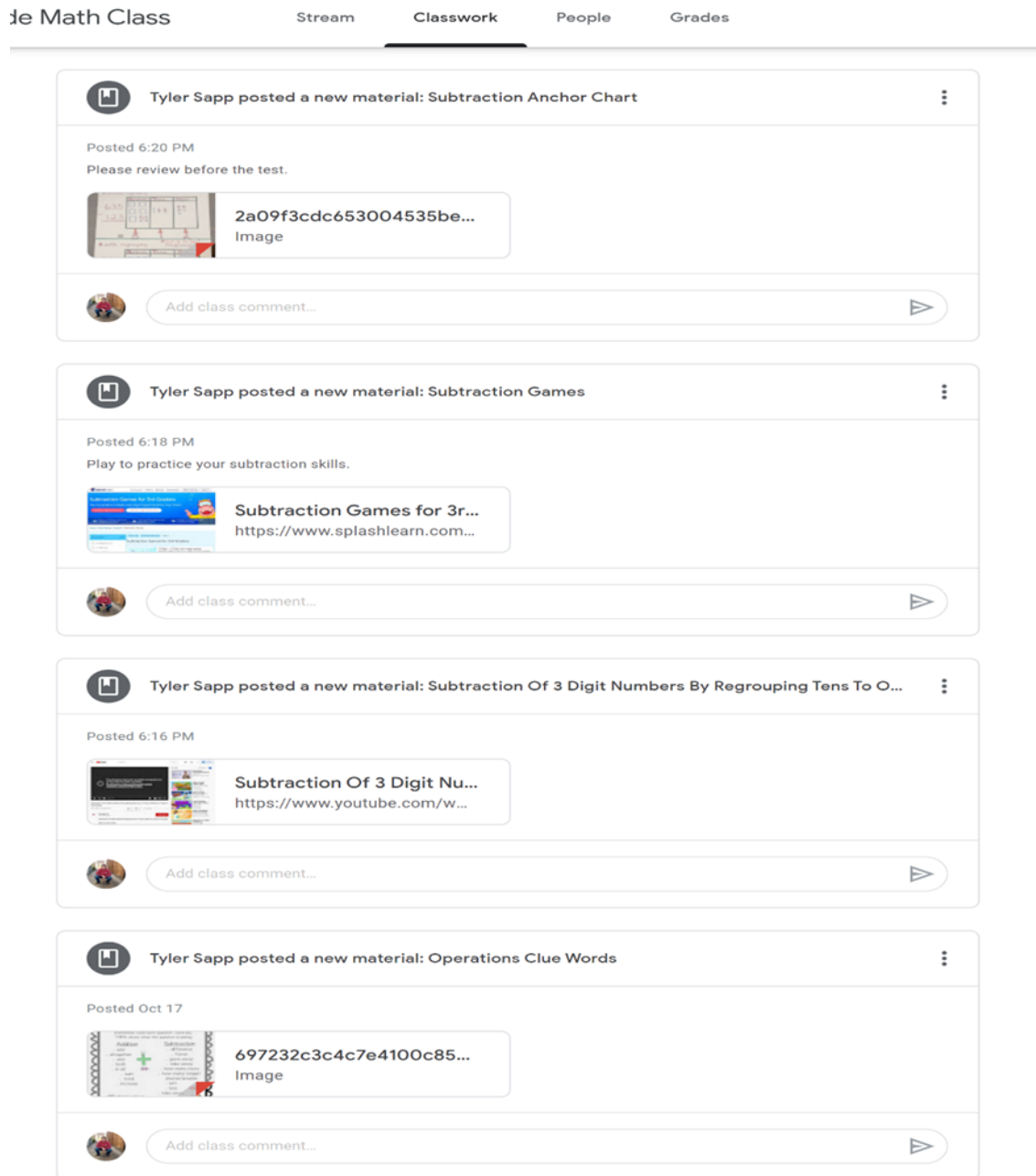
thought would be difficult during distance learning. Google Classroom is a platform to allow educators to continue to utilize worksheets as an instructional resource. Educators can use Google Docs or Google Slides to create an interactive worksheet for students to complete. Students can complete the worksheet using the drawing tools or text boxes with typed responses. The process for completing and turning in assignments for grading becomes effortless for students.

### **Resource Repository**

Google Classroom as a Learning Management System (LMS) that allows teachers to post materials and resources for students. Educators can post numerous types of resources including an assignment, a quiz, a discussion question, or a “material.” A material in Google Classroom can have multiple meanings, including files, links, YouTube videos, or documents from Google Drive. Adding materials and resources for students to Google Classroom will create a more effective learning environment. Students will be able to easily access the materials to assist them with math concepts. Students can also comment on materials to ask questions directly on the post. Figure 5 demonstrates how educators can use Google Classroom as a resource repository.

Figure 5

Resource Repository Example in Google Classroom



*Note. This figure demonstrates an example of a resource repository in Google Classroom. The repository can consist of links, documents, slides, pdfs, pictures, videos, etc.*

### **Direct Math Instruction**

In a traditional classroom, educators provide direct instruction, engaging activities, and meaningful assessment. In a remote learning classroom, educators have a more difficult time providing direct math instruction. However, the use of Google Classroom can help educators do just that. Google Classroom supports Google Meet integration. Google Meet is a video conferencing program by Google Suite to allow educators to continue meeting the needs of their students through direct math instruction. Math teachers can share their screens to show visuals and to model problem-solving strategies. Math teachers can still introduce, model, conduct guided practice, give independent practice, and evaluate students through Google Meet integration in Google Classroom.

### **Conclusion**

Google Classroom is a Learning Management System that offers a variety of opportunities for math educators. Math educators can use Google Classroom to create an online, interactive, and effective math classroom to provide remote student learning. Number talks, worksheet completion, resource repository, and direct math instruction are only just a few ways that math educators can use Google Classroom. Using Google Classroom for math instruction will help math educators meet the needs of their students virtually. With the high demand for teachers to incorporate technology-based instruction, teachers can create a valuable online environment filled with research-based strategies to promote student learning, engagement, and collaboration.

### References

Humphreys, C., & Parker, R. (2015). Making number talks matter: Developing mathematical practices and deepening understanding, grades 4-10. ProQuest Ebook Central

<https://ebookcentral.proquest.com>