



Teacher: Miss Miranda

Subject: Fractions of a Group / Grade Level: 4th grade

SDTR Lesson Planning Template

CONTEXT

Provide brief context for the lesson. How and where does it fit within a unit or project? What happened the day before, and what will happen the day after? Who are the learners? How long will the lesson last?

This math lesson will introduce the topic of using fractions to represent a group of objects. It will also help the students practice the skill of adding fractions with a common denominator. We will also be reviewing the academic language we have learned in this unit including fraction, numerator, and denominator.

This lesson fits within our unit on fractions. In our class, we have been working on fractions of a whole. They will already be exposed to what a fraction is, the terminology "numerator" and "denominator," and they have been taught how to add fractions with a common denominator. During the last lesson, the class worked on representing fractions of a whole by using a whole (of a circle or rectangle shape) and breaking it into pieces. We then learned how to add those pieces together to fill the whole. During the next lesson, we will be working on subtracting fractions with common denominators.

During this lesson there will be various learning modalities; teacher-led, student-led, whole group, small group, pairs, and individual. The learners are 4th grade students, who are 9-10 years old. The group make-up includes seven students, four boys and three girls. One student in the group has an IEP and there are two English language learners. The lesson will last approximately 45 minutes.

STANDARDS

If applicable, provide specific standards that the lesson will target. Indicate if the standard is being introduced (I), practiced (P), or assessed (A) in this lesson. Possible standards frameworks: CA [CCSS](#), [NGSS](#), [ELD](#), and/or [Learning for Justice](#).

4.NF.3.a Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

ELD.P1.1.1 Exchanging information and ideas with others through oral collaborative conversations on a range of social and academic topics.

GOALS

What are your goals for the activity? Specifically, by the end of the lesson, what will students know, feel, understand, and/or be able to do?

Students will understand how to use fractions in real word applications.

Students will feel capable yet challenged when tackling this new material, and feel safe to ask questions.

Students will be able to write a fraction that represents a group and add multiple fractions together.



ANTICIPATORY PLANNING

What prior knowledge, ideas, and misconceptions might students bring into this lesson? How can you proactively address or frame these misconceptions? How will you respond if students share harmful misconceptions?

I anticipate that my students will have difficulty remembering the academic language numerator and denominator. I plan to review the vocabulary and have them speak the terms aloud as a group to help them become familiar and comfortable using the language. I also plan to use the terms throughout the lesson when talking to the students to model using the academic language.

A misconception I predict may arise is that the students may have a challenge transitioning from pieces of a whole, to items in a group. Specifically when using a fraction to represent a portion of a group and keeping the denominator the total number. I plan to combat this by providing an example of this mistake during the lesson and asking my students why it is not correct. When I am modeling how to create a fraction with my group of five M&Ms, I will have the denominator represent the number of M&Ms that are left instead of the total number in the group. I will then have the students explain why this is incorrect so they can broaden their understanding of the concept and avoid the mistake.

MATERIALS & PREP

What materials will you need to prepare ahead of time? How will the room be set up? What other logistical considerations do you want to plan for? Provide links to documents and/or slides if applicable.

- **Slideshow Presentation**
https://www.canva.com/design/DAFUgtAB8V8/ZY2OUg_j1IAFvFbYb4khw/edit?utm_content=DAFUgtAB8V8&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton
- **M&M's**
- **Worksheet**
https://www.canva.com/design/DAFTpIW5Md8/Btoh0hBJVFh16oNyBcMLlw/edit?utm_content=DAFTpIW5Md8&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton
- **Pencils**
- **Colored Pencils**
- **Visual Timer**
- **Poster Paper (for anchor chart)**

PROCEDURE

Please provide specific descriptions of all activities, including what the teacher(s) will be saying and doing and what the students will be doing. *Remember that the person doing the doing & talking is the one doing the learning!*

Launch: How will the teacher spark curiosity, get students actively engaged in lesson-related content right away, and/or help students understand the *purpose* of what they will be doing during the lesson?

I plan to begin the lesson by letting students know the learning goal for the lesson. "Today we will learn how to use fractions to represent a group of objects." Then I will ask the students what they already know about fractions and create an anchor chart with the information they provide. This will help me assess if there are any pieces I need to review with



them that they don't remember from the previous lesson. I will ensure that the academic language appears on the poster so students will be able to use the terminology during the lesson and have access to the information if they need a reminder. I will lead a choral reading of the academic language to ensure that all students are able to pronounce the words and feel comfortable speaking them aloud.

Then I will model the steps of a simplified version of the activity the students will be doing. From a group of 5 M&Ms, I will create fractions to represent how many of each color there are out of the 5 total. During this, I will give students help with the steps. Then, I will decide my two favorite M&M colors and add them together to create a new fraction to represent how many of my favorite colors there are in the group.

Explore: How will students engage in the “meat” of the lesson? What will students be doing in order to move toward the learning goals? How will you be supporting them?

Students will be given a group of 10 M&Ms. They will then work on a worksheet that calls for the students to color in circles on their page to represent their unique M&M color array. Then they will create fractions to represent each color of their M&Ms. Next, they will pick their two favorite colors of M&Ms and add them together to create a new fraction that represents how many of their favorite colors there are in the group.

There are additional challenge problems for them to attempt. They are labeled as mild, medium, and spicy challenge problems. The mild challenges ask “What fraction would represent all of the colors of M&M's added together?” and “What fraction would represent every color of M&M EXCEPT brown?” The medium challenge problem asks students “How many M&Ms make up half ($\frac{1}{2}$) of the group?” I believe that with the tangible M&Ms as scaffolding, these questions will be accessible for all of my students. The spicy challenge problems ask “How many M&Ms make up $\frac{1}{5}$ of the group?” and “How many M&Ms make up $\frac{2}{5}$ of the group?” I believe that these questions will be a good challenge for my advanced students.

While the students are working individually and with their peers, I will walk around the room to answer any questions that may come up and check in on each student's learning. The student will have approximately 15 minutes to work on the worksheet.

Drop your anchor: How will students synthesize, share their learning with each other and/or with the teacher, and make connections to future lessons?

The students will be able to share either one of the problems that they solved on the worksheet, something they learned during the lesson, or a question or wondering that came up for them. I will facilitate student sharing and help to create sense-making opportunities for the students. Then I will let my students know what we will be doing in the next math lesson. “Our next steps for learning are subtracting fractions with a common denominator.”



CLASSROOM MANAGEMENT & SUPPORTS

How will you proactively help students to envision the behaviors that will make each part of this lesson go smoothly? How and when do you anticipate needing to remind students to honor community agreements?

In our classroom, we have our class created norms on display on a poster. I plan to emphasize important norms as reminders throughout the lesson, i.e. "Remember, we only have one voice at a time."

DIFFERENTIATION/ACCOMMODATION

How might you provide multiple means of representation, multiple means of expression, and multiple means of engagement? Consider how you will meet the needs of three specific focus students, labeled below.

Special Needs / IEP: Students will have tangible M&Ms to use as manipulatives. As the lesson progresses, there will be a gradual release of responsibility until the students are working independently or with their peers. There is also a visual timer in the room to show the amount of time they will have to work. Additionally, during my lesson I will provide multiple opportunities for engagement for the students to help keep them interested and participating in the lesson. There will be a visual anchor chart with the background information needed to complete the worksheet.

Emerging Bilingual: I will be reviewing and having the class repeat the academic language that is important to this lesson. I also will have a visual anchor chart that has the vocabulary written on it for a reference.

Ready for challenge: There are additional challenge problems on the worksheet labeled as mild, medium, and spicy challenges. The spicy challenge should prove to be an appropriate challenge for my advanced students.

INFORMAL ASSESSMENT

How will you assess students' thinking throughout the lesson? What are key moments to check for understanding?

Throughout the lesson, I will be monitoring which students are sharing out and how they are doing with understanding the material. There are opportunities for the students to speak out as we review what we have already learned about fractions, while I am modeling the material, and at the end of the lesson when they are able to share one of the problems from the worksheet they solved, something they learned, or a question they have. For the students who are staying more quiet, I will make sure to check in on them while they are completing the worksheet to check in with how they are doing and see if they need any clarification or additional support. As they are working with their peers, I will also be listening to their conversations surrounding the academic material to assess their understanding.

ASSESSMENT

How will you know if your students met the goals of the lesson? What artifacts of student work will you collect and why?

The artifact I will be collecting is the worksheet the students will complete "M&M Math." I will know that my students meet the goals of the lesson if they were able to represent the colors of M&Ms as fractions and add two of the colors together. I will collect the worksheet so that I can review the work they completed and assess their understanding and then be able to adjust the next lesson accordingly.