Teacher Guide for the Lesson on **simplified form**

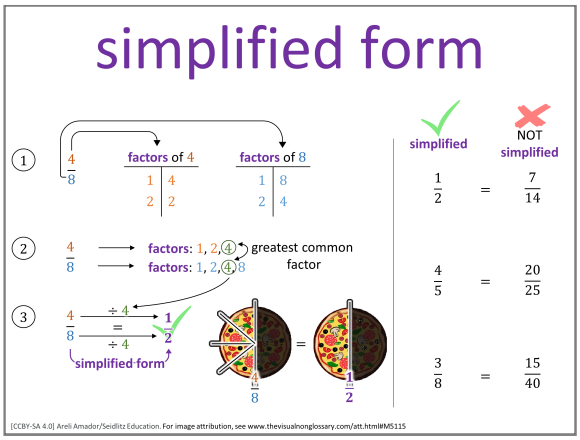
Standard:
5.3(H)

Content Objective:
We can use factors to **simplify fractions** to their simplest form.

Language Objective: Answer the following question in complete sentences using the sentence stem and the key vocabulary of the lesson:

> Why do you think we **simplify** fractions when we do math problems?
>
> *We **simplify** fractions when we do math problems because...*

Other key vocabularies: equivalent fraction, simplify



By studying this visual, students might:

Notice	Wonder
• The numerators and denominators get smaller in the simplified form.	• Why do we need to simplify fractions?
• The fractions have different numbers but the same shaded value.	• How do I know which factors to use to simplify?
• The visual uses factors to reduce the fraction.	• Is there always one single simplified form?
• There are models showing equivalent amounts with different fractions.	• Can every fraction be simplified?

• Each fraction bar represents the same part of a whole but is divided into different numbers of parts.	• What happens if I don’t simplify a fraction?

EXTENDING THE DISCUSSION

- After randomly calling on students, if there is anything from this list that was not mentioned, then ask the class, "Did anyone notice...?"
- After students have shared what they notice, ask the class, "Did anyone wonder...?" using the suggestions above or anything else you might think is interesting or relevant to the lesson.

Structured Conversation Prompts

OBSERVATIONAL	RELATIONAL	INFERENTIAL
What is the **simplified form**? The **simplified form** is...	How is a **simplified form** fraction related to an **equivalent fraction**? A **simplified form** fraction is related to an **equivalent fraction** because...	Why do you think we **simplify** fractions when we do math problems? We **simplify** fractions when we do math problems because...

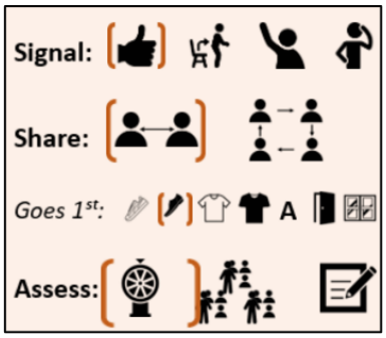
Example Student Responses to the Observational Question

Low-Level	High-Level
The **simplified form** is the smallest fraction.	The **simplified form** is the version of a fraction that has the smallest numerator and denominator possible while still showing the same value.

RESPONDING TO RESPONSES

Emphasize and celebrate each student's use of the key vocabulary to support a culture of "no wrong answers."

STRUCTURING STUDENT CONVERSATIONS



Have students list observations from the visual as a warm-up, then use the Q-SSS-A process to guide small-group conversations. In the slide decks, brackets can be moved to prepare the structured conversation. In the example to the right, students will be instructed: Q-SSS-A.

- To put a thumb up, then lower their hand when they are ready to answer the question
- To share with their elbow/shoulder partner, and that the student with the darkest shoe will share first
- That they will be randomly called on after the conversation

Here is an example of structuring a conversation with Q-SSS-A.

Note: the inferential question is the same as the language objective. It is recommended that students answer the inferential question in a small-group discussion before answering it individually as the closure or exit ticket of the lesson.

Structured Reading

READING PURPOSE	PAT LIST	POST-READING DISCUSSION
To learn how to recognize and create the **simplified form** of a fraction using **factors**.	• Examples of fractions that show the same amount • Steps that involve using factors • What makes a fraction the simplified form • Clues that a fraction cannot be simplified further	Why might someone choose to use **simplified form** when doing fraction work in math? *Someone might choose to use **simplified form** when doing fraction work in math because...*

STRUCTURING THE READING

Communicate the purpose of reading to the students and instruct them to make a note every time they see something on the PAT ("Pay Attention To") list. How you have students note items on the PAT list is up to you. This could include:

- Putting an asterisk in the margin
- Underlining text that supports the PAT list

- Putting a comment in the margin

Follow the reading with the post-reading discussion. Structure this discussion using the Q-SSS-A process just like the structured conversations in this lesson.

Note: you might find the relational question is better discussed before or after the reading. This depends on whether the relational question is directly related to the reading or might make connections across units.

DIFFERENTIATING THE READING

You will notice that three different reading passages are provided with this lesson. Look at the shapes in the top-left of each passage to determine the grade level.

BELOW GRADE LEVEL	ON GRADE LEVEL	ABOVE GRADE LEVEL
		
Triangle is bottom-left	*Square is bottom-left*	*Circle is bottom-left*

In a class with students at diverse reading level proficiencies, you can give the appropriate reading passage to different students, while having all students follow the same PAT list and post-reading discussion.