

Grade 4 – 5: Mathematics

Adding Fractions

This resource can be used to plan an individual mathematics lesson or a unit of study. The suggested activities can be used in the order presented here, or they can be adapted for your lesson plan and classroom.

CURRICULUM OBJECTIVES

VIDEO OUTCOMES

Mathematics / Number and Operations in Base Ten / Fractions

Use fraction models to add fractions with like denominators in real-world and mathematical situations.

Add fractions, using efficient and generalizable procedures, including standard algorithms.

Use common factors and common multiples to calculate with fractions and find equivalent fractions.

Recognize and generate equivalent fractions, mixed numbers and improper fractions in various contexts.

TEACHER PACK OUTCOMES

Mathematics / Number and Operations in Base Ten / Fractions

Use fraction models to add fractions with like denominators in real-world and mathematical situations.

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Recognize and generate equivalent fractions, mixed numbers and improper fractions in various contexts.

Activity	Resources	Outcomes
<p><u>Activity 1: How Do We Add Fractions?</u> Timeframe: 40 minutes Lesson overview: Students will be introduced to adding fractions with the same denominator.</p> <hr/> <p>As a class, summarize what students have learned about fractions so far.</p> <p>Introduce the concept of adding fractions together, beginning with the same denominator.</p> <p>As a class, watch the ClickView Miniclip <i>Adding Fractions</i>.</p> <p>After watching the Miniclip video, ask students what they learned about adding fractions with the same denominator.</p> <p>Draw some practice examples on the board to explain the strategy in detail. You may choose to include diagrams of each fraction in these introductory examples to help guide students' understanding.</p> <p>Distribute a copy of the <i>Adding Fractions with Diagrams (Same Denominator)</i> worksheet to each student. Students can complete this worksheet independently or guided as a class.</p> <div style="border: 1px dashed black; padding: 10px; margin-top: 10px;"> <p>Extension: Students can write their own fraction addition problems and swap it with a partner to solve.</p> </div> <p><u>Answers:</u></p> <p>a) $\frac{3}{3} = 1$ b) $\frac{2}{4} = \frac{1}{2}$ c) $\frac{4}{5}$ d) $\frac{4}{6} = \frac{2}{3}$ e) $\frac{6}{7}$ f) $\frac{7}{8}$ g) $\frac{7}{9}$ h) $\frac{7}{10}$</p>	<p>Smartboard / Digital display</p> <p>ClickView Miniclip – <i>Adding Fractions</i></p> <p><i>Adding Fractions with Diagrams (Same Denominator)</i> worksheet</p> <p>Writing materials</p>	<p>Students will:</p> <ul style="list-style-type: none"> Use fraction models to add fractions with like denominators in real-world and mathematical situations.

Activity	Resources	Outcomes
<p>Activity 2: Let's Add Fractions! Timeframe: 20 minutes Lesson overview: Students will practice adding fractions with the same denominator through worksheets, with an opportunity to explore adding fractions with related denominators.</p> <hr/> <p>Rewatch the ClickView Miniclip <i>Adding Fractions</i> as a class or individually.</p> <p>After watching, summarize the strategies to add fractions with the same denominator.</p> <p>Then distribute a copy of the <i>Adding Fractions (Same Denominator)</i> worksheet. This worksheet does not include diagrams and will help students practice their fraction addition using numbers only.</p> <div> <p>Optional: Students can explore adding fractions with related denominators by completing the <i>Adding Fractions (Different Denominator)</i> worksheet. The teacher will need to guide them through the process involved.</p> <p>To further challenge students once they have the answers, they can change the improper fractions to mixed numbers.</p> </div>	<p>Smartboard / Digital display</p> <p><i>Adding Fractions (Same Denominator)</i> worksheet</p> <p>Writing materials</p> <p>Optional: <i>Adding Fractions (Different Denominator)</i> worksheet</p>	<p>Students will:</p> <ul style="list-style-type: none"> Add fractions, using efficient and generalizable procedures, including standard algorithms <p>Optional: Students will:</p> <ul style="list-style-type: none"> Use common factors and common multiples to calculate with fractions and find equivalent fractions. Recognize and generate equivalent fractions, mixed numbers and improper fractions in various contexts.
<p>Answers:</p> <p><i>Adding Fractions (Same Denominator)</i></p> <p>a) $\frac{4}{10} = \frac{2}{5}$ h) $\frac{3}{4}$ b) $\frac{4}{6} = \frac{2}{3}$ i) $\frac{5}{8}$ c) $\frac{2}{3}$ j) $\frac{8}{11}$ d) $\frac{4}{7}$ k) $\frac{6}{9} = \frac{2}{3}$ e) $\frac{2}{2} = 1$ l) $\frac{10}{12} = \frac{5}{6}$ f) $\frac{3}{4}$ m) $\frac{6}{6} = 1$ g) $\frac{4}{5}$ n) $\frac{9}{13}$</p>	<p>Answers:</p> <p><i>Adding Fractions (Different Denominator)</i></p> <p>a) $\frac{5}{6}$ h) $\frac{39}{45}$ b) $\frac{12}{18} = \frac{2}{3}$ i) $\frac{26}{24} = 1 \frac{1}{12}$ c) $\frac{24}{20} = 1 \frac{1}{5}$ j) $\frac{55}{70} = \frac{11}{14}$ d) $\frac{11}{12}$ k) $\frac{54}{44} = 1 \frac{5}{22}$ e) $\frac{26}{40} = \frac{13}{20}$ l) $1 \frac{1}{30}$ f) $\frac{16}{21}$ m) $\frac{67}{77}$ g) $\frac{17}{18}$ n) $\frac{23}{24}$</p>	

Activity

Resources

Outcomes

Activity 3: Online Fraction Games

Timeframe: Variable duration

Lesson overview: Students will practice adding fractions with the same denominator by using online games, with opportunities to explore fractions with related denominators.

Students can practice adding fractions through a variety of online games listed below.

Adding fractions with the same denominators:

Hyperlinked game	URL
Feed Me Fractions	https://www.abcya.com/games/adding_fractions
Fruit Splat Fraction Addition	https://www.sheppardsoftware.com/math/fractions/addition-game/
Jungle Fractions	https://www.education.com/game/jungle-fractions-like-denominators
Speedway (addition and subtraction with simplification)	https://www.mathplayground.com/ASB_Speedway.html
Add Fractions (with mixed numbers and visualization)	https://play.dreambox.com/student/dbl/TeacherTool_FractionAddition?atype=2&back=http%3A%2F%2Fwww.dreambox.com%2Fteachertools&eng=Intermediate&ie_skin=paperfrenzy

Adding fractions with different denominators:

Hyperlinked game	URL
Fruit Splat Fraction Addition	https://www.sheppardsoftware.com/math/fractions/addition-game/
Add Fractions	https://www.splashlearn.com/fraction-games
Adding and Subtracting Fractions Board Game (two player)	http://www.math-play.com/fractions-board-game/fractions-board-game.html
Fractions Jeopardy Game (addition and subtraction)	http://www.math-play.com/Fractions-Jeopardy/fractions-game.html
Unlike Denominator Fractions	https://www.education.com/game/teeth-fractions/

1:1 devices with Internet connection

Access to the games listed or of your own choosing

Students will:

- Use fraction models to add fractions with like denominators in real-world and mathematical situations.
- Add fractions, using efficient and generalizable procedures, including standard algorithms.
- Use common factors and common multiples to calculate with fractions and find equivalent fractions.
- Recognize and generate equivalent fractions, mixed numbers and improper fractions in various contexts.

Activity	Resources	Outcomes
<p><u>Activity 4: Interactive Video</u> Timeframe: 15 minutes Lesson overview: Students will watch the ClickView Miniclip and answer the interactive questions to show their ability to add fractions with the same denominators.</p> <hr/> <p>ClickView has created an interactive video lesson to accompany the ClickView Miniclip <i>Adding Fractions</i>. It includes a range of question types such as multiple choice, missing word, and true or false.</p> <p>You can assign the interactive video to your students to do at any suitable point in your unit. Alternatively, you can edit the pre-made questions to suit your students or create your own interactive video.</p> <p>To share the interactive video with your students, follow these steps:</p> <ol style="list-style-type: none"> 1. Search for the Miniclip <i>Adding Fractions</i> that has the interactive logo (Interactive). 2. Click to view the video. 3. Click on the "Interactive videos" tab beneath the video. 4. Click the "Print as Worksheet" OR "Save to Workspace" button on the interactive video. 5. If you click "Save to Workspace", you can either click "Share with your students" or access it via your Workspace. <ul style="list-style-type: none"> • If you choose "Share with your students", copy the link and send it to your students. • Otherwise go to your Workspace, select the "Interactive videos" folder, and click "Share" to access the link and send to students. <p>Students can watch and answer the interactive questions either in class or at home. Their results will be collated for you to view from your Workspace.</p> <p>The following guides are available if you require assistance:</p> <p>Creating an interactive video www.clickviewsupport.com/hc/en-us/articles/115005656528-PB202</p> <p>How do I share an interactive video? www.clickviewsupport.com/hc/en-us/articles/115005496667-PB208</p> <p>How do I make my interactive video private/public? www.clickviewsupport.com/hc/en-us/articles/115005494867-PB206</p>	<p>Interactive video for the ClickView Miniclip – <i>Adding Fractions</i></p> <p>1:1 devices with Internet connection</p>	<p>Assessment</p>