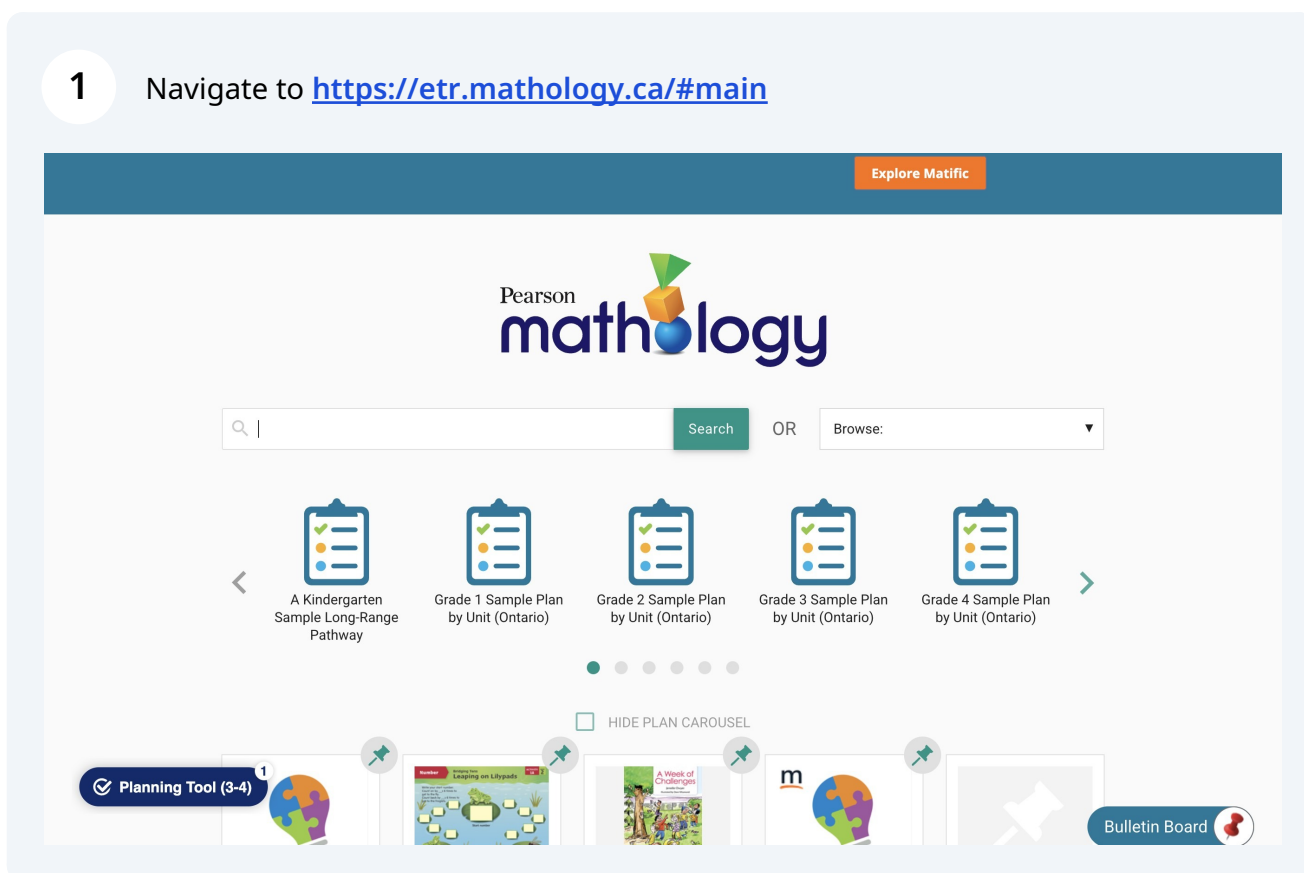


Teaching-Lessons-Using digital tools Gr 4-9

This guide shows you how to use digital tools from the lesson page gr 4-9.

1 Navigate to <https://etr.mathology.ca/#main>



2 Click "keyboard_arrow_right" to find your sample plan for your grade

Pearson **mathology**

Search OR Browse: ▾

< A Kindergarten Sample Long-Range Pathway Grade 1 Sample Plan by Unit (Ontario) Grade 2 Sample Plan by Unit (Ontario) Grade 3 Sample Plan by Unit (Ontario) **Grade 4 Sample Plan by Unit (Ontario)** >

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HIDE PLAN CAROUSEL

Planning Tool (3-4) Algebraic Expressions: Mathematical Counting: Bridging Tens (Ontario) A Week of Challenges: Teacher Guide m Number Relationships and Place Value: Bulletin Board

3 Click a sample plan

Pearson **mathology**

Search OR Browse: ▾

< Grade 1 Sample Plan by Unit (Ontario) Grade 2 Sample Plan by Unit (Ontario) Grade 3 Sample Plan by Unit (Ontario) Grade 4 Sample Plan by Unit (Ontario) **Grade 5 Sample Plan by Unit (Ontario)** >


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HIDE PLAN CAROUSEL

Planning Tool (3-4) Algebraic Expressions: Mathematical Counting: Bridging Tens (Ontario) A Week of Challenges: Teacher Guide m Number Relationships and Place Value: Bulletin Board

4 Click a unit

Section 1: Plan Contents

Interactive Math Tools	0/1
Number: Number Relationships and Place Value (Sept)	0/5
Patterning & Algebra: Patterning (Sept)	0/5
Number: Fluency with Addition and Subtraction (Oct)	0/5
Number: Fractions and Decimals (Oct)	0/10 >
Measurement: Mass, Capacity and Volume (Nov)	0/7
Number: Fluency with Multiplication and Division (Nov)	0/8
 Planning Tool (3-4)	0/8
Patterning & Algebra: Variables and Equations (Jan)	0/7

Section 2: Lessons & Resources

Number: Fractions and Decimals (Oct)



Number: Readiness Task: Fractions and Decimals and Percents



Just as students understand fractions as parts of a whole, they need to understand decimals as parts of a whole. Understanding that our number system is based on groupings of 10 supports students in representing decimals. Understanding fractions, and the relationship...

TAGS: [Grade 5](#) [Readiness Task](#) [Number-3](#)



Fractions and Decimals: Equivalent Fractions



In pairs, students use paper folding to find fractions that are equivalent to $\frac{3}{4}$. To consolidate, students share their fractions and the...

TAGS: [Grade 5](#) [Activity](#) [Number-10](#)




Fractions and Decimals: Exploring Improper Fractions and Mixed Numbers (ON only)



In pairs, students play a game that involves counting by unit fractions to reach a whole number, and writing improper fractions as mixed numbers. To consolidate, students discuss the relationship between mixed...

5 Click a lesson

Number: Fractions and Decimals (Oct)	0/10 >
Measurement: Mass, Capacity and Volume (Nov)	0/7
Number: Fluency with Multiplication and Division (Nov)	0/8
Data Unit: Data Management (Dec)	0/8
Patterning & Algebra: Variables and Equations (Jan)	0/7
Measurement: Length, Perimeter, and Area (Jan/Feb)	0/6
Geometry: 2-D Shapes, Angles, and 3-D Solids (Feb)	0/7
 Planning Tool (3-4)	0/5
Geometry: Grids and Transformations (Mar)	0/6
Number: Operations with Fractions and Decimals	0/8



Fractions and Decimals: Equivalent Fractions



In pairs, students use paper folding to find fractions that are equivalent to $\frac{3}{4}$. To consolidate, students share their fractions and the...

TAGS: [Grade 5](#) [Activity](#) [Number-10](#)



Fractions and Decimals: Exploring Improper Fractions and Mixed Numbers (ON only)



In pairs, students play a game that involves counting by unit fractions to reach a whole number, and writing improper fractions as mixed numbers. To consolidate, students discuss the relationship between mixed numbers and improper fractions, then share...

TAGS: [Grade 5](#) [Activity](#) [Number-11](#)

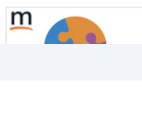


Fractions and Decimals: Comparing and Ordering Fractions



In pairs, students use number lines to order a set of fractions from least to greatest. To consolidate, students discuss the various strategies that can be used to compare and order fractions and how the strategy used depends on the fractions.

TAGS: [Grade 5](#) [Activity](#) [Number-12](#)



Fractions and Decimals: Representing Decimals



6 Click "Lesson" tab

The screenshot shows the Mathology website interface. At the top, there is a navigation bar with the Mathology logo, a search bar, and links for Home, Favourites, Plan, Analytics, Matific Dashboard, and Help. The user is logged in as 'on@mathology.ca'. Below the navigation bar, the page title is 'Fractions and Decimals' and the main heading is 'Comparing and Ordering Fractions'. A navigation menu below the heading has five tabs: ABOUT, LESSON (highlighted with an orange circle), ASSESSMENT, NEXT STEPS, and PRACTICE. The 'About this lesson' section contains text about using number lines and a table with activity time and group size. The 'Focus' section highlights the lesson focus on comparing and ordering fractions with like and unlike denominators. A 'Curriculum' link is visible at the bottom left.

mathology Search... Home Favourites Plan Analytics Matific Dashboard Help on@mathology.ca on@mathology.ca

Fractions and Decimals Comparing and Ordering Fractions

ABOUT LESSON ASSESSMENT NEXT STEPS PRACTICE

About this lesson

In pairs, students use number lines to order a set of fractions from least to greatest.

ACTIVITY TIME	45-50 min
GROUP SIZE	Pairs

To consolidate, students discuss the various strategies that can be used to compare and order fractions and how the strategy used depends on the fractions.

TAGS: Grade 5 Activity Number-12

Content Background

Focus

Lesson Focus: Comparing and ordering fractions with like and unlike denominators

Curriculum

7 Click digital tool

The screenshot shows the Mathology website interface, focusing on the 'Lesson' tab. The navigation menu has five tabs: ABOUT, LESSON (highlighted with an orange circle), ASSESSMENT, NEXT STEPS, and PRACTICE. The 'Materials' section is highlighted with a red arrow and contains a list of resources. The 'INSTRUCTIONS' section is also highlighted with an orange circle and contains a list of steps for the activity. The 'CONSOLIDATION' section contains text and a list of fractions for discussion. A 'Planning Tool (3-4)' button is visible at the bottom left.

ABOUT LESSON ASSESSMENT NEXT STEPS PRACTICE

Number

Materials

- Paper strips or sheets of paper (all the same size)
- Master 2: Number Lines (PDF) (WORD)
- Math Mat 20: Fraction Strips (PDF) (WORD)
- Relational Rods (Accommodation)
- Practice (PDF) (WORD)
- Practice Answers (PDF) (WORD)
- Assessment (PDF) (WORD)
- Lesson Slides (PDF) (PowerPoint)

INSTRUCTIONS

Before (10-15 min)

Have students order $\frac{4}{6}$, $\frac{1}{4}$, $\frac{11}{12}$ from least to greatest. Possible strategies:

- folding and shading paper strips, then comparing the amounts shaded
- comparing to benchmarks (e.g., $\frac{1}{4}$ is less than $\frac{1}{2}$, $\frac{4}{6}$ is a bit more than $\frac{1}{2}$, and $\frac{11}{12}$ is very close to 1)
- placing the fractions on a number line by considering their relative location
- writing equivalent fractions with same denominator, for example, using rectangles to show that $\frac{4}{6} = \frac{8}{12}$ (partitioning each sixth in half) and that $\frac{1}{4} = \frac{3}{12}$ (partitioning each fourth

CONSOLIDATION

Depending on your curriculum, discuss the strategies used to compare and order:

Part A: $\frac{1}{12}$, $\frac{1}{4}$, $\frac{3}{6}$, $\frac{2}{3}$, $\frac{7}{8}$

Part B: $\frac{8}{6}$, $\frac{15}{9}$, $1\frac{2}{3}$, $2\frac{1}{6}$, $\frac{15}{6}$, where $\frac{15}{9}$ and $1\frac{2}{3}$ are equivalent.

- Comparing fractions with the same numerators: $\frac{1}{4}$ and $\frac{1}{12}$; since fourths are bigger than twelfths, the fraction with the smaller denominator is greater: $\frac{1}{4} > \frac{1}{12}$.
- Comparing fractions with the same denominators: $\frac{15}{6}$ and $\frac{8}{6}$; the count determines the greater fraction: 15 sixths is greater than 8 sixths.
- Using benchmarks: comparing $\frac{1}{4}$ and $\frac{2}{3}$ to $\frac{1}{2}$:

Planning Tool (3-4)

8 Click within the tool to drag items to the work space.

1/10 2/10 3/10 4/10 5/10 6/10 7/10 8/10 9/10 10/10

1/8 2/8 3/8 4/8 5/8 6/8 7/8 8/8

1/6 2/6 3/6 4/6 5/6 6/6

1/5 2/5 3/5 4/5 5/5

1/4 2/4 3/4 4/4

1/3 2/3 3/3

1/2 2/2

1

Show number line

9 Click at the bottom to find different ways of using the tool.

1/10 2/10 3/10 4/10 5/10 6/10 7/10 8/10 9/10 10/10

1/8 2/8 3/8 4/8 5/8 6/8 7/8 8/8

1/6 2/6 3/6 4/6 5/6 6/6

1/5 2/5 3/5 4/5 5/5

1/4 2/4 3/4 4/4

1/3 2/3 3/3

1/2 2/2

1

Show number line

10 Drag more items for use.

A digital workspace for fraction strips and a number line. On the left, a vertical menu contains various fraction strips: $\frac{1}{10}$ to $\frac{10}{10}$ (blue), $\frac{1}{8}$ to $\frac{8}{8}$ (purple), $\frac{1}{6}$ to $\frac{6}{6}$ (light purple), $\frac{1}{5}$ to $\frac{5}{5}$ (green), $\frac{1}{4}$ to $\frac{4}{4}$ (orange), $\frac{1}{3}$ to $\frac{3}{3}$ (brown), $\frac{1}{2}$ to $\frac{2}{2}$ (pink), and 1 (red). The $\frac{1}{3}$ strip is circled in orange. On the right, a number line from 0 to 1 has a pink strip labeled $\frac{1}{2}$ and a red strip labeled 1 placed above it. At the bottom, a toolbar includes a checkmark icon, the text "Show number line with intervals", a dropdown menu with "1" selected, and several utility icons.

11 Click here for alternate digital tools

A digital workspace for fraction strips and a number line. At the top, a blue header bar contains a dropdown menu labeled "Fraction Strips" (circled in orange), and icons for text, text with background color, help, undo, and redo. The left menu is identical to the previous workspace, but the $\frac{1}{3}$ strip is circled in orange. On the right, a number line from 0 to 1 has a red strip labeled 1 , a pink strip labeled $\frac{1}{2}$, and a brown strip labeled $\frac{2}{3}$ placed above it.

12 Click on one of the alternate tools to use.

The screenshot shows a software interface with a blue header bar. On the left, a menu titled "Colour Tiles" is open, listing several tool categories: "Counters", "Relational Rods", "Fraction Circles", and "Fraction Strips". The "Fraction Strips" category is currently selected, and a sub-menu is visible showing various fraction strips: $\frac{1}{6}$, $\frac{2}{6}$, $\frac{3}{6}$, $\frac{4}{6}$, $\frac{5}{6}$, $\frac{6}{6}$; $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$, $\frac{4}{5}$, $\frac{5}{5}$; $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$, $\frac{4}{4}$; $\frac{1}{3}$, $\frac{2}{3}$, $\frac{3}{3}$; and $\frac{1}{2}$, $\frac{2}{2}$. In the top right corner of the header bar, there are several icons: a text tool (T), a text tool with a downward arrow (T↓), a question mark (?), a back arrow (←), and a "Res" button. The main workspace on the right contains a diagram of fraction strips. It consists of three horizontal strips. The top strip is brown and divided into three equal parts, with the rightmost part labeled $\frac{2}{3}$. The middle strip is pink and divided into two equal parts, with the rightmost part labeled $\frac{1}{2}$. The bottom strip is red and is a single solid block labeled "1".

13 Click "Tool Help" for more support for each tool.

The screenshot shows the same software interface as in the previous image. The "Colour Tiles" menu is open, and a vertical list of colored squares is visible on the left side of the workspace. The top right corner of the header bar shows the same set of icons as before. The question mark icon (?) is now highlighted with an orange circle, indicating it is the tool being selected for help.