Rainbow Fraction Tiles

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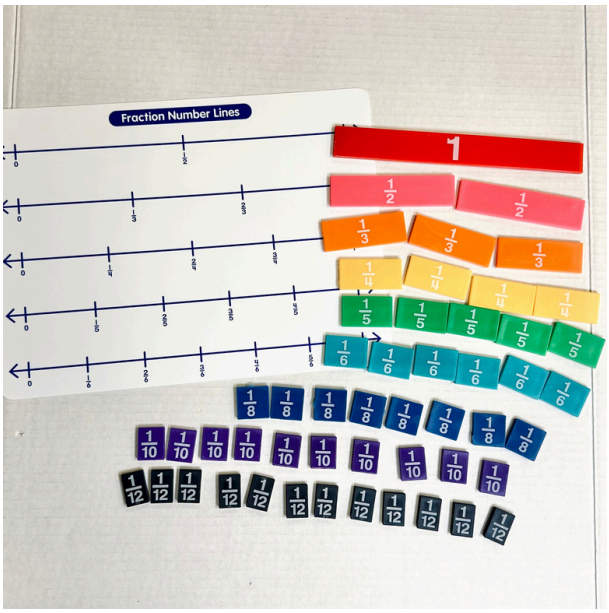

The Rainbow Fraction Tiles STEAM Kit provides a colorful, hands-on way for students to develop a deep understanding of fractions. Featuring 15 complete sets of color-coded fraction tiles, this kit allows learners to visually explore fraction concepts including equivalence, comparison, operations, and real-world applications. The tactile experience of manipulating tiles helps reinforce mathematical thinking and supports differentiated learning for a wide range of learners in a collaborative classroom environment.

Grade Level

3rd - 7th

Group Size

1 student per set

Time Duration

20 - 40 minutes

Content of Kits

Components

- 30 sets of Rainbow Fraction Tiles

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Usage

Getting Started

1. **Introduce the Tiles -** Show students the color-coded tiles and explain how each color represents a specific fraction.
2. **Model Basic Equivalence -** Demonstrate simple comparisons (e.g., how two 1/4 tiles equal one 1/2 tile).
3. **Allow for Free Exploration -** Give students 5–10 minutes to handle the tiles, build fraction models and discover relationships on their own.
4. **Introduce Activity Challenges -** Provide students with guided practice activities or task cards focused on specific learning objectives.
5. **Encourage Math Talk -** Prompt students to explain what they observe and how they are using the tiles to represent mathematical ideas.

Storage

- Ensure all pieces return to the bags they were distributed in and each bag returns to the storage bin provided between uses.

Troubleshooting

- **Students Confused by Equivalence -** Encourage students to line up tiles of different denominations to reinforce understanding physically.

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Activity Guide

Beginner

Fraction Fundamentals
Students use Rainbow Fraction Tiles to build and compare simple fractions. They explore equivalencies by constructing visual models that show how different combinations of tiles represent the same value.

Intermediate

Adding and Subtracting Fractions
Students model the process of adding and subtracting fractions with unlike denominators using the tiles to visualize finding common denominators and combining parts.

Advanced

Multiplying and Dividing Fractions
Students use tiles to represent problems involving multiplying or dividing fractions, exploring how these operations affect size and quantity.

Extension Activities:

Real-World Fraction Applications
Students write and solve their own word problems using Rainbow Fraction Tiles to model solutions — examples could include adjusting a recipe, building a model, or comparing distances.

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Learning Extensions

STEAM Connections: Math

Learning Objectives:

- Understand, identify, and compare fractions.
- Develop fluency in adding, subtracting, multiplying, and dividing fractions.
- Build visual and tactile understanding of fraction concepts.
- Apply fraction concepts to real-world contexts.
- Foster mathematical communication and reasoning through collaborative exploration.

Career Connections:

- **Chef/Baker –** Uses fractions to measure and adjust recipes.
- **Carpenter –** Applies fractions in precise measurements and material cutting.
- **Pharmacist –** Calculates dosages and ratios in prescription preparation.
- **Engineer –** Uses fractions in technical drawings and material specifications.
- **Financial Analyst –** Interprets data and ratios in financial modeling.

Essential Employability Skills:

- Numeracy
- Problem-Solving
- Attention to Detail
- Critical Thinking
- Communication

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Resources and Accessibility

Safety Guidelines

- **Supervise Use with Younger Students -** Ensure small tiles are used with appropriate age groups to avoid choking hazards.
- **Keep Workspaces Clear** - Encourage students to keep work areas organized to prevent tiles from being lost or stepped on.
- **Clean Regularly -** Wipe down tiles periodically to maintain cleanliness, especially in shared classrooms.

Accessibility

- **Allow Verbal Explanations -** For students with motor challenges, allow participation by describing fraction models rather than physically manipulating tiles.
- **Offer Alternative Recording Methods -** Allow students to record answers verbally or digitally if writing is difficult.
- **Adjust Group Roles -** Assign roles like "navigator," "explainer," or "recorder" so all students can participate meaningfully in fraction activities.

Library Catalog

Library Resources

Feedback

QR to feedback survey