8th Grade Versa Tiles

Mid-Valley
STEM-CTE HUB

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8th Grade Versa Tiles

The 8th Grade VersaTiles STEAM Kit offers an engaging, hands-on way for students to practice and master key math concepts aligned with grade-level standards. Using a self-checking tile system and interactive workbooks, students explore topics such as linear equations, functions, systems of equations, and geometry. The kit promotes independent learning, critical thinking, and real-world math connections—perfect for reinforcing skills in a collaborative or self-paced classroom setting.

Grade Level

8th

Group Size

1 - 2 students per set

Time Duration

15 - 30 minutes

Content of Kits

Components

- 24 Student Activity Books (4 copies of each title, 32 pages each)
- 8 Answer Cases
- 1 Teacher Guide

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Usage

Getting Started

1. **Introduce the VersaTiles System -** Demonstrate how to use the answer case and tiles in conjunction with the activity books.
2. **Model a Sample Activity -** Walk through an example problem, showing how to place tiles and check answers.
3. **Assign Roles for Pair Work -** In pairs, designate one student as the "solver" and the other as the "checker" to encourage collaboration.
4. **Set Clear Objectives -** Define the learning goals for each session to keep students focused.
5. **Encourage Reflection -** After activities, have students discuss what strategies worked and where they faced challenges.

Storage

- **Return components to the provided storage bin between uses.**

Troubleshooting

- **Misplaced Tiles -** If tiles are misplaced, guide students to double-check their placements against the activity book.
- **Difficulty Understanding Instructions -** Provide additional guidance or peer support for students struggling with activity instructions.
- **Engagement Issues -** Incorporate game-like elements or timed challenges to increase motivation.

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Activity Guide

Beginner

Linear Equations Warm-Up
Students use VersaTiles to solve sets of problems involving linear equations in one variable. This activity helps solidify their grasp of solving equations and understanding the properties of equality.

Intermediate

Exploring Functions and Their Representations
Students complete VersaTiles activities that require them to identify and interpret functions presented as tables, graphs, and equations. This reinforces their ability to transition between different forms and understand the relationships between variables.

Advanced

Analyzing Systems of Equations
Students tackle VersaTiles sets focused on systems of equations, using methods such as substitution and elimination. They then apply these skills to real-world scenarios, enhancing their problem-solving abilities.

Extension Activities:

Mathematics in Real Life
After completing a VersaTiles activity, students research and present how the mathematical concept applies to a real-world situation or career. For example, they might explore how linear equations are used in budgeting or engineering.

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Learning Extensions

STEAM Connections: Math

Learning Objectives:

- Strengthen proficiency in solving linear equations and understanding functions.
- Enhance students' ability to interpret and analyze various representations of mathematical concepts.
- Develop problem-solving skills through the application of systems of equations.
- Foster connections between mathematical concepts and real-world contexts.

Career Connections:

- **Engineer –** Applies systems of equations in designing and analyzing structures and systems.
- **Economist –** Uses functions and models to predict economic trends and behaviors.
- **Data Analyst –** Interprets data using various mathematical representations to inform decisions.
- **Urban Planner –** Utilizes mathematical models to design and improve city infrastructures.
- **Computer Scientist –** Employs algorithms and equations in programming and software development.

Essential Employability Skills:

- Analytical Thinking
- Attention to Detail
- Problem-Solving
- Communication
- Adaptability

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Resources and Accessibility

Safety Guidelines

- **Clean Regularly -** Wipe tiles, cases, and activity books with a soft, damp cloth to maintain hygiene, especially in shared-use environments.
- **Store Properly -** Return all tiles to their cases after use to avoid misplacement or damage.
- **Handle Tiles Carefully -** Encourage students to slide or place tiles gently—avoid forceful snapping or tossing to prevent wear and breakage.
- **Keep Workspaces Clear -** Ensure desks are free of clutter so tiles don't scatter or fall, reducing the risk of slipping or losing pieces.

Accessibility

- **Offer Verbal Instruction Support -** Allow peer partners or teachers to read prompts aloud for students with reading or processing differences.
- **Incorporate Flexible Timing -** Allow extended time for students who need it to complete tile placement and self-check activities at their own pace.
- **Enable Alternative Response Modes -** If physical tile use is difficult, students can write answers on paper or use digital equivalents where available.

Library Catalog

Library Resources

Feedback

QR to feedback survey