6th Grade VersaTiles

Mid-Valley
STEM-CTE HUB

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6th Grade VersaTiles

The VersaTiles STEAM Kit offers a hands-on, self-checking system that reinforces math concepts aligned with 6th-grade standards. Students engage with topics such as ratios and geometry through interactive activities that promote independent practice and immediate feedback. This kit is designed to build confidence and proficiency in mathematical skills.

Grade Level

6th

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 kit components in an orderly manner to the provided storage bin.

Troubleshooting

- Misplaced Tiles: If tiles are misplaced, guide students to double-check their placements against the activity book.
- Damaged Components: Have spare tiles and cases available to replace any damaged parts promptly.
- 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

Fluency Warm-Up
Students use VersaTiles to complete quick review sets on multiplication, division, and fractions. This warm-up activity reinforces core math fluency, helping students transition smoothly into more advanced topics.

Intermediate

Geometry & Measurement Mastery
Students work in pairs to complete VersaTiles activities on geometry and measurement. After completing each set, they explain their reasoning to a peer or teacher, fostering deeper comprehension and communication skills.

Advanced

Ratios, Proportions & Percent Challenges
Students tackle VersaTiles sets on ratios, rates, proportions, and percent. They then extend learning by designing their own real-world problem (e.g., calculating sale prices, recipe adjustments), which classmates solve using VersaTiles.

Extension Activities:

STEAM Connections Journal
After completing a VersaTiles activity, students write a short journal entry explaining how the concept could be used in a STEAM field (e.g., geometry in architecture, ratios in engineering). This reinforces cross-disciplinary thinking and real-world relevance.

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Learning Extensions

STEAM Connections: Engineering - Math - Science

Learning Objectives:

- Reinforce grade-level math fluency and conceptual understanding.
- Apply mathematical reasoning to solve multi-step problems.
- Develop self-monitoring and error correction through self-checking activities.
- Collaborate and communicate about math strategies with peers.
- Connect math concepts to real-world contexts and STEAM careers.

Career Connections:

- **Architect –** Uses geometry and measurement in building design.
- **Engineer –** Applies ratios, proportions, and calculations in product development.
- **Data Analyst –** Interprets and represents numerical data in meaningful ways.
- **Financial Planner –** Uses percentages and ratios to develop financial strategies.
- **Computer Programmer –** Relies on logical reasoning and problem-solving in coding.

Essential Employability Skills:

- Numeracy
- Critical Thinking
- Attention to Detail
- Communication
- Self-Management

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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