

Owlet Cube Math Tool



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Owlet Cube Math Tool

The Owlet Cube Math Tools STEAM Kit offers a tactile and interactive approach to mastering foundational math concepts such as place value, money, and decimals. Designed for students in grades K–5, the Cube is a sensor-enabled tower that allows learners to stack cubes in three tracks to form numbers and solve math problems. When paired with the Cube3 and Cube6 apps, students receive immediate feedback, enabling them to visualize and understand mathematical operations in a concrete manner.



Grade Level

K - 5th

Group Size

1 - 2 per device

Time Duration

20 - 45 minutes

Content of Kits

Components

- 10 Owlet Cube Math Tools
 - Charging Cables
 - 30 Stacking cubes
- Charging Station
- Teacher Guide

This kit requires:

- Chromebook
- Tablet
- Owlet apps (Links to download apps can be found at www.birdbraintechnologies.com)

Tablets and Chromebooks can be checked out through the Educator Lending Library. Apps are included with devices.



Usage

Getting Started

- 1. Unbox and Inspect Components -** Ensure all parts are present and undamaged. Familiarize yourself with the Cube tower, cubes, and accessories.
- 2. Set Up the Cube Tower -** Place the Cube tower on a stable, flat surface. Connect the USB charging cable and power on the device.
- 3. Download and Launch the App -** On your tablet, Chromebook, or Mac, download the Cube3 or Cube6 app from the appropriate app store. Follow the on-screen instructions to pair the Cube tower with the app via Bluetooth. If you borrowed Lending Library tablets or Chromebooks, the apps will already be downloaded.
- 4. Begin Exploration -** Start with simple activities to familiarize students with stacking cubes and observing the corresponding numbers on the app. Encourage students to experiment with different combinations and observe the results.

Storage

- Store in a dry, dust-free environment to maintain functionality.
- Store USB charging cable and any additional components in a labeled container to keep them organized.
- Keep stacking cubes in the provided drawstring pouch to prevent loss and ensure easy access.

Troubleshooting

- **Cube Not Powering On** - Ensure the USB charging cable is securely connected and the power source is functional. Try using a different USB port or charger.
- **App Not Connecting** - Verify Bluetooth is enabled on your device. Ensure the Cube tower is within the Bluetooth range of your device. Restart the app and attempt to pair again.
- **Inaccurate Number Display** - Check that cubes are properly seated in the tracks. Ensure the Cube tower is placed on a flat, stable surface. Calibrate the Cube tower through the app settings if necessary.



Activity Guide

Beginner

Build and Identify

Students will begin by stacking cubes in the Cube tower to form numbers. They will observe the corresponding number displayed on the app and identify the place value of each digit. This will help students understand how each digit in a number has a different place value depending on its position. As they experiment, students can create different numbers and discuss their observations with the class, reinforcing their understanding of number formation and place value concepts.

Intermediate

Money Matters

Students will explore the concept of money and its relation to place value in this activity. Each cube will represent a specific monetary value, such as \$1, \$5, or \$10. Students will stack cubes to represent different amounts of money, practicing counting and understanding how different combinations of cubes can add up to the same total amount. They will calculate the total value of each combination, helping them connect the idea of place value to real-world financial concepts.

Advanced

Decimal Delights

Students will use cubes to represent decimal numbers, such as 1.2 or 3.45. They will then perform addition and subtraction with decimal numbers using the Cube tower, manipulating the cubes to match the numbers and observe the results on the app. Students will practice carrying out operations with decimals, gaining a deeper understanding of decimal place value. As they work through these problems, they will explain their reasoning and strategies to their peers, enhancing their mathematical communication skills.

Extension Activities:

Number Patterns

Students will identify and create number patterns using the Cube tower in this activity. They will use the cubes to create sequences of numbers, such as counting by twos or fives, and will observe the patterns they form. After establishing these patterns, students will predict the next numbers in the sequence, reinforcing their ability to recognize number relationships. Additionally, students will be encouraged to create their own patterns and challenge their peers to identify and extend them, fostering creativity and pattern recognition.



Learning Extensions

STEAM Connections: Math

Learning Objectives:

- Develop a concrete understanding of place value.
- Enhance skills in addition, subtraction, and decimal operations.
- Foster pattern recognition and number sense.
- Encourage collaborative problem-solving and mathematical reasoning.

Career Connections:

- **Mathematician** - Analyzes and interprets numerical data.
- **Financial Analyst** - Assesses financial data and trends.
- **Engineer** - Applies mathematical principles to design and problem-solving.
- **Educator** - Teaches mathematical concepts and fosters critical thinking.

Essential Employability Skills:

- Critical Thinking
- Collaboration
- Communication
- Adaptability





Resources and Accessibility

Safety Guidelines

- Use the Cube tower and cubes as intended to prevent damage.
- Keep components in a safe, dry place when not in use.
- Ensure students are supervised during activities to promote safe usage.

Accessibility

- Use tactile markers on cubes to indicate value for students with visual impairments.
- Provide written instructions and visual cues for students with hearing impairments.
- Allow extended time for activities and assist as needed.
- Use simplified instructions and provide additional practice opportunities.

Library Catalog



Library Resources



Feedback

QR to feedback survey

