

# SUPPORT FOR THE UNIVERSAL DESIGN FOR LEARNING

**Universal Design for Learning (UDL)** is a set of three guiding principles that offer all students equal opportunities to learn. UDL provides a framework for devising flexible, adjustable instructional goals, methods, materials, and assessments that can be personalized to every learner's individual needs, as opposed to a static, one-size-fits-all solution. UDL also encourages opportunities for learning outside of the traditional classroom environment.

## PRINCIPLE 1.

**Present** information and content in different ways.



**Extensive use of multiple types of graphic representations and models, all supported with both English and Spanish audio.**

Multiple representations of concepts provide opportunities for students to make connections within, as well as between, concepts—helping them to understand math as a coherent system and facilitating the transfer of learning.

**Interactive games and the related gamification process provide a contextual framework for applied practice with instant feedback.**

Interactive games are directly integrated into lessons to facilitate a student's recall of prior math knowledge and concepts that will be used within the current lesson. These games not only ensure that students come into the instructional segment of the lesson "cognitively primed" for learning new concepts, but also function as a motivational aspect of the program as students earn points that can be applied to individual or collaborative goals.

**Support for each learner's unique needs through immediate multi-level corrective feedback within each lesson and on-demand tutoring from certified math teachers.**

Imagine Math utilizes text, illustrations, short animations, and integrated audio throughout the program to adapt to differing learning styles.

## PRINCIPLE 2.

Differentiate the ways that students can **express** what they know.



**Age-appropriate adaptive software that enables each learner to move at their own pace, while affording them the opportunity to achieve goals.**

Students can see at any point where they are within their customized learning pathway and adjust their pacing accordingly.

**Problem-solving framework specially designed to help students develop higher-order thinking skills and problem-solving abilities.**

Students are provided with opportunities to strengthen their executive function abilities, and recognize that there is often more than one way to address a specific problem or to arrive at a correct outcome. The organizational skills students develop through this approach extend well beyond the math classroom.

**Immediate corrective feedback, performance-based pathways, motivation for perseverance, and access to on-line teachers reduce math anxiety and provide a supportive learning environment.**

The research-proven Gradual Release model, devolving responsibility within the learning process from the teacher to the eventual independence of the learner, allows students to take ownership of new concepts on a measured basis to ensure lasting mastery and success.

## PRINCIPLE 3.

Stimulate interest and **motivation** for learning.



**Utilizes intrinsic and extrinsic, short-term and long-term, and individual and collaborative motivational strategies keep students engaged.**

Imagine Math recognizes that there are marked differences in the manners through which learners can be motivated to learn, such as spontaneity versus predictability and individual versus collaboration

**Personalized avatars, leaderboards, regional and national contests, collaborative classroom goals, and donations to charity keep students engaged and excited about learning.**

Since not all students are motivated in the same manner, and even a single student may be motivated by different rewards or recognition opportunities at different times, Imagine Math enables students to select from multiples types of incentives as they work through their lesson pathway.

**Points awarded for effort AND accomplishment encourage students to persevere through more complex concepts.**

Points are never taken away for making errors or asking for help, so students are encouraged to develop a growth mindset toward math and to reflect on their mistakes as an integral part of the learning process.

Imagine Math accepts the legal mandates stipulated by the Americans with Disabilities Act (ADA), the Individuals with Disabilities Education Act (IDEA), the Assistive Technology Act, and Section 508 or other similar guidelines/requirements for accessibility.

Imagine Math uses the **World Wide Web Consortium's Web Content Accessibility Guidelines (Version 2)** to guide our platform support for assistive technologies for students and educators with disabilities.

As a browser-based application, Imagine Math relies on accessibility supports built into the Web browser and within the operating system of the specific device.

Some examples of Imagine Math's support for these guidelines include:

- **Using alternate descriptions for image-based assets.** As a matter of policy, ALT tags are used for all application imagery.
- **Utilizing semantic HTML to ensure content is navigable without a stylesheet or with text-only browsers such as screen readers.** Elements include functional text descriptions to identify themselves.
- **Avoiding any interference with core browser and operating system assistive supports such as zoom/magnification and text-to-speech.**
- **Providing synchronized text and audio fallback for any animation elements used.**
- **NOT overriding browser specifications for stylesheets or rely on color alone to make any selections in the application.**
- **NOT requiring any browser plugins or App downloads for math functionality on tablet devices.** All content is rendered directly through a web browser. Likewise, Imagine Math does not require students to download an App for use on tablet devices.

Due to the variety of screen reader products available in the market, it is not possible to verify Imagine Math's support for specific screen readers. However, the most popular products in the market focus support on WCAG version 2 and should not have any issues with parsing and rendering Imagine Math's application.

For more information on **Universal Design for Learning**, please visit: [udlcenter.org](http://udlcenter.org)