Values360Ventures builds its portfolio for the EduTech in collaboration with BLC Math, is a private company established in South Korea in 1997.

STEMinnoKey is one of the EduTechs, is an inquiry-based teaching and learning application that uses virtual manipulatives to enhance your child's math foundation and skills.

STEMinnoCare is a motion-tracking application designed to enhance cognition and motor skills. It features a comprehensive training program that includes physical exercises, motion games, and cognitive training games.

VALUES 360 VENTURES

THE VENTURE CAPITAL ADVISORY FIRM

Values360Ventures is an EU-based consultancy firm that specializes in equipping entrepreneurs, investors, and stakeholders with the resources to create social businesses and social ventures.
We also generate investment opportunities in companies with a social or environmental impact that deliver both financial and non-financial returns.

Our offices are located in Estonia, Italy, Nigeria, and Saudi Arabia.

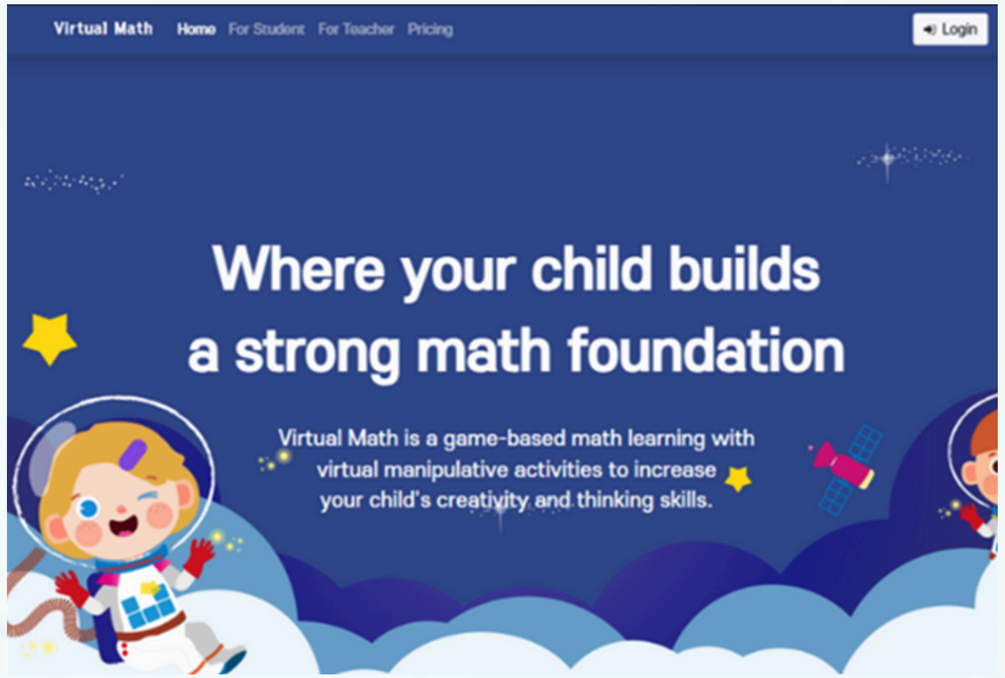
BLC MATH, SOUTH KOREA

BLC Math is a private company established in South Korea in 1997. It specializes in mathematics and logic education for both children and the elderly through innovative programs and cognitive enhancement techniques. BLC Math is dedicated to improving the mathematical and logical skills of children through its math app, STEMinnoKey. Recently, the company has also been developing digital content, including motion-tracking technology that supports cognitive development and overall health for both young and elderly individuals.

STEMINNOKEY

MATH TEACHING & LEARNING APP

STEMinnoKey is an inquiry-based teaching and learning application that uses virtual manipulatives to enhance your child’s math foundation and skills.



BLC MATH - COMPANY OVERVIEW

Founded 1997 (South Korea): Specializes in innovative math and logic programs for children and seniors

Proven impact:

Preschool program raised IQ scores from 125.3 to 139.0

Elementary math curriculum boosts proficiency by focusing on concepts

Dementia-prevention cognitive games saw a 17.3% improvement

Achievements: Winner of Korea’s 2016 EdTech contest; led multiple government research projects

STRUGGLING WITH MATH?

What matters most is finding effective ways to help them understand and gain confidence. Some of the world's top-performing education systems offer valuable insights.

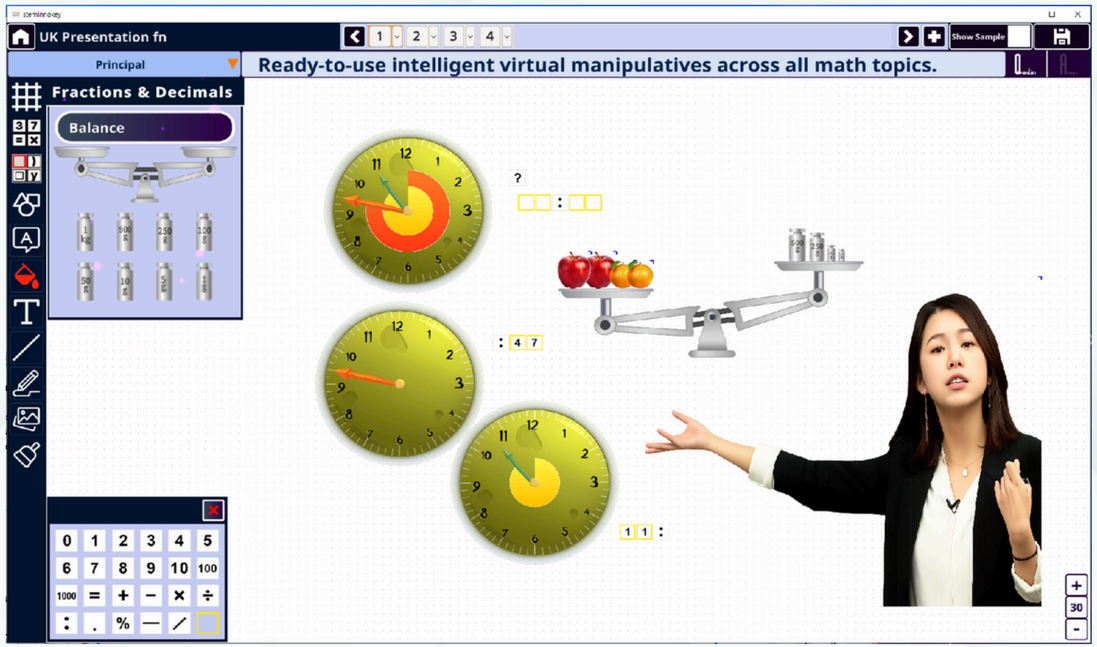
STEMinnoKey offers intelligent virtual manipulatives that enhance learning across all areas of mathematics.
These tools make it easier for teachers to present concepts clearly and simply, while enabling students to engage with and explore math in a hands-on, visual way.

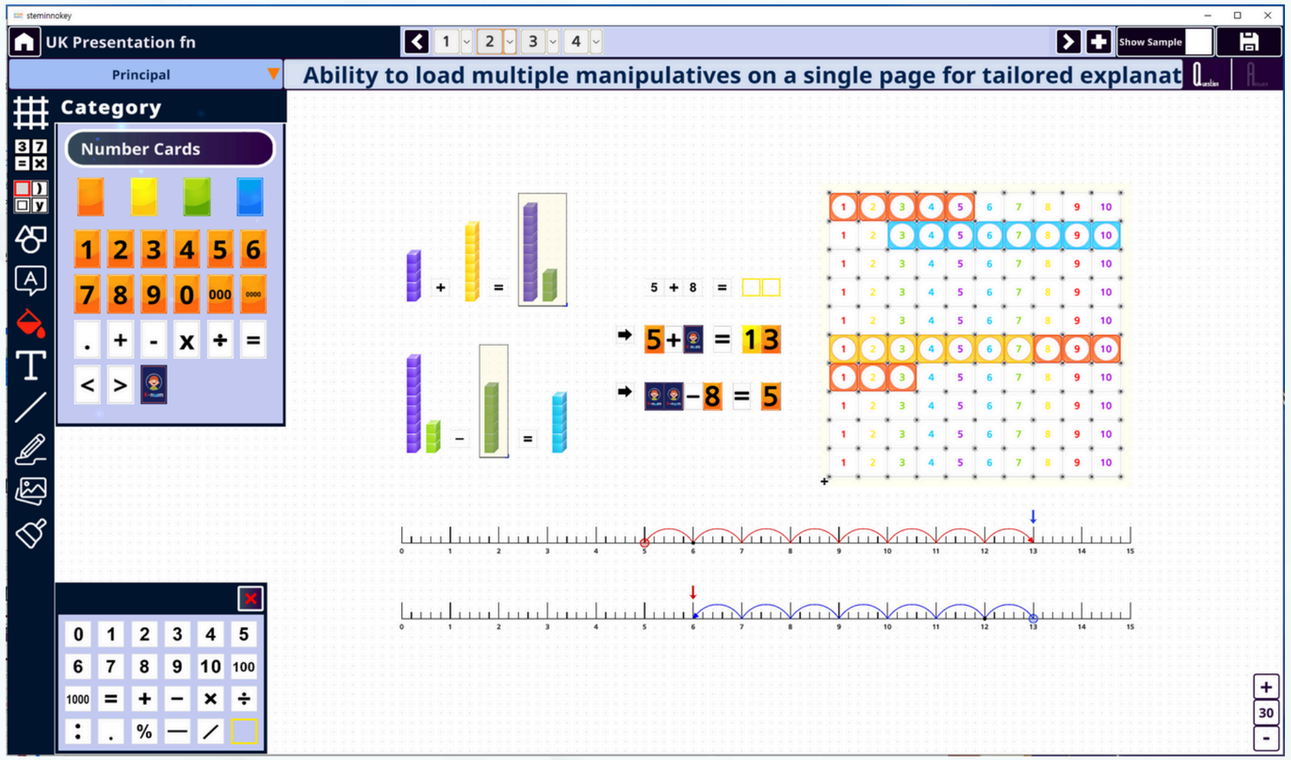
Through hands-on exploration, students develop logical understanding rather than relying solely on memorization.
By shifting from rote learning to inquiry-based learning, students build strong conceptual foundations and develop lasting mathematical skills.

YOU CAN USE IT RIGHT AWAY IN THE CLASSROOM

We’ve developed over 40 manipulatives and a wide range of images for instant classroom use.

Teachers can easily import, move, zoom in, and combine manipulatives with numbers, letters, and drawings.
This creates a supportive environment that sparks curiosity and helps students reach their full potential.

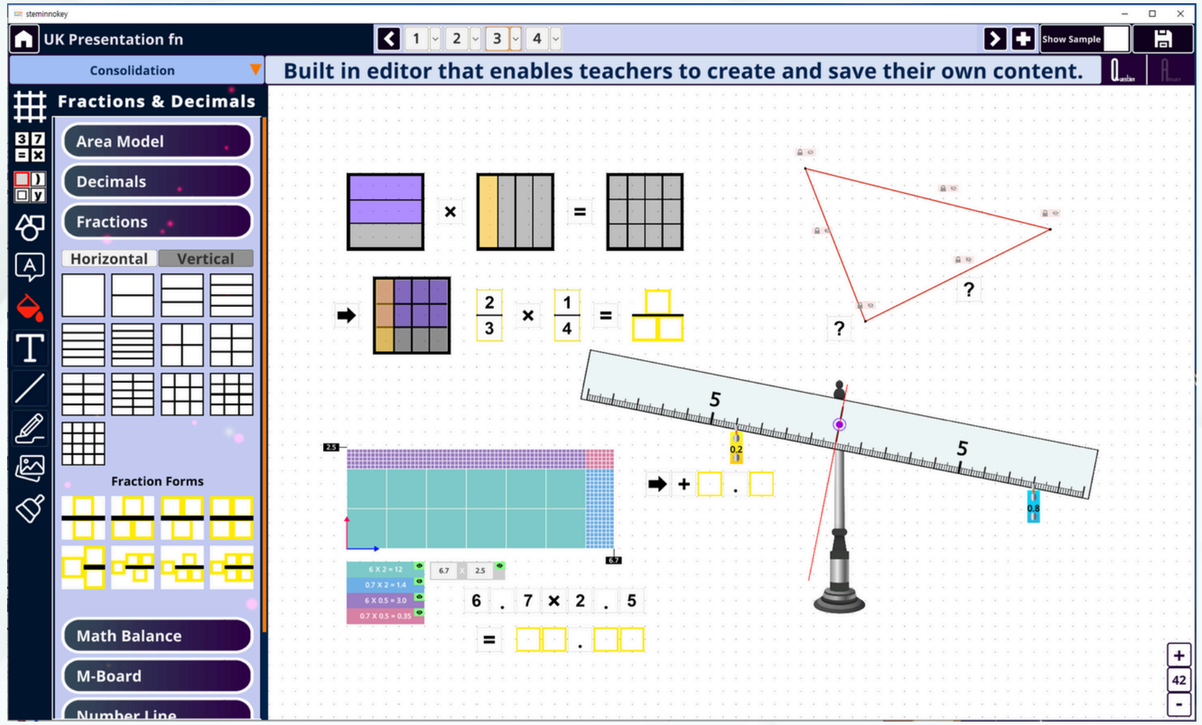




EASY USE OF MANIPULATIVES TO DEMONSTRATE ALL MATH CONCEPTS

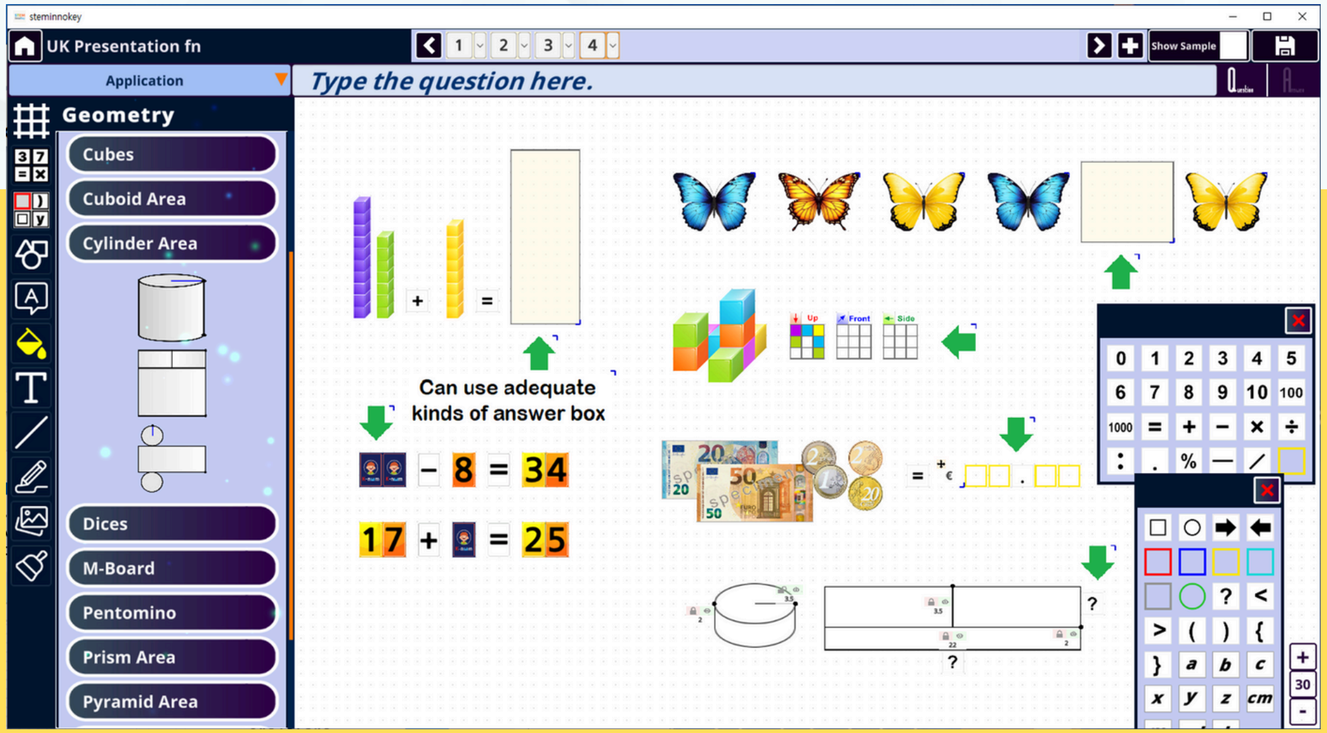
Ability to load multiple manipulatives on a single page for tailored explanations.

INTELLIGENT MANIPULATIVES THAT SIMPLIFY AND CLARIFY CONCEPTS



Various manipulatives with intelligent features help students understand concepts more clearly,
allowing them to build confidence through inquiry-based learning and a solid grasp of the principles.

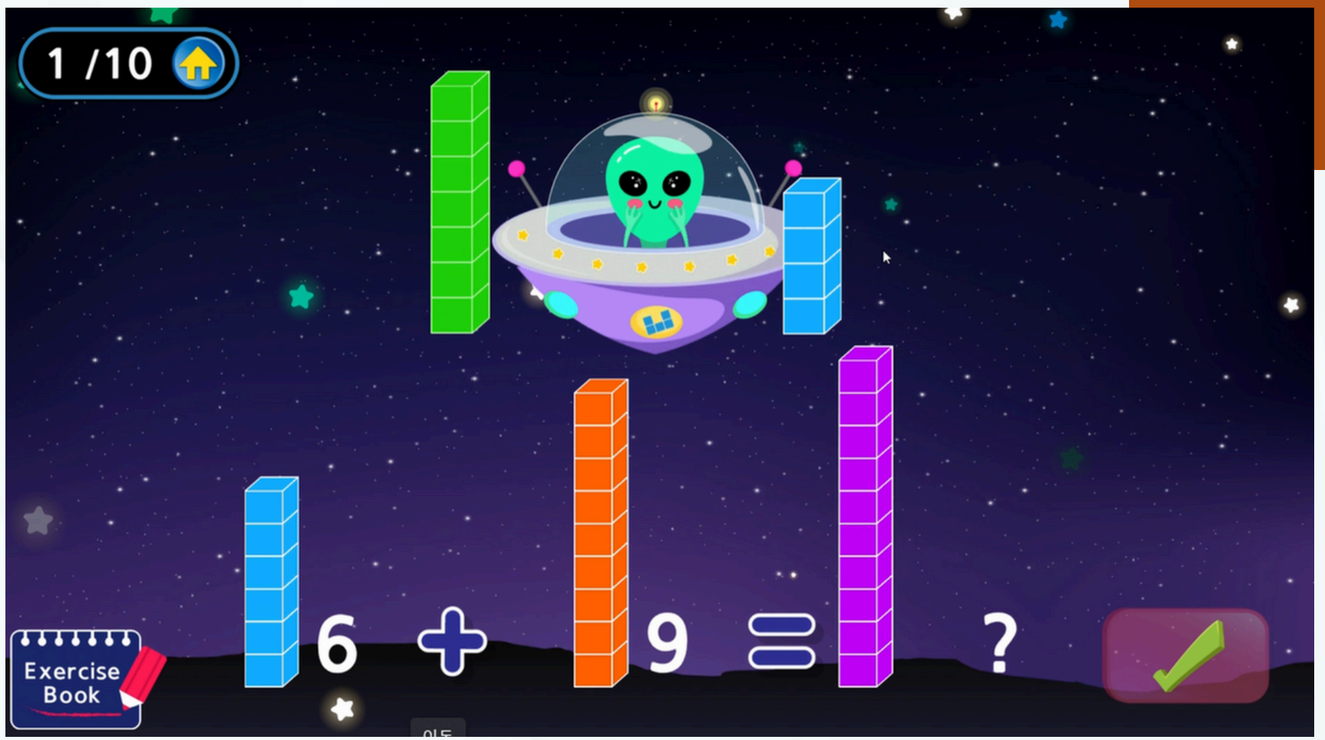
YOU CAN CREATE FUN GAME-STYLE CONTENT



A built-in editor that enables teachers to create and save their own content easily—without coding—by simply dragging and dropping manipulatives and images. This makes it easy to adapt lessons to different teaching styles and students' needs.

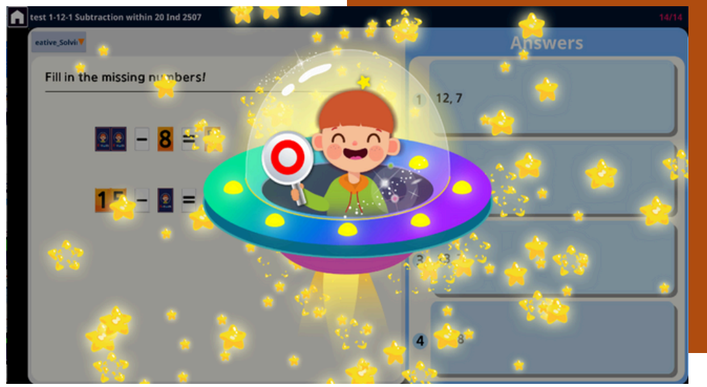
GAMES

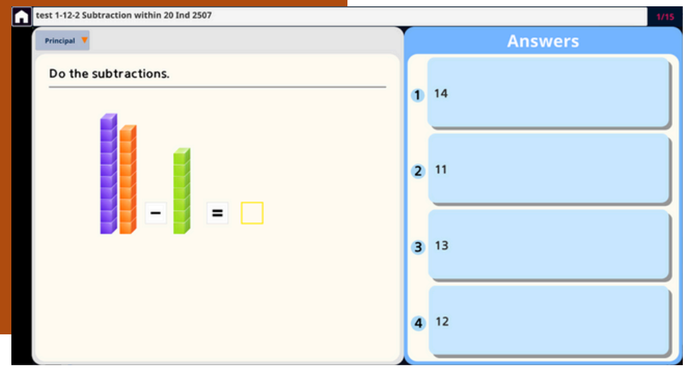
Students reinforce learning through fun, curriculum-aligned games. Participation is voluntary and enjoyable, deepening understanding.

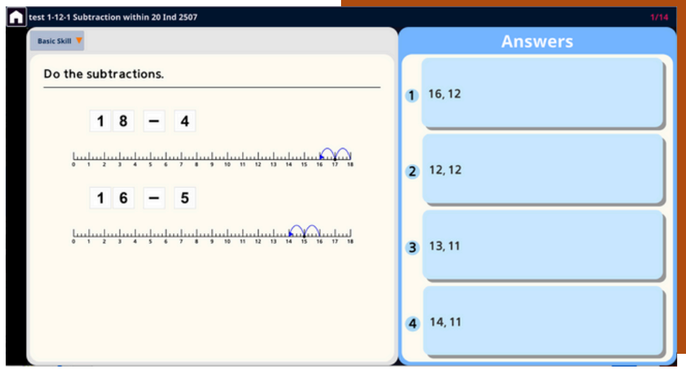


APPLY

Learners solve broader problems (classwork or worksheets) applying the same concept, which cements skills

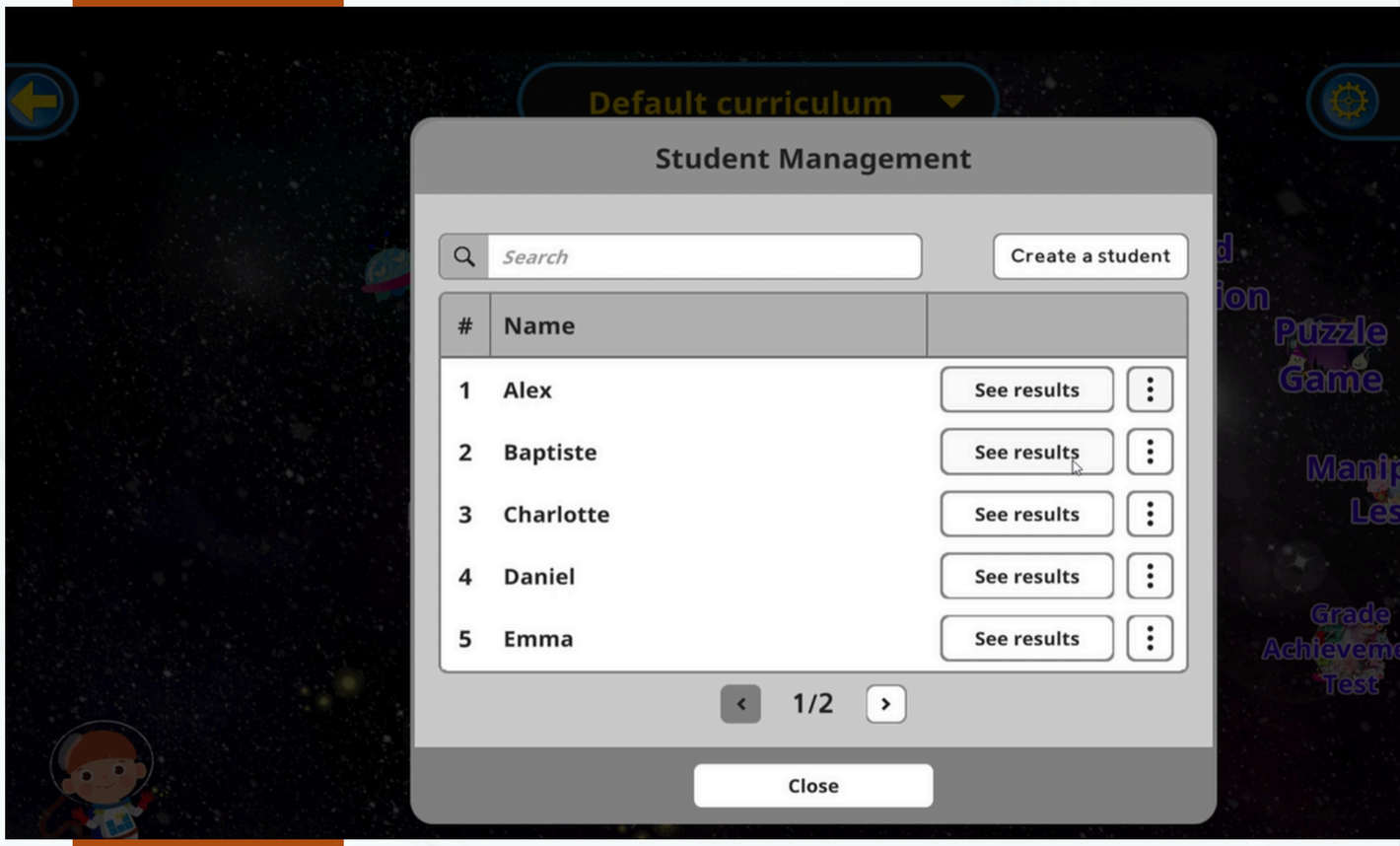






ASSESS

The app provides quick quizzes and analytics. Teachers review student mastery easily and identify areas for review

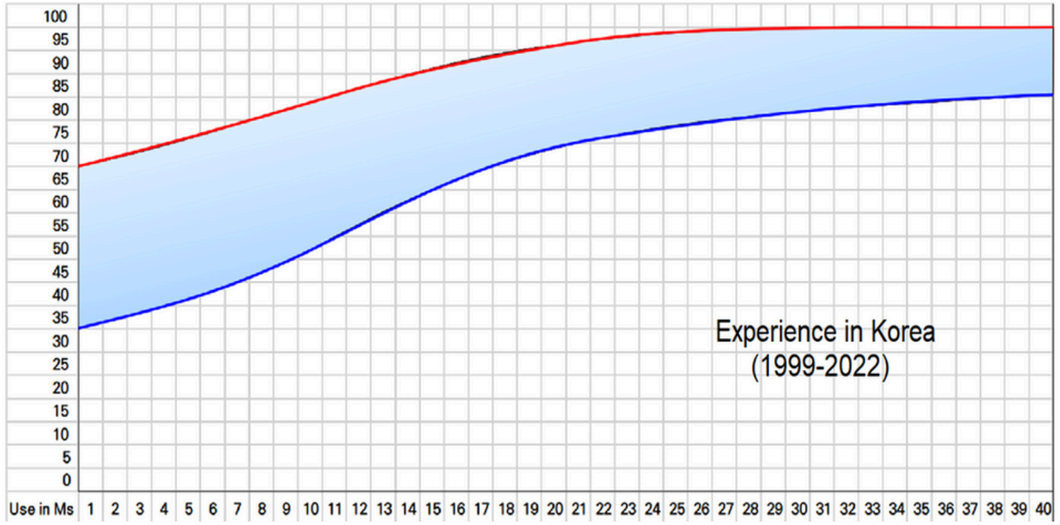


PROVEN EDUCATIONAL OUTCOMES

Interactive manipulatives and gamified practice boost student engagement and confidence.

In our studies, children using STEMinnoKey showed dramatic proficiency gains – e.g.
math achievement rates jumped from ~35% to 85% after 2–3 years of use.
These gains translate to better understanding and a positive attitude toward math.

Higher engagement:
Students show more interest and voluntary participation in math.



Increased confidence: Learners feel capable as they master concepts through play.

Achievement growth: Sustained use yields measurable score improvements

(see pilot data above)

ALIGNMENT WITH UK CURRICULUM

The STEMinnoKey app is fully mapped to UK's primary math curriculum (grades 1–5).

Grade	Units per Grade	Manipulative Activities per Unit	Assessments
1 - 5	23 - 26	15 - 20 interactive activities	2 sets of quizzes (about 15 questions each)

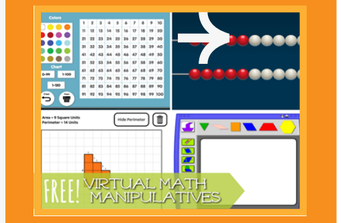
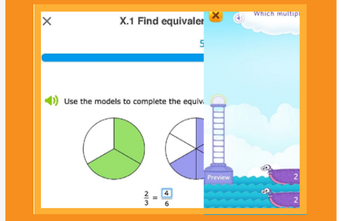
WE HAVE TWO SETS OF QUIZZES THAT CAN BE ADDED TO THE APPLICATION:

- One set of advanced-level quizzes
- One set of descriptive-answer quizzes

OFFLINE CONTENT (IN KOREAN LANGUAGE):

- **Fundamental Math (Grades 1–6)**
- **Creative Problem-Solving Math (Grades 1–6)**
- **Math Investigation (Grades 3–6)**
- **STEM Program (Grades 1–6)**
  - Math applied in Science, Technology, and Social Domains
  - See the attached link for sample work
- **Preschool Program (Ages 3–6)**
  - Language, Math, Science, Logic, and Creativity

COMPARING WITH COMPETITORS

	TECHNOLOGY	COMPETITORS		STEMINNOKEY
MANIPULATIVE	REAL TEACHING MATERIAL	• In primary math, manipulatives are commonly used due to their ability to illustrate principles in an easy-to-understand way. • Some common manipulatives used in math education include number rods, number charts, multiplication charts, number cards, and Geo-boards.		• STEMinnoKey offers two types of virtual manipulatives in their program: one for classroom instruction and the other for student exploration. • These manipulatives are well-designed and suitable for the entire primary curriculum. • This tool is designed to adapt to the user's needs and is highly flexible. It allows the user to access various tools across different pages, all within a single unit. • Teachers can edit the content to meet their specific needs.
	VIRTUAL MANIPULATIVE	• Different types of virtual manipulatives are available online for teaching in classrooms, replacing the need for physical tools. • However, these manipulatives do not include questions that can be used with them for student learning.		
GAMIFICATION	MIXED PROGRAM OF QUIZ AND GAMES	• The mixed program of quizzes and games usually focuses on arithmetic, particularly in the games. • The quizzes are repetitive because they consist of short questions with simple answers that are all of similar difficulty. Example of I..., S....		• The program based on games is generally efficient because it captures children's attention and transforms tedious work into a fun activity. • The STEMinnoKey's program is a composite of virtual manipulatives, games, and quizzes. It combines the advantages of manipulatives and games to compensate for the weaknesses of online learning. • With the STEMinnoKey's program, teachers can explain concepts easily, and students can explore principles by manipulating virtual tools.
	GAMES BASED	• The current trend is focused on programs that are based on games. • The difficulty of games remains invariant due to their quick responding system. • The major programs available are either game-based or a mixture of game-based and question-based programs, such as D... and M....		

UTILITY

A math teaching and learning application designed for preschool and elementary school curricula.

AVAILABILITY

- Web
- Windows
- Android
- iOS

AIMS

STEMinnoKey makes classroom teaching easier by providing intelligent virtual manipulatives across all areas of mathematics. These tools help students understand mathematical concepts by visually demonstrating principles. The application shifts traditional memorization-based learning toward inquiry-based learning, promoting conceptual understanding and sustainable math skill development.

FEATURES

FOR TEACHERS

- Ready-to-use intelligent virtual manipulatives across all elementary math topics, featuring over 40 different tools.
- Ability to load multiple manipulatives on a single page for tailored explanations.
- A built-in editor that enables teachers to create and save their own content easily—without coding—by simply dragging and dropping manipulatives and images. This makes it easy to adapt lessons to different teaching styles and students' needs.

FOR STUDENTS

- A structured learning process: explore concepts with manipulatives → practice with interactive games → consolidate knowledge through quizzes.
- Builds a strong foundation for continuous learning and long-term mastery of mathematics.

HOW TO ACCESS

For Teachers

Visit www.steminnokey.com

- Click Download in the top menu, then install the version for your device (Web, Windows, Android, or iOS).
- Open the app, tap Start, and enter:
  - **ID** : ukt-test
  - **PW** : ukt-test
- Select the curriculum (UK or Indian) from the top menu.
- Choose a Grade → a Chapter → and either:
  - Manip. Virtual for manipulative activities, or
  - Test for quizzes.
- To access games, click Games (top left).
  Use All Categories (top right) to find games relevant to the current chapter.

HOW TO ACCESS

For Teachers

To use the editor:

- Click your username (top right) and select Virtual Manipulatives (among other options like Curriculum or Subscriptions).
- Under Virtual Manipulatives, click Create to open a new editor page.
- Use the toolbar on the left to add backgrounds, numbers, manipulatives, and answers. You can switch between “Q” and “A” (on the right or under each manipulative) to set questions and answers.
- Add more pages with + (top right). Save content locally with Save, or submit it to the application manager with Submit for Publication.
- Saved content can be accessed again under Virtual Manipulatives.
- To create multiple-choice questions, select MCQs and follow the same process.

HOW TO ACCESS

For Students

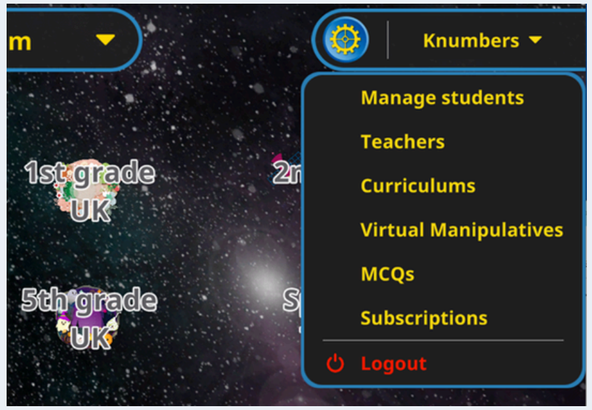
- Teachers create student accounts and assign IDs and passwords.
- Students open the app, tap Start, and log in using the assigned credentials.
- **Example accounts:**
  - **ID** : John1 (or John2, John3)
  - **PW** : 1234

- Select grade → Chapter → Unit → and begin learning.
- After each activity, students receive results and can review only the questions they answered incorrectly.

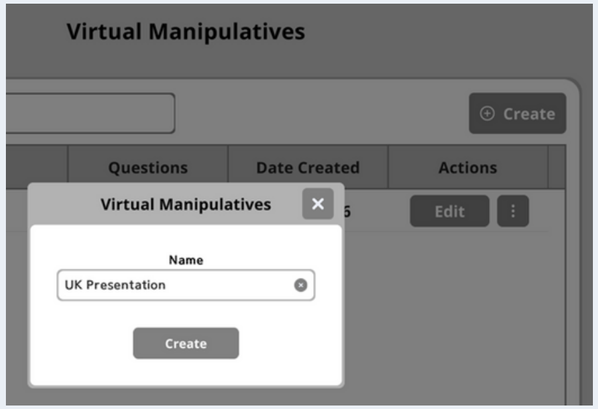
PROCESS OF CREATING
CONTENT USING THE EDITOR

A. CONTENT USING VIRTUAL MANIPULATIVES

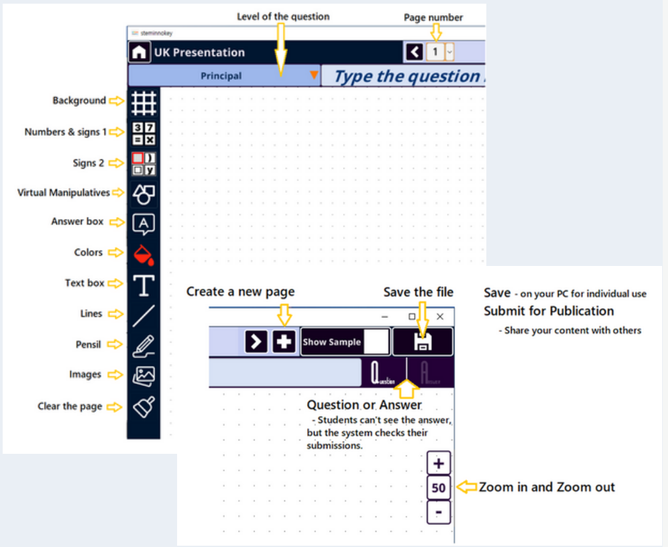
1 Click on your ID at the top right, then select Virtual Ms.



2 Click on “Create” on the right, and then type the name of the new file.



3 A new page appears, and you are ready to create content using manipulatives and images.

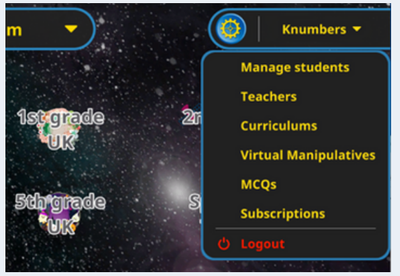


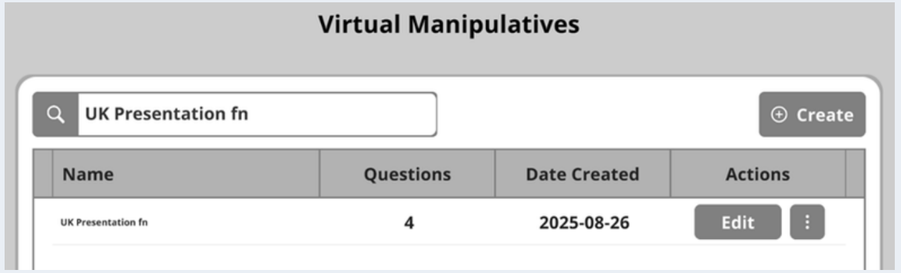
PROCESS OF CREATING
CONTENT USING THE EDITOR

A. CONTENT USING VIRTUAL MANIPULATIVES

4 You can search for and select a virtual manipulative from more than 40 options in the list, sorted by alphabet or by section.

5 Once you create and save your content, you can find it later in the Virtual Ms. section. You can load it onto your classroom display by clicking the “Edit” button.



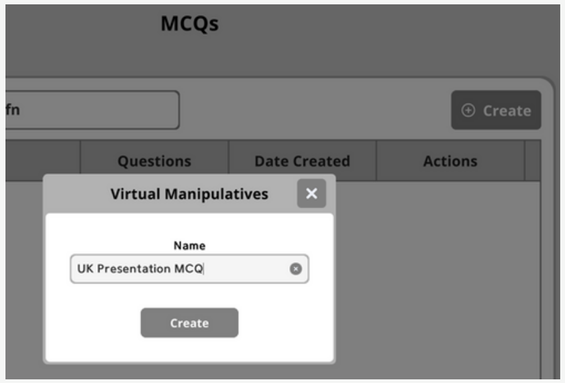


PROCESS OF CREATING CONTENT USING THE EDITOR

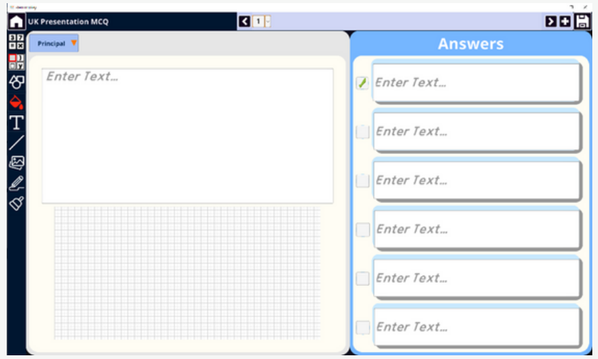
B. MCQ CONTENT

1. Click on your ID at the top right, then select *MCQs*.

2. Click on “**Create**” on the right, and then type the name of the new file.



3. A new page will appear, where you can create questions and indicate the correct answers. Most of the tools are available here, allowing you to use virtual manipulatives and images. The program will automatically check whether the students’ answers are correct or incorrect.



4. You can add pages using the “ **+** ” button and save them to load later or assign them to students as homework.

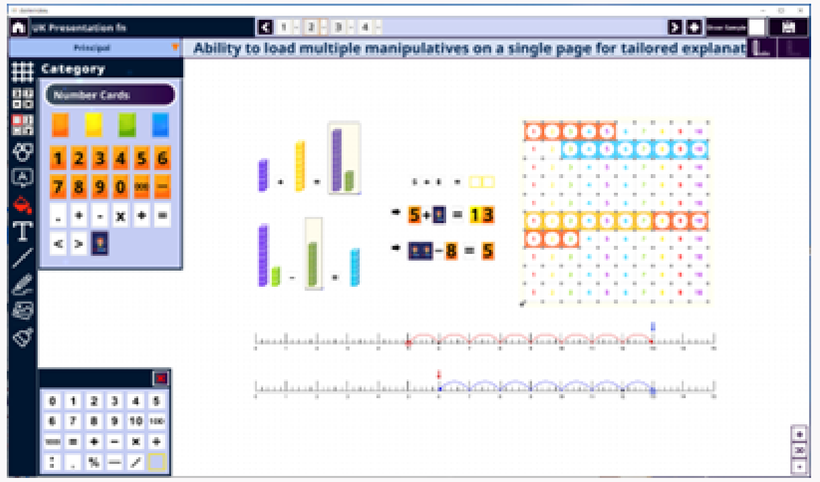
STEMINNOKEY LEARNING MODEL

OVERVIEW

The STEMinnoKey Learning Model provides a three-step approach to mathematics learning.
It combines inquiry, practice, and application to build deep understanding and long-lasting skills.

Step 1: Explore (Inquiry-Based Learning)

Students explore virtual manipulatives, ask questions, and refine their understanding. This phase focuses on building conceptual knowledge before memorization.



Evidence: Virtual manipulatives improve problem-solving and understanding (Moyer-Packenham & Westenskow, 2013).

STEMINNOKEY LEARNING MODEL

Step 2 : Practice (Game-Based Learning)

Game-style practice reinforces concepts through repetition and feedback, while boosting motivation and engagement.

Evidence: Game-based learning strengthens long-term retention and improves student achievement (Ke, 2008; Moyer-Packenham et al., 2014).

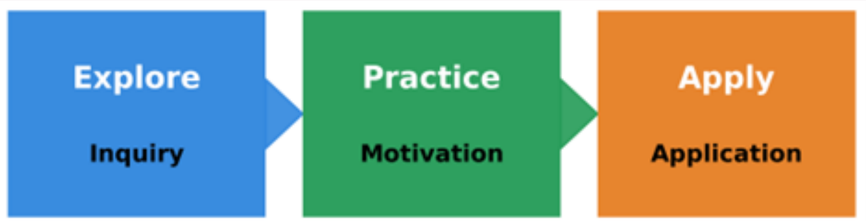
STEMINNOKEY LEARNING MODEL

Step 3 : Apply (Quick Quizzes)

Quick quizzes check understanding, promote active recall, and ensure transfer to classwork and problem-solving.

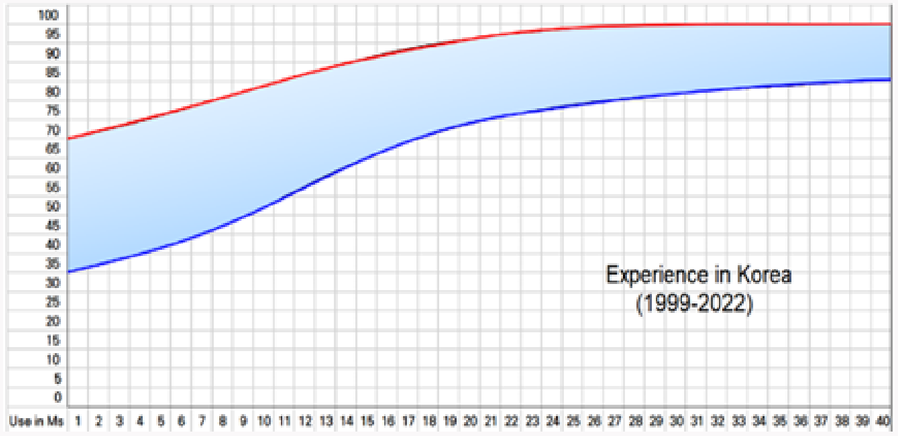
Evidence: Frequent quizzes improve long-term memory and enhance classroom performance (Roediger & Karpicke, 2006; Black & Wiliam, 1998).

WHY IT WORKS



Explore : Builds conceptual foundations.
Practice : Reinforces skills through fun and repetition.
Apply : Ensures knowledge transfer and retention.

Together, this model supports deeper learning, higher engagement, and lasting math skills.



Proven Educational Outcomes

Math proficiency rates increased from ~35% to 85% after 2–3 years of use.
Students demonstrate higher engagement, voluntary participation, and deeper conceptual understanding.
Learners gain confidence as they master concepts through inquiry and play.

HOW TO ACCESS

FOR TEACHERS

1. Visit: www.steminnokey.com

2. Click **Download** in the top menu, then install the version for your device (Web, Windows, Android, or iOS).

3. Open the app, tap **Start**, and enter:

ID	: india@g.c
PW	: india

4. Select the curriculum (UK or Indian) from the top menu.

5. Choose a **Grade** → a **Chapter** → and either:
   - **Manip. Virtual** for manipulative activities, or
   - **Test** for quizzes.

6 To access games, click **Games** (top left). Use **All Categories** (top right) to find games relevant to the current chapter.

7 To use the editor:

- Click your username (top right) and select **Virtual Manipulatives** (among other options like Curriculum or Subscriptions).
- Under **Virtual Manipulatives**, click **Create** to open a new editor page.
- Use the toolbar on the left to add backgrounds, numbers, manipulatives, and answers. You can switch between “**Q**” and “**A**” (on the right or under each manipulative) to set questions and answers.
- Add more pages with **+** (top right). Save content locally with **Save**, or submit it to the application manager with **Submit for Publication**.
- Saved content can be accessed again under **Virtual Manipulatives**.
- To create multiple-choice questions, select **MCQs** and follow the same process.

HOW TO ACCESS

FOR STUDENTS

1. Teachers create student accounts and assign IDs and passwords.

2. Students open the app, tap **Start**, and log in using the assigned credentials.

   - Example accounts:

     ID : Anjali (or Aarav, Atharv, Dhruv, or Aditi)
     PW : 1234

3. Select grade → **Chapter**→ **Unit** → and begin learning.

4. After each activity, students receive results and can review only the questions they answered incorrectly.


STEM
innoKey
VALUES AT THE CORE
VALUES
360
VENTURES
VALUES AT THE CORE
THANK YOU