Beit Issie Shapiro
Changing the lives of people with disabilities
On the Willie & Celia Trump Campus

Tech it Issie

Using Fun Apps for Math to Improve Learning Engagement

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This document highlights a few chosen apps for math and provides ideas for using them to create engaging lessons. It provides ideas for integrating digital and manipulative elements and is designed to meet math standards. All ideas are taken from the classrooms at the Special Education School at Beit Issie Shapiro.

Play, learn, and enjoy!

You are also welcome to browse our blog for apps for a variety of topics.

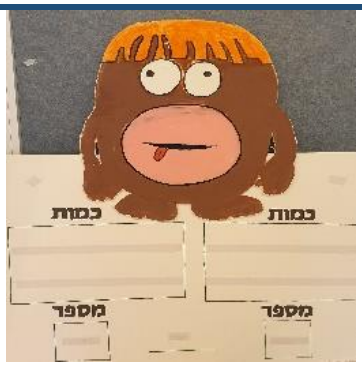
Apps

Apps for Math

Feed the monkey (free)

Platform	iOS | Android
Learning Domains	Number recognition, number sense, counting, quantity
App Description	On the screen is Monkey, a cute hungry monkey. He uses words and/or pictures to tell the player what he wants to eat. The player needs to press the button beside the

	desired food the correct number of times. If the player counted correctly, Monkey eats the food, and the player gets cute feedback. If the player lines up the wrong amount of foods, Monkey tells them to try again.
Examples for Using in Lessons	• Using Manipulatives: Create a learning board out of poster board or sturdy presentation board, and a set of printed number and food cards, representing the foods in the app. The cards can be laminated for durability. The board should have a representation of the monkey, and a template for number and quantity comparison. In this way, the app can be used cast onto a large screen and the children can practise matching the number and counting the foods using their manipulatives. Using the board children can work on counting, more than/less than/equal to. • Practising Addition: the app does not explicitly work on addition but lends easily to that adaptation in class. If the monkey asks for two different types of food, we naturally have a set of two numbers to work with. Addition templates and the printed manipulatives work great here. • Worksheets based on the app: You can be creative here and work on everything discussed above. Worksheets can be designed to be done at home or in class without the app, using the monkey and food images from the app to encourage engagement. Alternatively, you can design worksheets to be used with the app either on personal tablets or cast to a big screen in front of the class. For example, students can fill in the numbers that come up on the app and create an addition problem, or they circle the number of food items the monkey asks for, etc.
Lesson Tools	Presentation board with monkey representation and template for number and quantity, printed and laminated food cards (matching foods from the app), printed and laminated number cards.

Moose Math (free)

Platforms	iOS | And
Learning Domains	Counting, quantity, addition
App Description	App with mini games with various of levels of difficulty, though without customized settings. One of the games has the moose ready to make a fruit shake. Students must put the fruits into the blender according to the recipe. If the student makes a mistake the shake is not edible, and they must try again.
Examples for Using in Lessons	• Using Manipulatives: Create a large blender out of poster board or sturdy presentation board, and a set of printed number and food cards, representing the foods in the app so that students can attach foods to the blender, using hook and loop tape. Ensure there is space to also assign numbers according to the quantities. The cards can be laminated for durability. In this way, students can practise digitally and with manipulatives. The app can be used cast onto a large screen and the children can practise matching the number and counting the foods using their own manipulatives. • Practising Addition: the app does not explicitly work on addition but lends easily to that adaptation in class. If the monkey asks for different types of food,

	use the numbers to create addition equations. Addition templates and the printed manipulatives work great here. • Worksheets based on the app: You can be creative here and work on everything discussed above. Worksheets can be designed to be done at home or in class without the app, using the images from the app to encourage engagement. Alternatively, you can design worksheets to be used with the app either on personal tablets or cast to a big screen in front of the class. For example, students can fill in the numbers that come up on the app and create an addition problem, etc.
Lesson Tools	Presentation board, with large blender printed and laminated fruits (based on images in the app), printed and laminated numbers cards and/or number lines

Math Bakery First Grade (paid)

Platforms	iOS | Android
Learning Domains	Counting, quantity, addition, subtraction
App Description	Players are presented with a tray of two different types of cookies. A math equation is presented and the players answer using the number line at the bottom of the screen. Players work on number recognition, solving equations, and quantity.
Examples for Use in Lessons	• Using Manipulatives: Create a set of cookie cards like the ones in the app or use actual cookies for extra fun. The cards can be laminated for durability. Use a number line for answering the questions. Before playing the app practice counting cookies and matching numbers to quantities using the cookie cards. • Practising Addition and Subtraction: Use the addition/subtraction template with the cookie cards

	and the number line to work out the answer before answering in the app. • Worksheets based on the app: Worksheets can be designed to be done at home or in class without the app, using cookies from the app. Work on quantities, addition and subtraction and word problems.
Lesson Tools	Equation template board to be used with laminated cards/numbers; cookie cards or real cookies; number line

Graphing for Kids (paid)

Platforms	iOS
Learning Domains	Data collection and graphing
App Description	The app allows teachers or students to easily create graphs from data sets. Photos can be added to the x-axis and numbers to the y-axis. Students enter data on their own or together with the teacher. The app can be used in a group or one-on-one situation. The resulting graph can be presented in several ways, saved and printed or sent by email for homework or creating worksheets. Graphs can be saved in the app for repeated use.
Examples for Use in Lessons	• Using Manipulatives: Create a graph template to be used with laminated counters that can be stuck to the template with Velcro. Counters can be anything from laminated colored squares to actual objects.

	Y-axis should have numbers up to 10. Start the lesson by presenting the topic you will examine. For example, ask the students a question and display their answers in graph format. This can be used for voting for a favourite classroom activity. Once the physical graph has been made students can practise making the graph in the app, using the template created in class to copy from. Results can then be analyzed. For example, where is the most, the least, etc. • Worksheets based on the app: The graph can be saved as a photo and added to worksheets in which the students answer questions according to the information presented.
Lesson Tools	Graph template on poster board with Velcro strips to allow attaching of counters. Number lines

Mini-games in the Matific app (subscription based)

Platforms	iOS | Android | Web
App Description	Matific for School is an app and website with a collection of mini games working on a large variety of math skills, from kindergarten to Grade 6 levels. Teachers customize content on the web and students work on the companion student app or on the web. Teachers can assign content to the students. Matific also has individual apps for each grade level under the name Matific Galaxy. These apps are also subscription based.

Hop on the Bus Addition/Subtraction

Learning Domains	Number recognition, counting, quantities, addition/subtraction
Description	**Addition** – During the game a bus appears at the bus stop and characters can get on. The player needs to drag the correct number of characters onto the bus according to what the bus asks for. The player then completes an addition equation according to the numbers of characters that boarded the bus. Quantity, counting, addition. **Subtraction** – The bus stops at two stops. At the first stop the player boards characters on the bus and at the second stop a number of characters get off the bus. Players complete a subtraction equation reflecting the story. Quantity, counting, subtraction.
Examples for Use in Lessons	• Using Manipulatives - Create a school bus template with room to attach characters that have boarded the bus. Combine with an addition/subtraction template. This template allows students to practice the counting with physical manipulatives and subsequent production of an equation using numbers from a number line. • Worksheets based on the app – use the characters from the app to create worksheets for quantity exercises, addition/subtraction exercises, and word problems.
Lesson Tools	Poster board with bus animation, cutout and laminated characters from the app, addition/subtraction template, number lines. Video for inspiration: https://youtu.be/LWyOYer_cwE

String-a-Bead

Learning Domains	Number recognition, counting, quantities, addition
Description	**Level 1** – A creature appears holding a string and asks for a number of beads to be put on the string. The player drags the correct number of beads to the string **Level 2** – A creature appears holding a string. There are two types of beads in bowls in front of him. The creature asks for a certain number of beads and the player has to put the amounts he asks for and then is solves an addition exercise.
Examples for Use in Lessons	• Using Manipulatives – Use two different types of beads and a string, together with an addition template. Copy the situation that is displayed by the app. Use the number line to find the correct number and then count out the beads to string them. • Worksheets based on the app – use drawings of beads or screenshots from the app to create worksheets for quantity exercises, addition exercises, and word problems.
Lesson Tools	Poster board with bus animation, cutout and laminated characters from the app, addition/subtraction template, number lines. Video for inspiration: https://youtu.be/LWyOYer_cwE

Underwater

Learning Domains	Number recognition, counting, quantities
Description	Fish appear in the sea. The player needs to count them and press the correct number on the number line. As the player counts, he can touch each fish and there is a visual cue (highlight or animation) that the fish has been counted.
Examples for Use in Lessons	• Using Manipulatives – create a poster board of the sea with the ability to attach laminated fish. Practice with the manipulatives while also playing with the app. Though the game only works on counting and quantity it can also be used with classroom/personal addition/subtraction templates to create equations. • Worksheets based on the app – use screenshots from the app to create counting, quantity comparisons or word problems.
Lesson Tools	Poster board with a drawing of the sea, laminated fish, addition/subtraction template, number lines.

Snack Time

Learning Domains	Number recognition, counting, quantities, addition
Description	Two plates appear in the game, with fruits on each. Players need to count the fruits and answer addition questions.

Examples for Use in Lessons	• Using Manipulatives – create a poster board with two plates and laminated fruits. Or use two real plates and plastic fruit toys or laminated fruit cards from the app. Practice with the manipulatives while also answering in the app. • Worksheets based on the app – use screenshots from the app to create counting, quantity comparisons or word problems.
Lesson Tools	Poster board with a drawing of plates, laminated fruits, addition template, number lines.