Traditionally, the adults in a child’s life were confined to their respective environments—a teacher was responsible for facilitating learning in the classroom, while parents took the lead outside of school. However, expectations have shifted over the past several years and many parents now play a more active role in school, beyond offering homework help.

For example, Boris—a father of two school-aged kids and software engineer by trade—sought to incorporate more creativity-focused activities into his kids’ studies after years of professional experience led him to recognize the value of creative problem solvers in the workforce. Seeking techniques to help students learn, practice, and improve creativity over time, Boris discovered MindAntix’s How To Be An Inventor program. The program tasks students to develop an invention and uses a curriculum that incorporates a variety of creativity techniques to guide students through the process of developing a new idea. Kids also practice real-world applications through prototyping and bring the invention “to market” in the classroom.

After coordinating with school leaders, securing other parents to volunteer, and translating the How To Be An Inventor curriculum into Hebrew, Boris and his team of parents embarked upon teaching the semester-long course at the elementary school. Working with fourth graders, each parent co-taught a class of 28 students for 90+ minutes each week.

**Students Learn and Apply the Creative Thinking Process**

*Mind mapping is a brainstorming technique to help inventors generate ideas.* In one activity, students create an association map, which helps them visualize their creative thought process. In this approach, students start with an initial product—the subject of your innovation—which goes in the center of the map and start by branching out with a few different attributes like “used with,” “material” or “similar to” to come up with the first order of associations. Students start branching out to the second order of associations, with the end goal of connecting these second order concepts with the original object to see if that helps uncover an interesting idea.

For example, one association map started with the object of a book, followed by identifying the color orange (a property of a book), and then scent (a property of the color orange). The final invention was an orange-scented book that helped prevent nausea by adding in a soothing smell for students wanting to read during the bus rides commutes.
Reverse thinking involves developing an assumption about a particular problem and then using this to look for opposite ideas that go against the initial assumption in a meaningful way. To practice this technique, students partake in a game called Fortunately and Unfortunately. To start, the first student is given a prompt and has to say a sentence that begins with the word “fortunately,” while the next student has to continue the storyline starting with the word “unfortunately.” The game continues until all students have participated. This activity engages students in discovering new ideas by challenging their own assumptions and is also an exercise in improv, which promotes public speaking and collaboration with their peers. Here’s an example of the game in action:

- Prompt: I took out the assignment from my bag
- Fortunately: “Fortunately, it was a very simple assignment.”
- Unfortunately: “Unfortunately, the assignment was due last week.”

Teachers and volunteer parents were impressed with the course’s methodical approach to teaching children to be inventors. After working through multiple exercises to equip students with the skills required to develop creative ideas—those that are both novel and useful—each student is tasked with selecting one idea to carry forward. The process then continues into the entrepreneurial aspect, where students pitch their ideas to classmates and use constructive debates to refine their inventions.

**Students Demonstrate New Ideas at Inventors Showcase**

By the end of the course, students had come up with many interesting ideas for their inventions and were excited to showcase them. A few of the most notable inventions included:

- **A self-folding/collapsible seasonal sweater** for those times when the weather changes and you are too hot or too cold.

- **A rubber duck-shaped vacuum** to be operated by small children to help their parents. While kids play, it vacuums and cleans the house.

- **A single bottle with internal compartments** that allow you to store more than one type of drink, and be able to drink and mix and bring it all with you on a trip.