Melody & Chord
Creative Learning

2016 - 2017

LEVEL III
Grades 6-8

Applied Math & STEM

with an MIT engineer from academia & industry

The best tools are used to solve problems!

A bookless, project-based hands-on coaching

Can you imagine your children learning math and STEM through solving problems?
"How can I shop for my new bike? How is the size of the bike defined? What's the difference between a mountain bike and a road bike? Why?"

Scientists, engineers and mathematicians ask questions and solve problems to develop math and STEM. Why not introduce the topics to our children the same way? From analyzing the situation to verifying the results, the students learn to apply Common Core math topics and peripheral STEM concepts! In each session, we:

Discover a problem to solve.

Explore the why and applications of a math concept for the problem.

Master techniques required to apply the concept.

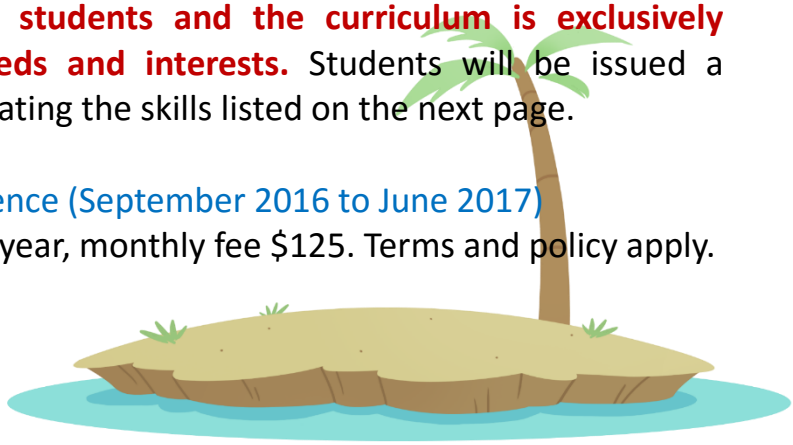
Apply the concept in the problem.

Use technology that helps solve the problem faster.

Update with the latest solution in the news and relavent STEM concepts.

Each session consists of maximum 6 students and the curriculum is exclusively customized based on the group's needs and interests. Students will be issued a certificate of completion upon demonstrating the skills listed on the next page.

WHEN: Based on most families' convenience (September 2016 to June 2017)
The curriculum is throughout the school year, monthly fee $125. Terms and policy apply.



Level-III Applied Math & STEM Program Focus

Upon completion, the students will achieve the following. Level of depth is customized towards the students' needs and experience.

Math – Application | Problem Solving | Analytical Skills

Within and beyond the requirements in the **California Common Core State Standards**:

http://www.cde.ca.gov/be/st/ss/documents/ccssmathstandardaug2013.pdf

- ☐ Excel in elementary level math.
- ☐ Develop solid skills in **geometry**, **algebra**, and **statistics**.
- ☐ Apply tips and patterns used in middle school and high school math.
- ☐ Analyze **word problems**, communicate thought process, and perform problem solving.

Science | Technology | Engineering

- ☐ Apply the concepts from **physics**, **computer science**, **chemistry**, and **biology** in the surroundings.
- ☐ Understand the critical role of math in various STEM disciplines.
- ☐ Utilize tools, technology, and software used in practical scenarios.
- ☐ Develop and apply computer programming logic to solve real-world problems.
- ☐ Apply the basics of robotics.

Soft Skill – Computational Thinking | Scientific Writing | Team Work

- ☐ Develop and demonstrate computational thinking.
- ☐ Explore life of an engineer or scientist.
- ☐ Collaborate with peers to complete projects and receive feedback.
- ☐ Demonstrate communication skills in a logical manner.
- ☐ Develop self-discipline and time management skills to complete assignments.
- ☐ Practice skills needed in **scientific writing** and **presentation**.