

**CUTTING-EDGE SCIENCE TOPICS  
TO ENGAGE STUDENTS AND EQUIP  
THEM WITH 21ST CENTURY SKILLS**

## How it works

### Our Teachers

Qualified and experienced teachers will lead classes online, joined by teaching assistants accompanying students in the class.

### Schedule

- 10 sessions in total; 1 session/week
- 2 x 45mins lessons/session
- After class OR weekend

### Location and what to prepare

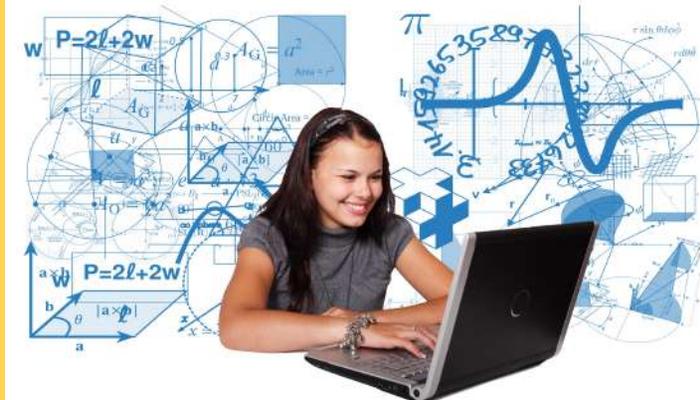
- **Option 1:** students will study at home. Stable internet connection and computer with video and audio access needed.
- **Option 2:** students will study at school. Devices will be provided by your school.

# LEARNING HUB

LET STUDENTS HAVE A MEANINGFUL AFTER  
SCHOOL TIME.

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## WHY LEARN WITH US?

### FIRST-PRINCIPLE PROBLEM SOLVING SKILL

- We apply **first-principle thinking** to reverse-engineer complicated problems, and **unleash creative possibilities** by breaking down problems into basic elements. Students then reassemble the problems from the ground up.
- By identifying the causes behind real-life issues, students will develop the ability to **see through appearances to their true essence**.
- From analyzing real-life issues to creating prototypes, and sharing with the wider community, students learn **time and project management skills** at a young age.

## EXCITING SCIENCE TOPICS WITH HANDS-ON ACTIVITIES

- All of our topics are carefully selected and align with pressing global issues to enable students to **think as a global citizen**.
- Our teaching materials are tailored to different inquiry steps, and integrate **hands-on activities** in order to motivate and inspire students to improve their knowledge and skills related to **global technological innovation**.

## MULTI-DIMENSIONAL ASSESSMENT

- Students' **learning progress** will be monitored frequently by the leading teacher and teaching assistant, and **assessments** will be conducted regularly among teachers, themselves and peers.
- Our **learning report** will record students' improvements in across-subject knowledge, specific skills and five key competencies, **supporting the school report**.



## Transdisciplinary Projects linked with NZ curriculum

Our projects are closely linked with the New Zealand curriculum and integrates subjects such as Science, Technology, Engineering, Literacy, and Arts.

We adapt a student-centered learning pattern based on the inquiry-learning model, which helps students to truly understand the topics learned in class, instead of simply memorizing them.

Our program focuses on key competencies required by the national curriculum, as well as specific skills developed in individual learning areas. By introducing tasks based on real-life problems and guiding students towards potential solutions, students will be able to uncover conceptual ideas and transfer them to new scenarios.



## PREVIOUS CASE STUDY REVIEW: DESIGN A SPACESUIT



### REAL WORLD ISSUE

Current spacesuits are often heavy, bulky and uncomfortable! How can you improve the design for astronauts' comfort?

### INTEGRATE 5 SUBJECTS

**Science:** What are the conditions on Mars like? How cold or hot is it there? Does Mars have atmosphere?

**Technology & Engineering:**

What are the functions that a space suit should have? What about transmitters, protection from radiation, and extreme cold, or even the bathroom?

**Arts:** What makes a good spacesuit? Have you heard of flexibility, lightness, insulation, and durability?

**Mathematics:** How can you correctly calculate the area or amount of the material you would need to make a spacesuit?

### POTENTIAL SOLUTIONS

Design a section of a spacesuit using various materials that you tested for their good performance.

## LEARNING TOPICS FOR TERM 4 2020

- Set a **bird feed station** in your community
- How **earthquake** effects our lives
- Stop **COVID-19** with our hands

More information and registration, please click the below to visit our website:

<https://www.aandeedu.com/schoolpage>

## SKILLS INVOLVED

- Critical thinking skills: analyze and evaluate the environment on Mars.
- Research skills: gather, record and interpret data
- Problem solving skill: find solutions, interact with media to create and communicate ideas
- Communication skills: interpret information from multi-media resources and convert representations of science ideas
- Managing self & Contributing in communities: Project/time managing skills, act locally to make a positive impact