

Workshop Description

This workshop falls under the STEM Plus category. It introduces students to Biomimicry- the new method of innovation, and clearly explains how and why industries are adopting it. It also introduces to Green Chemistry and Industrial designing. The workshop will be structured in four formats - lectures, discussion seminars, hands-on activities, and presentations. Students will work in teams and will be encouraged to debate about the scientific concepts and observations. Students will be introduced to the Solutions Development Life Cycle.

STEM:

- ◆ Science
- ◆ Technology
- ◆ Engineering
- ◆ Mathematics



Recommended Age group:

- ◆ Upper Elementary
- ◆ Middle School
- ◆ High School

***"Environmental etiquette is
the new norm for innovation"***



Green Kids Now, Inc.

<http://greenkidsnow.org>

<http://greenkidsconference.org>

Phone: +1-510-793-1343

E-mail: info@greenkidsnow.org

******Made from 100% Recycled Paper******

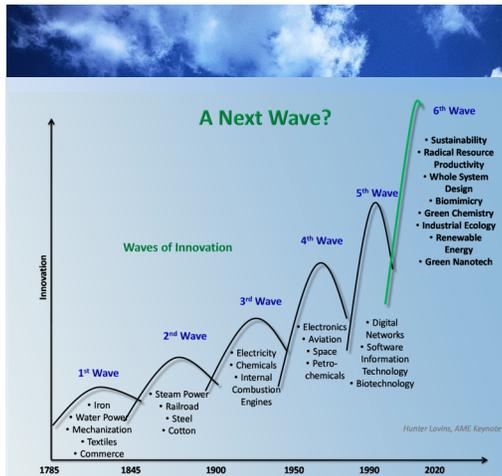
Workshop

***Learning to be an Innovator
Level 1***



Workshop Need

From the 18th century there have only been 5 major real waves of innovation – like the steam engine, electricity, electronics, digital networks, etc. It is predicted that the sixth wave of innovation would come from the fields like Biomimicry / Green Chemistry / Industrial Ecology / Sustainability, etc. Several industries have already started to adopt these new areas and are striving to become the next generation leaders. Higher education institutions have started to offer programs in these areas as well. However, in the K-12 education space there is a huge vacuum and it is this generation that would be going to the workforce around 2020. It has become extremely crucial to start teaching these new skillsets to the current K-12 students, so they can emerge as our next generation innovators. These areas are called as “STEM Plus” skillsets.



Workshop Duration

One week – 5 days—Full Time

The structure for the days will have 4 formats - lectures, discussion seminars, hands-on activities, and presentations

Day 1 – Biomimicry

Day 2 – Green Chemistry

Day 3 – Industrial Designing

Day 4 – Solutions Development Life Cycle

Day 5 – Learning to Implement Phase 1 and Phase 2 of the Solutions Development Life Cycle which will incorporate the knowledge and results of the activities from the past 4 days, and each team will be presenting their designs at the end.

We can teach this enrichment workshop during class hours, or as an after-school program or camp, and can also structure it for shorter durations per day and cover syllabus over longer time period.

Skills gained by students at the end of the course:

- ◆ Understanding on what it takes to be an innovator
- ◆ Gain exposure to the STEM Plus skillsets required to proceed in the path of innovation
- ◆ Understanding the responsibilities when creating a solution or product
- ◆ Understanding of the Solutions Development Life Cycle
- ◆ Gain confidence to apply their academic knowledge gained at school into creating real life solutions
- ◆ Understanding of Biomimicry
- ◆ Understanding of Green Chemistry
- ◆ Understanding of Industrial Designing
- ◆ Team work and collaboration skills
- ◆ Argumentation skills
- ◆ Presentation skills