



Science Camp – Fall 2016

Conducted by **Dr. S. H. Zaidi**

Research Scientist at Princeton University 1999-2012

Currently Teaching at San Jose State University

Program in Progress

Sessions - Ten session in Fall 2016

- *STEM based Science and Technology Projects (Basic Electronics, Physics, Renewable Energy, etc.)*
- *Elementary to Middle School*

Course: Level 1

- *For beginners: Exposing children to STEM based technology*
- *Children will learn*
 - *How to formulate a problem or topic of investigation*
 - *How to write a hypothesis*
 - *How to conduct an experiment*
 - *How to perform data acquisition*
 - *How to present the experimental data*
 - *How to extract the information from the data*
 - *How to give the conclusion and verify the hypothesis*
 - *How to write a report and make a science fair poster*



Venue

Pinnacle Learning Academy

4320 Stevens Creek BLVD
San Jose, CA

Session: Fall 2016

3:00 pm to 4:30 pm



For IntelliSciene Program
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Details on Science Projects:

A total of ten STEM based experiments will be conducted in this course. Equipment and the main topic of each experiment will remain same for all grades but the level of difficulty and the nature of data acquisition and its analysis will vary according the students grade. Each student will be given a file in which experimental procedure and details will be included. Student will learn to keep the record of each experiment and will learn how to note down the data and how to analyze it. Here is the list of the topic:

1. Car dynamics: Children will learn about rolling cars, will measure the distance, time, speed for various cars. A timer and a photogate will be used to get the speed. Students will take the car dimensions and will learn to draw the diagram with appropriate dimensions. Data analysis will be conducted. Students will use the equipment that IntelliScience has designed and developed for this purpose.
2. Measuring and monitoring the boiling process. Students will take the temperature data and will plot it by observing the boiling process. IntelliScience equipment will be used for this purpose.
3. Solar Cell Experiment. IntelliScience designed and developed a solar cell kit that will be used in this experiment. Information related to solar cell and its characterization will be provided.
4. Solar Cell Experiment. Continuation of the previous experiment.
5. Basic Electronics: An electronic board will be provided to students to understand basic concepts related to resistors etc.
6. Basic Electronics: Continuation. More detailed experiments will be conducted.
7. Basic Electronics: Continuation
8. Magnetic tiles to make structures and measure the areas and volumes
9. Experiment related to optics – basic laws
10. Experiment related to optics – continuation

Note: These experiments have been selectively designed to enhance children curiosity and interest in Science, Engineering, and Mathematics. The outcome of this activity will be measured in terms of partially what they learnt and partially how much they enjoyed it – remember these are young students whose learning is mostly related to the fact that how much they enjoy the activity.

(After this level I program, Level II programs will be offered and selective students will be sent to participate Science Fair at Santa Clara County, San Jose)