

NSC 2016-17 - Level 2 (Project Round)

Welcome to Level two of NSC 2016. This is where you will find all the details for this round. Level one was a stepping stone to the world of experiential learning. We at NSC would like to congratulate you and take you on this journey that will be not only educative but loads of fun.

Now that you have cleared Level one, what next.

Now the fun begins !!

This is what you need to do now...

Level 2 is about creating a project of your choice and submitting it for the competition. This project can be on any of the topics that have been put up, or you can suggest one of your own which needs to be approved by the panel. This project can either be a research based project which would be submitted as a presentation/document with videos(if required) OR a working model which again would require a video explaining it. You can also write a document as a report along with the video. We accept only uploaded digital files as entries. You can take support of your school science teachers, your parents or also call us for help by the expert panelists.

Step A. Enrol for Level 2

Step B. Select the project from the list

Step C. Create the project

Step D. Submit the project

Step E. Wait for the result and merit list

Step A

Enrolling for Level 2 To enrol for Level 2, you need to pay Rs500. This is mandatory for enrolment into Level2.

Step B

Selecting a Project Below are the Projects that have been defined for this year. They are a mix of research based projects as well as models. We encourage you to choose carefully keeping in mind your interest. If you want to do something with plants and animals, choose accordingly, if its star gazing and galaxies, choose that, if physics and mechanics is your domain, choose that. We have catered to a lot of different science subjects for you to choose from.

Step C

Create the Project The Creation of the project has to be done by you. You can create this project by taking help to your teacher. We encourage you to think out of the box and create something new. Use of renewable resources is encouraged. We do not want you to spend too much on the project.

Step D

Submit the Project The Project needs to be submitted by the March 31, 2017. The submission has to be electronic, which means, you will have to create either a presentation or a video and upload it. To upload the file, you need to log into your account at NSC2016.com and you will find the upload option there. You can upload multiple files and also write a cover letter or description of the project and why you chose it. That will help the panel evaluate your project and know your line of thinking. Maximum File Size: 250 MB

Step E

Results In this, you don't have to do anything. After submission, all you need to do is wait. We will announce the winners by April 10th 2017. The selected students will then be part of our Summer Science Camp to be held in May The Summer Science Camp is the most treasured prize and attending this camp would be a unique opportunity for the students to experience science in the outdoors.



NSC 2016 – PROJECT TOPICS



(Class 6th and 7th)

Bio / Biotechnology

- Separating mixtures: Design a device to do it.
- Genetically Modified Food
- What makes candies so colourful?
- How do plants grow in different Biomes?
- what is the effect of X-ray and other radiation on plants and their growth pattern

Chemistry

- Expansion of gases at different temperatures. Study of different types of gasses. How balloons deflate with temperature. Explain elastic collisions.
- Making water glow and creating glowing bubbles. Why does tonic water glow when a back light is shone on it.
- What effect does music have on your Biological system?
- Compare the different sugar level in fruits and find out which one would be more healthy. Also research on Vitamin C content in fruits.
- Explain different ways to purify water. What would be the most economical way for rural area. How would you make sea water into drinkable water.

Physics

- Make a lava lamp and explain what is happening? Be creative and experiment with colours
- Effect of music on plants and animals
- What is static electricity? Showcase different creative ways how static electricity can be used.
- Effect of temperature on magnets, conductivity and battery life.
- Create Lightning in a bottle using household items.

Astro

- Describe Lunar Cycle. Does Lunar Cycle mammals and human behaviour?
- Lunar Crators, their formation, their sizes and How they are counted. Can we predict them? Why does the moon appear large some times and smaller at other times?
- What makes the Saturn rings? Study each ring and describe its properties.



(Class 8th and 9th)

Bio / Biotechnology

- The science behind Tsunamis
- How well do disinfectants work ?
- Recycling of Grey water
- Ozone depletion
- E-waste : How to recycle ?

Chemistry

- Study of Soap and its formation. make your own soap
- How do detergents work? What is a green detergent? Compare them with conventional detergents and conclude what is the ideal type of detergent
- Why is sand needed to be mixed in concrete for building structures? How does the ratio affect the strength? What is the recommended ratio. Explain the chemical composition of concrete.
- How to build a sound proof room.

Physics

- Study the affect of temperature changes on paint, rubber(elasticity), refraction in liquids, surface tension, viscosity in liquids and gases.
- The Study of snowflakes. Does temperature have any effect on Snowflakes? Explain the different sides, angles, shapes and sizes of snowflakes. How many crystals form a snowflake? Do they vary?
- How do traffic signals work? Is there a science behind it. Study the traffic control systems all across countries and recommend what would be the best for India.

Astro

- Study of Different types of satellites and their paths around the earth
- Study of stars at twilight. Observe the sunset over a few months. How long does it take to get dark after sunset. When do the stars appear?
- Do constellations change overtime? Describe the creation and life of a constellation.



(Class 10th, 11th and 12th)

Bio / Biotechnology

- Chromatography. How do you separate liquids. Build a project.
- Bioplastics How to create them.
- Future of stem cell therapy
- Use of antioxidants in daily life
- Bio adsorbents to eliminate water pollution

Chemistry

- Bridges. Which is the best design for different terrain. Suspension bridges and how they swing.
- Create a puzzle/ game using circuits, switches
- Make dry ice using CO₂ fire extinguisher and show the different effects of dry ice then create a crystal ball from Dry ice bubble.

Physics

- To study the magnetic elements of earth's magnetic field. Magnetic declination, magnetic dip, Horizontal component of earth's magnetic field
- Making your own solar oven. Which direction and what angle should the panels face?
- Study of transmission of images to TV. How does the TV work?
- Propeller designs for wind turbine. Aircrafts, boats, hovercraft etc. How do they differ. Which is the best design for different types of uses.

Astro

- Study of Sunspots. Solar flares and how they are formed, their relation and changes over time.
- Researching the SOHO. How do we calculate the rotation of the sun and calculate the Coronal mass ejection
- How does a rocket work? Changing shape of Rockets. Study of propulsion systems over time. Future fuel and shape of rocket.