

# **Navodaya Vidyalaya Samiti**

**STEM SYMPOSIUM  
THAILAND  
2019**

# K-12 STATISTICS

|                                                                                                                    |               |
|--------------------------------------------------------------------------------------------------------------------|---------------|
| <b>Total number of teachers</b>                                                                                    | <b>11,103</b> |
| <b>No. of Post Graduate Teachers in NVS</b>                                                                        | <b>3,839</b>  |
| <b>No. of Trained Graduate Teachers in NVS</b>                                                                     | <b>7,264</b>  |
| <b>No. of Primary Teachers in NVS</b>                                                                              | <b>Nil</b>    |
| <b>% of teachers teaching at least one STEM subject in NVS (ie. Science, Engineering, Technology, Mathematics)</b> | <b>31.0%</b>  |
| <b>% of students who pursue tertiary education</b>                                                                 | <b>100%</b>   |

# TRAINING PROGRAMMES IN NVS

| Course                                             | Duration                                                                                                                                                                              | Target Group                                                 | Notable Features                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Induction Training                                 | 21 days<br>Mostly in house training                                                                                                                                                   | Newly Recruited Teachers                                     | <ul style="list-style-type: none"> <li>➤ Exposing teachers in ICT leading from basic knowledge to expertize in using latest tools and software's.</li> <li>➤ Hands on activity based teaching -learning padogogy .</li> <li>➤ Enhancing soft skills for personal effectiveness.</li> <li>➤ Adoptation and enrichment to residential school system.</li> <li>➤ Value oriented learning .</li> </ul> |
| In-service Course for newly promoted teachers      | 10 days<br>Mostly in house training                                                                                                                                                   | Teachers promoted after qualifying limited departmental exam |                                                                                                                                                                                                                                                                                                                                                                                                    |
| Content Enrichment and Pedagogical Training (CEPT) | 10 days<br>Mostly in house training                                                                                                                                                   | Every teacher once in a three years on rotation basis.       |                                                                                                                                                                                                                                                                                                                                                                                                    |
| Short duration courses                             | <ul style="list-style-type: none"> <li>➤ 2 – 5 days in-house training at NLI.</li> <li>➤ In-house training at reputed institutes like NCERT, CBSE, NUEPA, IISC, NIFM etc.,</li> </ul> | All the teachers                                             |                                                                                                                                                                                                                                                                                                                                                                                                    |

# TRAINING PROGRAMMES IN NVS

## Strengths

- Capacity building and awareness towards personal, social & emotional quotient of students.
- Imparting skills & specialization to be creative & innovative in their domain specific areas.
- Futuristic based trainings integrating ICT and visualizing local & global needs & solutions to the problems.
- Trainings are based on field studies and research to bridge the performance gap and achieve organizational objectives.
- Empowering teachers to explore the potential and its complete manifestations in the students .

## Weaknesses

- Most of the time, the group needs are addressed but individual needs remain less attended.
- Sparse and distantly located limited training centres , results in loss of money, time & human hours.
- Online training for teachers and non-teachers is in progress.

# ESPECIALLY CUSTOMISED TRAINING PROGRAMMES FOR 'STEM' EDUCATORS

- In service course for Physics, Chemistry, Mathematics & Biology at Indian Institute of Science (IISc), Chitradurga every year on rotation.
- Astronomical Telescope making workshops for Physics Teachers in collaboration with Vigyan Prasar.
- Geo-Gebra Software training for Mathematics teachers in collaboration with Delhi University.
- Collaboration with research centres, labs & institutes of national importance to cultivate & nurture scientific temperament & research.
- Subject specific short term training for Science & Maths teachers at Navodaya Leadership Institutes inviting reputed and renewed schools, Professors, Scientists & experts.

# PROFESSIONAL DEVELOPMENT OF CENTRE IN NVS

- Induction Course of 21 days for all newly recruited teachers.
- Every teacher undergoes In-Service Training once in every three years besides 2-5 days need based Short Duration Courses periodically.
- Trainings in latest educational pedagogies, guidance & counselling, personal effectiveness, leadership, ICT etc.
- Collaboration with reputed institutes like IITs, IIMs, IISc, NCERT, NUEPA, CBSE, etc to enhance professional competencies of teachers.

# PREPARING TEACHERS TO TEACH STEM

## OBSTACLES

The STEM subjects are more frequently taught in a common classroom. This hampers the understanding of concept in absence of hands on experiences, demonstration, visualization and multi-sensory approach.

## HOW TO OVERCOME

The STEM subjects are to be taught in the labs and activity rooms, wherein the concept can be understood through hands on experiences. Facilities i.e. increasing the no. of labs with latest equipment.



THANK YOU