केन्द्रीय विद्यालय संगठन, गुवाहाटी संभाग

Kendriya Vidyalaya Sangathan, Guwahati Region

E- News Letter

On

Best Practices

adopted in teaching of

WORK EXPERIENCE

&

Skill Development

2022-23

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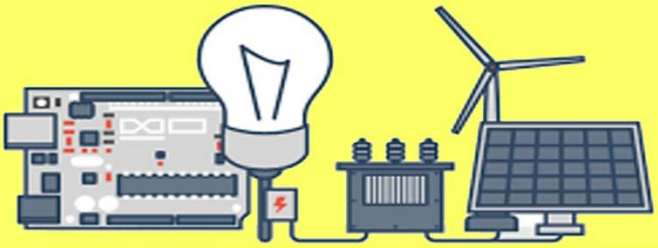
WORK EXPERIENCE

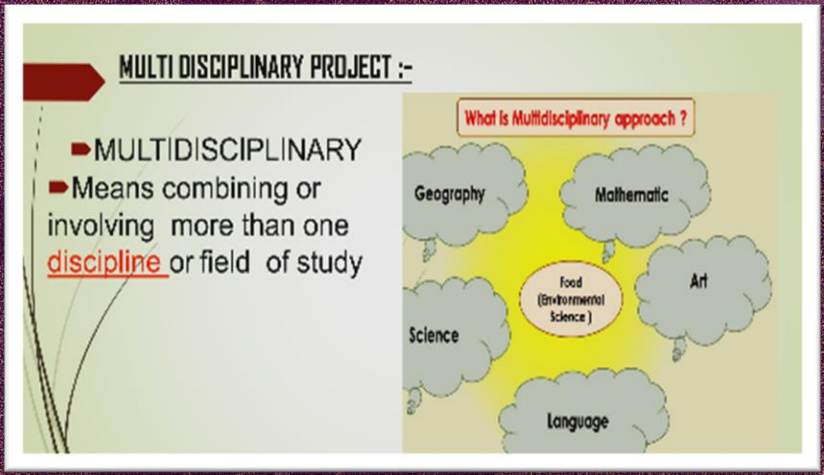
ONE SUBJECT- MANY DIMENSIONS/ MANY SKILLS

WORK EXPERIENCE

Imagination
Innovation



ROLE OF WORK EXPERIENCE TEACHER



The WE teacher plays a vital role in the proper implementation of the NEP 2020 guidelines and eventually ensures that effective Multidisciplinary Projects are prepared by the students under their guidance and teaching various skill-based activities. The WE teacher plays the role of a facilitator in preparing various projects/activities which integrates various subjects like Science, Social Science, Art Education, Mathematics, etc. and thereby ensures a comprehensive learning on a given topic.

ROLE OF WE TEACHERS IN IMPARTING DIFFERENT TYPES OF SKILLS AMONGST STUDENTS

Students always enjoy learning when it involves practical activities and they get an opportunity to explore their creative skills. The Multidisciplinary projects and other Work Experience activities allow the students to use their cognitive as well as loco-motor skills. Apart from this, they learn to work in team and they also develop technical, crafting and testing skills. Under the guidance of the WE teacher, the students can think of innovative Multidisciplinary projects which make their learning more activity-oriented and hence more interesting.

Students preparing various WE project at Work Experience laboratory.

The active participation of WE teacher and students at Work Experience laboratory.

"Only Skill takes a person to desired goal"

NATIONAL EDUCATION POLICY (NEP) 2020 AND MULTIDISCIPLINARY PROJECTS

The National Education Policy (NEP) 2020 aims to overcome the social status hierarchy associated with vocational education and suggests the integration of vocational education into mainstream education in all educational institutions in a phased manner over the next decade.

The National Curriculum Framework (NCF) 2005 also highlighted to bridge the gap between academic and vocational streams and the curriculum should provide space for learning beyond subject boundaries so that children and young people can make connections between different areas of learning.

According to NEP 2020, by 2025, at least 50% of learners shall have vocational exposure through school and higher education.

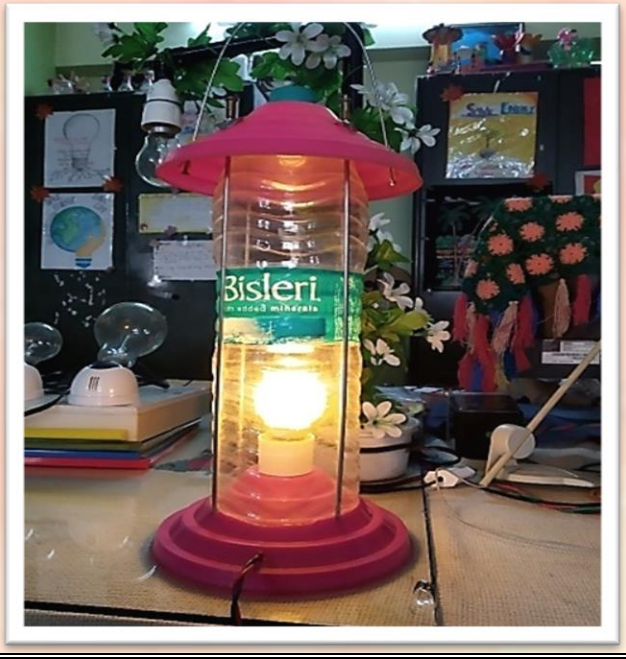
Every child is supposed to learn at least one vocation and be exposed to several more.

The NEP 2020 states that there will be 'no hard separation' between the 'vocational and academic streams.

According to NEP 2020, Pre-Vocational education is to be implemented from classes VI to VIII and Vocational Education has to be implemented from Class IX to XII.

In Kendriya Vidyalayas, Work Experience teachers play a key role in implementation of Skill development through Vocational Education from Class VI to XII. Work Experience is also a prime medium for integration of various subjects which is also called Multi-disciplinary Projects (MDP).

Since all Work Experience Teachers are of Electrical / Electronic Engineering background, implementation of Skills through vocational education has become easy. The syllabus of Work Experience is specially designed to inculcate the skills of Electrical/ Electronic works among the learners of class VI to XII. Besides this, many other vocational based activities are practised in the schools under the subject Work Experience. A few of these are Vermi compost, kitchen garden, mushroom growth, chalk making, soap making, craft works, origami etc.



A decorative lamp prepared by students using Plastic Bottle.

"Repetition is the mother of skill"

EXPECTED LEARNING OUTCOMES FROM WORK EXPERIENCE PROJECTS

The work experience and Multidisciplinary Projects have some crucial objectives and learning outcomes which provide a holistic approach in education across all subjects to ensure knowledge, harmony and integrity. A few important learning outcomes of these projects are:

- Different disciplines might contribute to a theme, subject or problem.
- The students get more and more hands-on experience and thereby skill development takes place in them.
- The students develop pragmatic approach learning by doing.
- Develops fresh ideas and flexibility in their approach as it includes the method of learning-by-doing.
- Develops experiential learning among students.

Students' work at display at Work experience Lab.

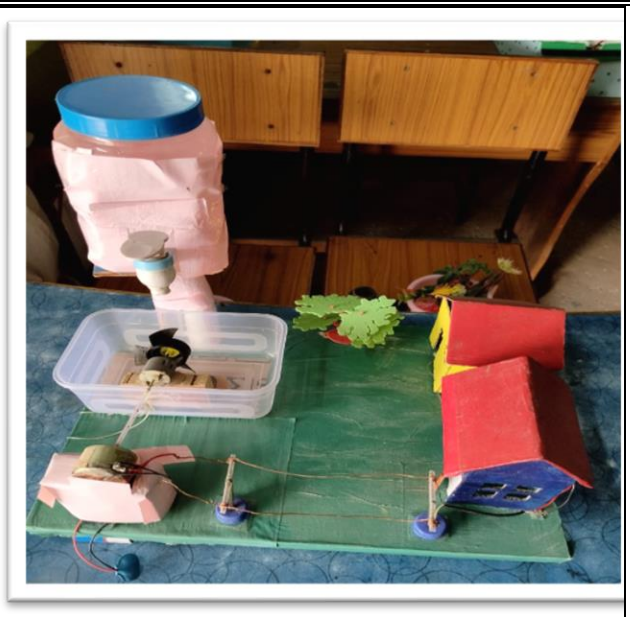
Students involved in preparing an electric lantern.

A simple and decorative electric circuit made by students of Class VI.

"The best way to sharpen your skill is to use them."

Students & teachers' participation in preparing various Scientific Toys

Prepared by the students of Class VIII, this project is a Hydroelectric Power Station which shows the mechanism of generating electricity through water. This project integrates various disciplines like Art Education, Work Education and most importantly Science and Social Science. The students learn the concept of hydroelectricity, its advantages and disadvantages and hydroelectricity as a renewable source of energy through this working model.

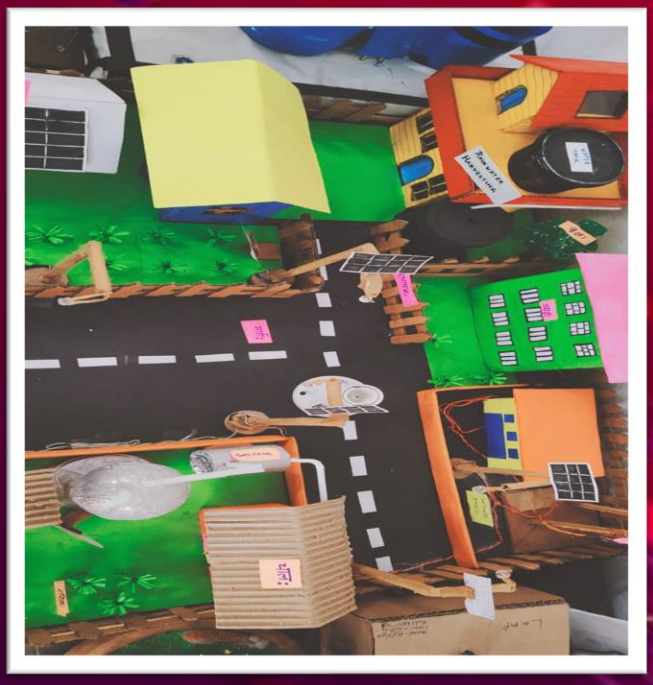


This model on **Evolution of Man** has been wonderfully prepared by the students of Class VIII which shows the evolution of man through different ages. This model perfectly integrates the disciplines of Social Science, Science and Art Education. Early man in different ages is an important topic in Social Science and this model helped the students in understanding the physiological changes of man in different ages.

Prepared by the students, this is a working **Drone** which can navigate automatically. This model helps the students to understand the working principles of aircrafts, aeroplanes, etc. The model largely integrated the discipline of Science and Work Education and it specifically helps the students in understanding the Newton's Third Law of Motion. The students also learn the use of rotors which is used for propulsion and control in drones.

Prepared by the students of Class VIII, this project is an **automatic street lights**. This is an electrical working model where the light glows by itself when no light falls on the resistor and the lights get switched off automatically when light falls on them. This kind of an electrical project helps the students in learning the concepts of light and resistance. They also learn how to prepare different electrical circuits.

This is a **smart dustbin** made by the students which involves a similar working principle of Light-Dependent Resistor (LDR) like the above project. This dustbin opens automatically when someone approaches it and closes as the person moves away. Students learn the use of Photoresistors, how to make LDR circuit, its advantages and disadvantages and to understand the concept of light which is an important topic of Science in all the Grades.



A model of **rainwater harvesting** prepared by the students. Rainwater harvesting is an important topic both in Science and Social Science which the students learn from Class VI. This project integrates Art Education and the children learn to use different craft materials and also learn the mechanism of rainwater harvesting. The model helps the student to present this topic as a MDP because it integrates all the subjects like Science, Mathematics, English, Hindi and Social Science.

"Skill is the unified force of knowledge, experience, intellect and passion."

Scientific toy making as Work Experience projects

A decorative electric circuit prepared by the students of Class VIII which beautifully integrates both art and work education. This has been prepared with quilling paper on glass and decorated with tuni lights.

A Future Accident Prevention Project prepared by the students. It's a proposed model of advanced sensor technology whereby if this device is fitted in a vehicle and if two vehicles come closer than specific distance, then the alarm will guide the driver to stop.

This is a Water Fountain using submersible pump. The water circulates and falls like a fountain through the lamp. This has been prepared by using earthen lamps which have been painted with acrylic colours. The project integrating Art Education, Science and Work Education have been prepared by the students of Class VII.

Scientific Toy/ Project making in Work Experience

Prepared by the students of Class IX, this is a **Fire Alarm System** which serves two purposes. First, the sensor fitted will sense the fire and the alarm/ light will glow and then the water stored in the container will rush to the spot and put off the fire. Through the working model, the students learn the mechanism of fire alarm and fire extinguishing system. It integrates Work Education and Science.

This is a **Rain Detection Sensor** prepared by the students. When water falls on the stainless steel blades, the circuit becomes on and the speaker/ buzzer make sound. The project integrates Work Education and Physics.

This is another beautiful **Water Fountain** using submersible pump made by the students of Class VIII. The water circulates and falls like a fountain. The project has been prepared by using Plastic bowls and plastic lids. The project integrates the subjects Science, Work Education and Art Education. This project can be easily prepared at home and it is cost-effective project using mostly waste items.

Scientific Toy/ Project making in Work Experience

This is a working model of a Ropeway made by the students of Class VIII. The model shows the mechanism of a ropeway where the trolley moves between two posts. The model has been made using cardboards and an electric motor has been fitted for the movement of the trolley.

This is a model of **Eiffel Tower** made by the students of Class XII. It is a good example of welding work showing the model of the famous Eiffel Tower and it is beautifully decorated with decorative lights.

This is a **Movable Solar Panel** prepared by the students. Generally, the solar panels are fixed and non-movable because of which a considerable portion of the sunrays doesn't fall on them directly. Here, the panel is made movable using a sensor and it rotates sensing the direction of light. This model integrates Physics and Work Education.

Types of Projects,Scientific toys and activities conducted under Work Experience for Skill development and as Multi-disciplinary activities

1. Electrical Projects:

a) Conductor testing device.
b) Multiple connections of Switches with bulb.
c) Bed Switch Connection.
d) Switch Board connection.
e) Electrical Quiz Board.
f) Decorative Lamps using waste products.
g) Motor/ Generator based projects etc.
h) Series parallel connections etc.

2. **Craft Works using waste materials.**
3. **Making decorative Items**
4. **Origami (Paper folding).**
5. **Other regular used items like Duster, Envelops, Carry bags etc.**
6. **Horticulture & gardening.**
7. **Socially useful projects.**
8. **Safety from Fire, electricity and disasters.**









Students learning experiences &

developing skills of Electrical Works

through practices in

Work Experience Classes.


Mushroom Cultivation
Skill is an art which thrills life forever

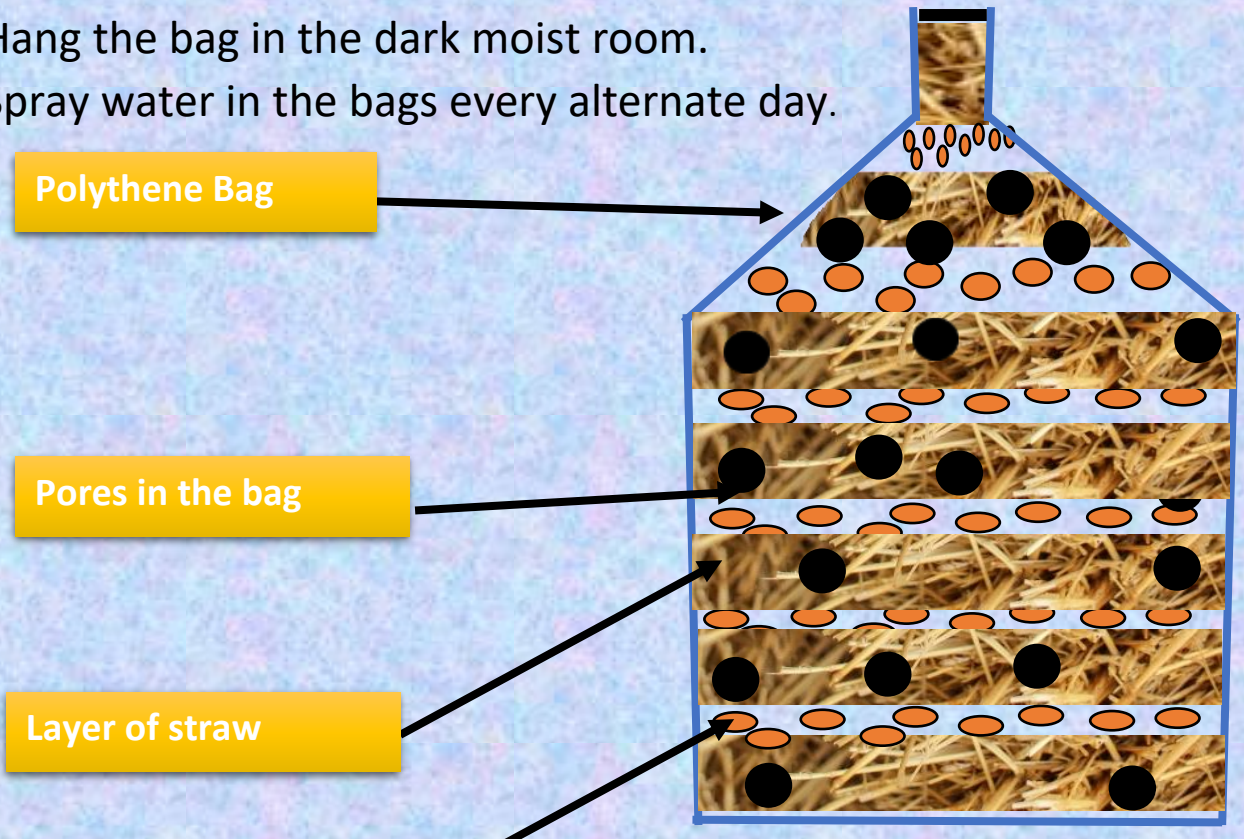
Mushroom Cultivation

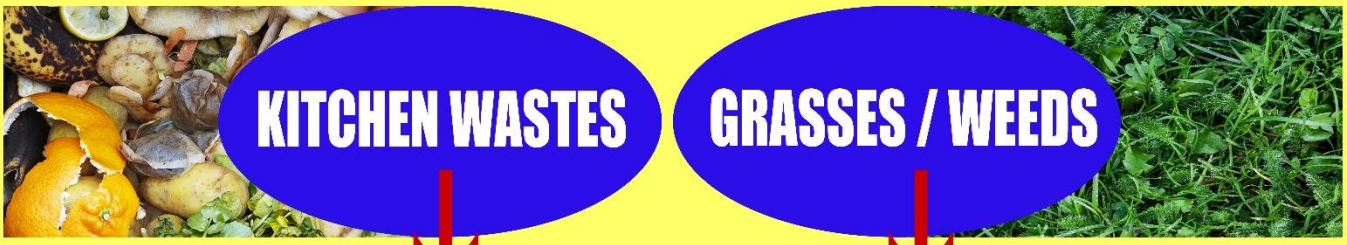
Mushroom is a protein rich agricultural product.

It is cultivated in a dark moist room.

Steps of Production:

1. Dip straw in water mixed with neem and lime overnight and cut into small pieces next day.
2. Take polythene bags and add a layer of straw of approximately 2 inches. Sprinkle seeds of mushroom on the layer of straw.
3. Repeat step no. 2 to make several layers of straw and mushroom seeds.
4. When the bag is filled, tie its neck.
5. Make several pores in the polythene bag with a stick.
6. Hang the bag in the dark moist room.
7. Spray water in the bags every alternate day.





VERMI COMPOSTING

(Earthworms utilizes Organic Wastes as Feed Materials

VERMICOMPOST

- Improves plant growth
- Increases microbial activities
- Suppresses plant diseases
- Enhances water retention and aeration
- High content of NPK
- Improves nutrient cycling

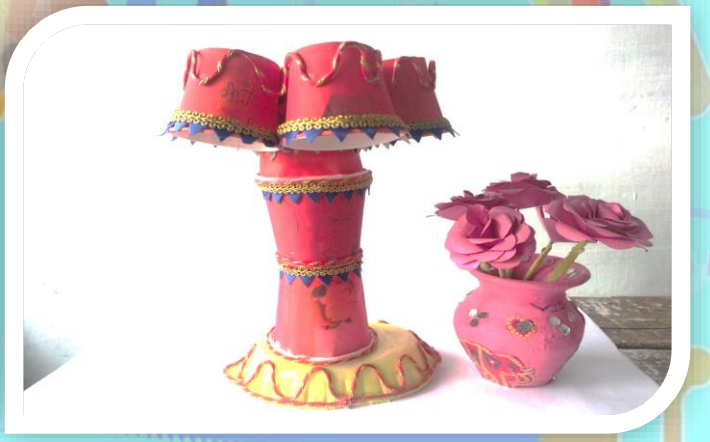
"Excellence is not a skill, it is an attitude"

STUDENTS' WORK OF DIFFERENT KVs

A BEST-OUT OF-WASTE PROJECT BY STUDENTS

A BEAUTIFUL CRAFT WORK MADE WITH MATCH STICKS BY STUDENTS

STUDENTS SHOWCASING DIFFERENT WE PROJECTS.



STUDENTS HAS PREPARED A DECORATIVE LAMP WITH DISPOSABLE CUPS.

STUDENT OF CLASS IV WITH HER BEAUTIFUL PROJECT.

BEST-OUT OF-WASTE PROJECT PREPARED BY STUDENTS.

Craft Work For Skill Development By students

"Craft is one of the most effective component of skill development"

Work experience inculcates all round development of child by developing her/ his skill in many fields.

धन्यवाद

केन्द्रीय विद्यालय संगठन, गुवाहाटी संभाग

WORK EXPERIENCE

Imagination
Innovation