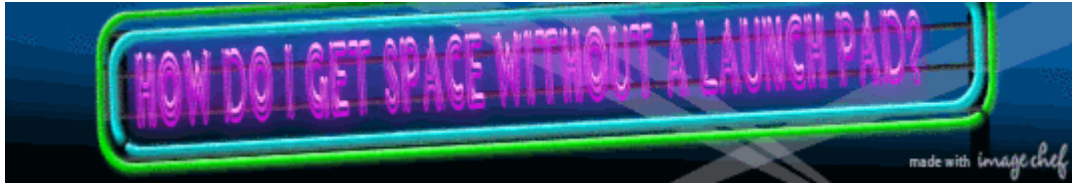


# THE BEST TEACHING PRACTICES CONFERENCE

## TECHNOLOGY BASED INNOVATIVE TEACHING STRATEGIES



### Paper Title:

Author's Name



and Authorization: Harminder Kaur Suri  
Kendriya Vidyalaya No 1 Ambala Cantt  
Kendriya Vidyalaya Sangathan, New Delhi  
Under Ministry of HRD, Government of India

Author's address  
for correspondence 59 A ,Block –A, Inderpuri ,Ambala Cantt, Haryana, Pin 133001  
With e –mail Id : [suri.harinder@gmail.com](mailto:suri.harinder@gmail.com)

and Phone No- 09416795315 (M), 0171-2650402 ®

### Abstract-

For the ages celestial studies guided the people and travelers. People looked at the heaven above and related to many superstitions ,beliefs and disbeliefs .Celestial bodies were taken as base of celebrations of festivals .Here kids study how celestial bodies have been interpreted across the time line and cultural celebrations. Students learn while working with technology- Launch of project, keep notes, arrange learning environment ,power point, working with internet tools , assessment approach, rubrics, You tube videos, create a work plan template, special activities plan, Resource plan, Reviews and check points ,create artifacts, student reflections by using Survey monkey tool, display culminating products, conflict and time management, conclude over a celebrations.

### Key Words-----

Communication, Constellations, Space, Stars, Celestial Bodies, Survey Monkey Tool  
Main paper---

### OBJECTIVES

#### 1. Primary Framework :

- Support and increase all children's access to excellent teaching, leading to exciting and successful learning.
- Make better Netizens

- To increase the students level of interest in EVS, to improve their EVS grades and raise scientific temper
- To explore and encourage self paced learning
- To analyze the effectiveness of learning in science
- To share the findings of the classroom with other community members across the globe –interact in the virtual world of Thinkers

2 Secondary Frame work:

- Change the rigid structure of conventional classrooms to envision alternative forms of instruction that enable more fulfilling relationships with pupils

## **Instructional method**

### **Essential Question**

*Put in writing the question that will engage the students*

PROCOVATIVE—How do I get SPACE without a Launch Pad ?

OPEN ENDED--- How can Moon interfere certain Astronomical observations?

CHALLENGING—Is Moon round or flat?

RELATED TO IMMEDIATE ENVIRONMENT

What are constellations, and what stories are associated with them?

What is the difference between a star and a planet?

Who invented the constellations we know today?

Do you need alarm clock to wake up every morning ?

### **Student Autonomy**

Decide upon student autonomy-

- PLANNING---Student autonomy is controlled by the Teacher to manage the Topic and Standards
- LEARNING RESOURCES-----Let them learn from their mistakes but teacher will be a facilitator
- CONTROL PROJECT PACE---Choice of work group and Time Management and Leadership quality

### **Grouping Strategy**

Groups divided upon the following factors-

- HETROGENOUS GROUP---Students from same neighbouring location as they need to work in the night sky
- ACADEMIC ABILITY----Library research
- REASONING POWER---creativity ,presentation
- MANAGERIAL SKILL---Celebrations
- TECHONOLOGY SKILLS—Technical know how

### **Learning Environment**

Consider the following parameters -

- Infra structure of Computer Lab
- Availability of Lab during Recess and other Non-Scholastic Periods
- Library services during Winter Holidays
- Use of School Printer ,Telephone
- Venue for meetings-Computer Lab

### **Assessment Approach**

View how a variety of student-centered [assessment](#) are used in the NIGHT SKY Unit Plan.

These assessments help students and teachers set goals; monitor student progress; provide feedback; assess thinking, processes, performances, and products; and reflect on learning throughout the learning cycle.

### **Designing of Rubric**

The Lead coach of the Project is to Design a [Rubric to judge Planning and Research work](#) of the little Astronauts .Use criteria of Launch, Task assigned, Process of Team Work, Technical Skills ,Grammar and Spell Check.

It is designed to assess the performance of Team members. Use dimensions of Content matter ,Resources used ,Proof Reading, Use of different Create Tools, Links ,Pictures, Cycle Time updating, originality of Work,

Grading will be done by focussing the theme of Content Learning, Team work, Creativity ,and Technical Expertise

### **Development of Lesson**

#### **Launch the Project in Morning Assembly.**

Make a Know-Wonder-Learn chart about the Night Sky. After each Briefing and debriefing sessions students will record the observations in the word document of Diary. They will use Internet ,Library Research ,Asking Teacher Educators, Peers . Helping students appreciate how other cultures see the sky by organizing a cooperative sky-gazing project with teachers and students in other parts of the world. Search for a class wanting a partner class to study astronomy at the [ePALS Web site](#)\*. Try to locate ePals in countries that speak their native language. Do this as far in advance as possible. Have students pair with assigned ePALS partners and discuss with other students what they see in the night sky at their respective latitudes and longitudes.

Let students note the Night sky and the position of planets ,stars, changing phases of Moon ,Constellations Tell students that different cultures looked at the same skies and created different stories. Present myths from different cultures based on this star pattern. Have students use this set of stars to invent their own constellation and write a short myth or story that explains its significance or write a new myth about an existing constellation. Have students share their short stories with the class. Discuss similarities and differences between students' interpretations and those of different cultures

Help students to find the stories related to constellations ,poems on Moon ,Make PowerPoint presentations

List the [Artefacts](#) for the Project –Note Making, Library Research, Maintain Appointment calendar, Drawing related to space, To-Do-List ,Check List, Model preparation, Collection of Poems, Managing Media, Student Interaction by using an Educational Website [www.thinkquest.org](http://www.thinkquest.org), [The assessment Tools](#).

### **Work Plan Template**

Create a spreadsheet to create the [Work Plan template](#) to build work plan .Create tasks ,subtasks, products ,dates and roles in the template .In the work plan table list add the product that will be created and indicate if it will be a milestone. Define the role Team members ,the start and end of the project .

Highlight [special activities](#) like field trips to Kalpana chawla centre Kurukshetra, Visit to Birla Planetarium, Science Panorama Kurukshetra ,Talk by Guest Speaker.

## **Resources Plan**

List [resources](#) that will be required during the project and any date constraints associated with them using [Survey Monkey tool](#)

## **Conflict Management**

### **Culminating Products**

Make projects

- PowerPoint presentation ,
- preparation of cost effective Model of Constellation
  
- Video shoot/ Upload autobiography of an Astronaut
- Organise Excursions
- Celebrate Space Week
- Talk of Research Findings in the Morning Assembly

List the products that will be assessed during the Project.

## **Revise Think Plan**

The Review meetings will be conducted between-

- Teacher and class –To know the issue that effect the progress of the project
- Teacher and student—To assess the team progress
- Teacher and Individual Student—To check the student progress
- Teacher Peer –To have feed back
- Student Student—To enhance learning

Identify all the check points at the start of the project

## **Celebration Completion**

Organize student work and host an Award Ceremony as per the agenda given below-

A special event of Award Ceremony organized as per the detail below—

- Welcome of the Chief guest
- Inaugural Ceremony
- Talk by the College Professor
- Presentation of the Report of the Project
- My Impressions about the Project
- Certificate Distribution
- Blessings by the Chief Guest
- Refreshment

Invite parents ,teachers, friends and share your findings and ask them for a feed back too.

## Reflections

Teacher and students go for self analysis so that they can improve for the next project

## References—

Sunit Sethi—Program Manager Microsoft, India

MMJoshi—Deputy Commissioner KVS New Delhi

Promila Bij-Vice President Project Shiksha

Sham Chawla-Principal KV1 Ambala

## Annexure—I

### Authentic assessment

PERFORMANCE ASSESSMENT—Show a ppt and describe your research

EXTENDED TASK----Prepare a Cost Effective Model of Night Sky

PORTFOLIOS---Let the students work on MISSION CHANDRYAN 2008-10-22

### Formative assessment

Prepare a Check List

Every student to present a Report of his findings

Peer review

### Summative assessment:

Quiz time

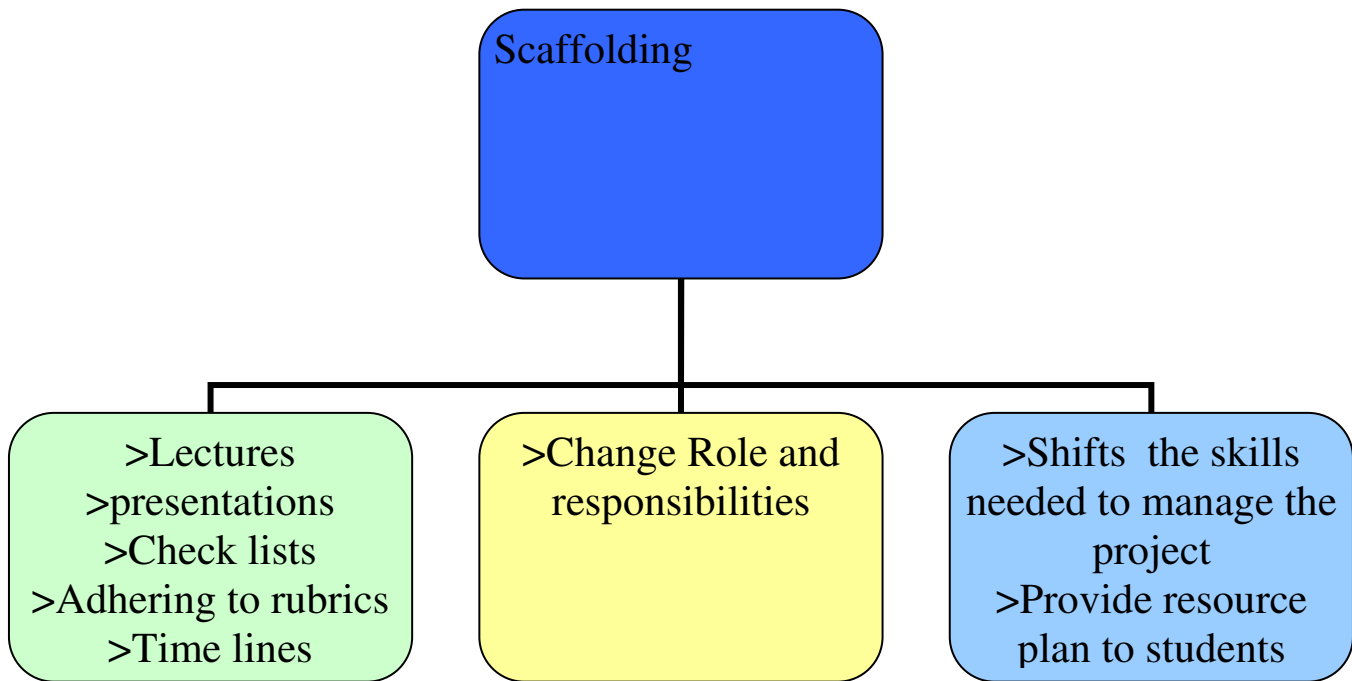
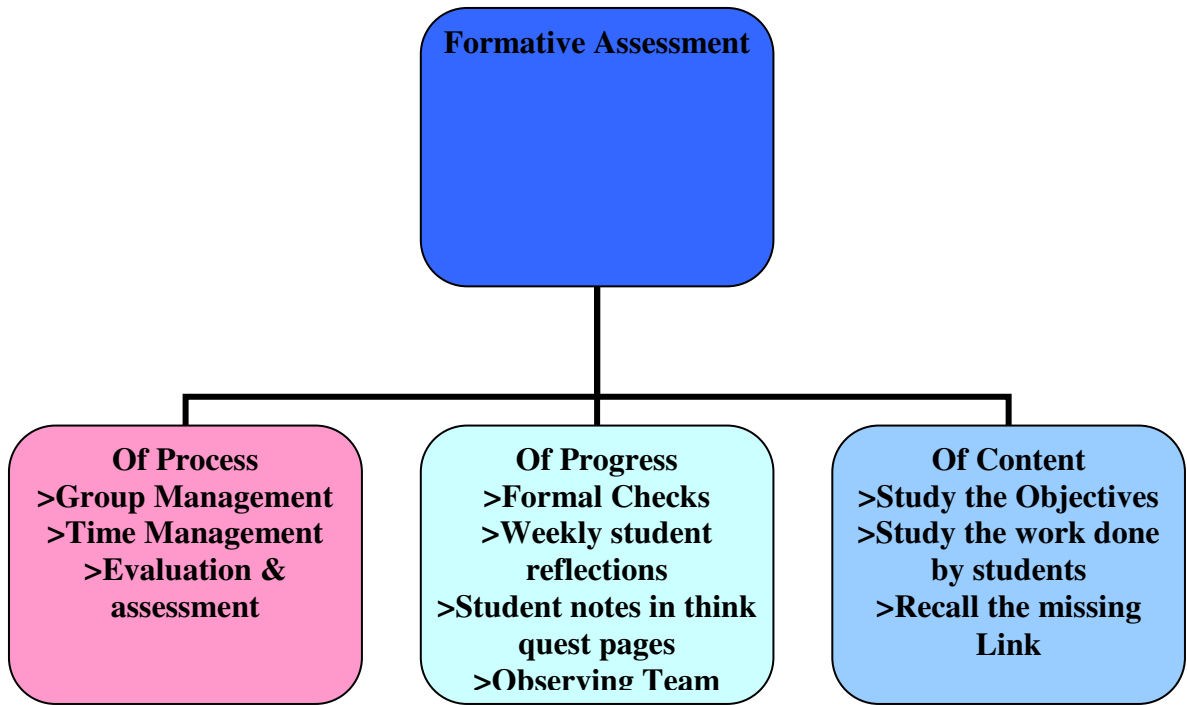
Group Discussions

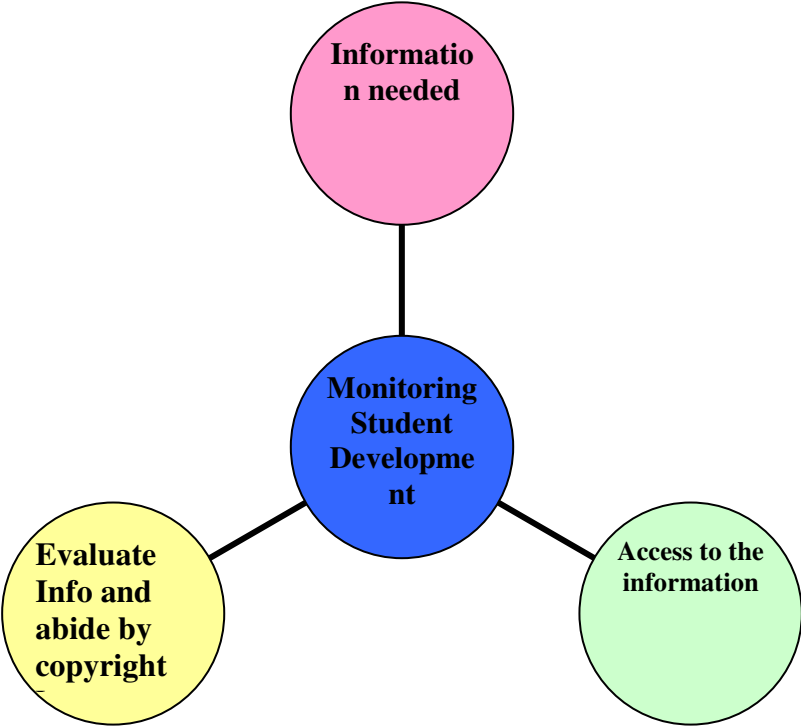
Digital Paintings

Use of window movie maker tool

Celebrate World Space day

Find url to important related websites





## Annexure—II

Project is to Design a Rubric to judge Planning and Research

	4	3	2	1	
<b>Introduction</b>	All the resources were gathered and targets were planned	All resources except mastering the skill of window movie maker not exercised	All resources planned except Organising a SPACE WEEK	All questions <b>were not</b> answered completely.	—
<b>Task</b>	Extensive Library ,Net research , PPT making, Reporting done, manage s the Time Line efficiently	Extensive Library Research ,PPT, Reporting done ,manages the Time Line efficiently	Seek guidance of his peer ,Library research done ,tries to manages the Time Line	The task is yet to be completed, Constantly chased to adhere to Time Line	—
<b>Process: Teamwork</b>	Contribute Ideas, share them with peer and volunteer for completion of task and has empathetic attitude	Contribute ideas, share with peers and is empathetic.	Contribute ideas, share with peers	. Share ides with peers and is empathetic	—
<b>Technical Skills</b>	Can work ok MS office, net surfing, movie maker tool	Can work on MS office, net surfing,	Can work with MS office not precise in Net surfing	Can work with MS office ,needs help in surfing net	—
<b>Grammar, Format , and Spelling</b>	The final body of work was free of grammar, spelling, and formatting errors.	The final body of work had 1 error related to either grammar, spelling, and formatting errors.	The final body of work had 3-5 grammar, spellings and formatting errors.	The final body of work had major grammar, spelling, and formatting errors.	—
				<b>Total--→</b>	—

### Rubric on performance of Team members

S. No.	Dimension	5 Points	3 Points	2 Points	Total Points Scored
1	Content Matter	Content is relevant and as per guide line.	Content is relevant but limited.	Content is irrelevant in some cases.	
2	Resources used	Various resources used effectively.	Resources used in some cases.	Very little use of resources.	
3	Proof reading	No grammatical mistake.	Proof reading is not done.	Grammatical mistakes in some cases.	
4	Use of different create tools	All tools are used as and where required.	Most of the create tools are used.	Some create tools used.	
5	Links	Large number of references/links related to topic is provided.	Few references / links related to topic is provided.	References/Links are not provided.	
6	Pictures	Complement content.	Vivid and appealing.	Pictures not complement content.	
7	Cycle time updating	Student is actively participating and updated meaningful content.	Moderate participation with meaning content.	Not updated. Contents are not reviewed.	
8	Originality of work	Data/Information is original in all cases.	In some cases data/information is original.	Data/Information is not original.	
				<b>Total Points</b>	

### **Annexure—III**

Work Plan Template

Please refer the work plan by clicking at the link below

<http://www.thinkquest.org/pls/html/think.page?p=416050265&m=>

Look in Project work plan –excel document

### **Annexure—IV**

Click the link for Survey Monkey tool for the Student Reflection and Evaluation

[http://www.surveymonkey.com/s.aspx?sm=S8p1HcDM2PXY41x\\_2fUZ2uig\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=S8p1HcDM2PXY41x_2fUZ2uig_3d_3d)

Click the Teacher reflection and evaluation

[http://www.surveymonkey.com/s.aspx?sm=FKxFFDsn7OyM4s98ruxHWw\\_3d\\_3d](http://www.surveymonkey.com/s.aspx?sm=FKxFFDsn7OyM4s98ruxHWw_3d_3d)

## Annexure—V

List of Artifacts used to assess the 21<sup>st</sup> century skills.

Sharing Ideas	<b>Critical Thinking</b> / communication
Note making	Critical thinking
Tools like message board,ask me	Critical thinking
Experiment	Creative thinking
Library research	Team Work
Check list	Team work /Self direction
To-Do list	Team work /Self direction
Emails/telephone	Team work & Cross cultural understanding/communication/technology
Models/working in thinkquest	Technology
Photographs	Technology
Word document	Technology
Graphic files	Technology
Videos	Technology
Web link/Internet Research	Technology
E-conferencing /PPT	Technology

**Annexure VI**  
**Special Activities**

**Special Activities Plan**

Highlight any special activities (e.g., field trips or guest speakers) in your work plan. Include dates. Notes:

TASK	SUBTASK	PLACE OF VISIT	DATE OF TOUR	PRODUCT
Field trip	Plan /seek permission/arrange conveyance	SCIENCE PANORAMA,KURUKSHETRA	December 19,2008	Notes
Field trip	Plan /seek permission/arrange conveyance	KALPANA CHAWLA CENTER,KURUKSHETRA	December 19,2008	Notes
Field trip	Plan /seek permission/arrange conveyance	BIRLA PLANETORIUM,AMBALA	January 20, 2009	Notes
Celebration	Plan/execute	SPACE WEEK	October 4-10 2009	A report

**Annexure VII**

Resources required to complete the project-

TASK	PRODUCT	RESOURCES
Launch	Vocabulary enrichment	Dictionary
Conduct Research-Library/online	Write report	Access to Library/ Computers & Internet
Model Preparation	Low cost Model	Raw material/ Coach Guidance
Video shoot	Movie	Camcorder/Computer/ Expertise
Autobiography of a Astronaut	Video upload	Computers /Internet
Excursion	Notes	Permission from Parents and School and Planetarium/Cab/Funds
Presentation	PPT	Computer/Internet
Felicitation	Recognition/Motivation	Certificates

## Annexure VIII

### Assessment Tools

ASSESSMENT TYPE	PRODUCT	10 POINTS	6 POINTS	3 POINTS	0 POINTS
<b>Authentic</b>					
1 Performance assessment	Writing/ Presentation /Analyzing	Write reports /presents/ analyze	Write report /presents	Write report/ Presentation Needs improvement	Needs guidance
2 Open Response Questions	Write Response/Draw Diagram	Write/draw With precision	Write /draw correctly	Write/drawing needs improvement	write
3 Portfolio	Writing Report/Editing	Writes/edits	Writes/need help in editing	Writes with errors /needs help In editing	Spellings needs improvement
<b>Formative</b>					
1 Effective Questions	Multiple/very short/short/Long type questions	Answers all	Answers all except long	Answers all except long/short	Answers only multiple
2 Feed Backs	About the student work	Good at Individual/team Work	Good at individual work	Good in team and significantly contributes	Good in Team but tries to help
3 Peer Assessment	Behaviour/Initiative/ Empathy/communication	Meet all criteria	Meet all except initiative	Meet all except communication	Meets all except communication
4 Self Assessment	Trouble Shoot/Time Management/ Conflicts resolve				

## Annexure IX

### Conflict Management

I will take a Proactive approach in resolving conflict Management

- Create a Group Contract which specifies the Nature of work and the consequences for not honouring the Group Work
- Articulating the Group Goals .Hence before assigning the roles a vigorous Brainstorming Session must be conducted in the class before nominating the Task
- Pressing the Importance of Team Work if need be change articulation of roles
- Teaching students Negotiation skills and snub them from using pejorative statements
- Practice introspection

Conflict in the workplace, can be common place. Here are two approaches to conflict, the positions approach or the interests approach. Conflict commonly arises when there is a difference of interests or belief that one party will be satisfied and the other will be dissatisfied. This approach is the positions approach and normally isn't a successful approach.

The interest approach is a way to try to relate the interests so that understanding occurs. For example, here is the motivation, likes, and dislikes. It is based in trying to understand the reason for the different positions. It is a much more successful manner to manage conflict.

Approaches to manage conflict-

- Silent Meditation be the part of Class routine
- A step towards Inculcation of moral values will be initiated ,for example-Students of the group will be asked to maintain Daily Diary at the end of the day, Must dine together during Lunch Break, Wear a badge PROJECT SPACE so that a sense of being recognized by the students is there and are bound to make deliberate attempts to check their behavior

Harminder Kaur Suri