Samvaad

Chandigarh's Monthly CCT Newsletter
October 2020

Leader Speak

"I would like to congratulate the teachers for their continued efforts towards developing Creative and Critical thinking skills amongst the students of the city beautiful. Creative thinking is important because it helps us look at problems and situations from a fresh perspective. I look forward to more innovative initiatives in the coming months and hope that it will motivate all the teachers to use these practices in their classrooms to make learning Joyful and experiential"

-Dr. Surender S. Dahiya
Director, SCERT

Did you Know?

PISA has no maximum score

Initiatives led by SCERT

- A CCT project - English practice questions for class 6th to 10th by DIKSHA, Chandigarh via Vidya Daan was launched on 21st October to upload the CCT practice questions of Reading literacy: English developed by Subject Expert Groups
- NISHTHA online course on DIKSHA for government school teachers of UT Chandigarh was launched on the 21st October by Director SCERT, UT Chandigarh. The Continuous Professional Development Program consists of 18 courses that teachers are required to complete in the duration of three months i.e from 21st October 2020 to 18th January, 2021.

The course intends to build capacity of teachers in pedagogy, art integrated learning, integrated lessons, ICT integration in teaching learning, health and well-being in the current COVID scenario etc.

- Project of class 8th for e-content in Hindi medium by DIKSHA Chandigarh has been completed. A total of 548 e-contents of 8th class in Hindi medium are now available on DIKSHA
- A booklet, 'Step by Step' has been developed by a team comprising of Mr. Davindra Singh, Principal Government Model Senior Secondary School -35, Ms. Gurpreet Kaur, TGT Mathematics Government Model Senior Secondary School-23 and Ms. Abha Kumar, Government Model Senior Secondary School-19 for classes 6th to 10th. The booklet consists of CCT questions on Number System and has been developed with the objective of making Mathematics joyful. The book has been circulated amongst all the Principals, Heads and Teachers

Initiatives led by CBSE

- New CCT website/portal http://pisa.seshagun.gov.in/cct/ was launched by CBSE in October, 2020 for all the students of Chandigarh, KVS and NVS to attempt CCT practice assessment. CCT-6 and CCT-7 have been uploaded on this portal on 23rd October, 2020 and students are required to attempt the CCT 7 Practice by 20th November, 2020
- A one-day Capacity Building Programme on Decoding Competencies of Reading Literacy, facilitated by Mrs. Ruchi Sengar (English) was conducted for teachers of English on 27th October through YouTube/Google Meet
- Online Training/Orientation sessions on PISA competency framework for all the teachers taking classes from 6th to 10th commenced on 23rd October, 2020 and will conclude on 18th November, 2020 by CBSE, CoE Chandigarh. Over **1500** teachers have been trained thus far across all subjects, and over **3000** teachers will be trained by the end of the training

CCT Torchbearers

MathArt - A must do activity at this time of the year

While Mathematics might seem like a purely formulaic pursuit, the patterns and ratios it produces can help create some of history's most striking works of art - as anyone who's read The Da Vinci Code will know. With festive time around the corner, the students of Bhavan Vidyalaya, Chandigarh were told to put on their thinking caps and brighten up their houses with some handmade decorative items and a tinge of Mathematical concepts. Students created their own lanterns, lampshades, 3D rangolis, paper diyas, wall hangings and dodecahedron. After performing this activity students have been able to

establish the static relationships such as relative position, similarity and congruence as well as correspondence between 2 and 3- dimensional objects. They have also strengthened their ability to select and interpret different shapes and concepts, linking them directly to aesthetic application of mathematical concepts in real -life situations.

We would strongly encourage you to have a look at this PPT shared by the team and replicate the same in your school

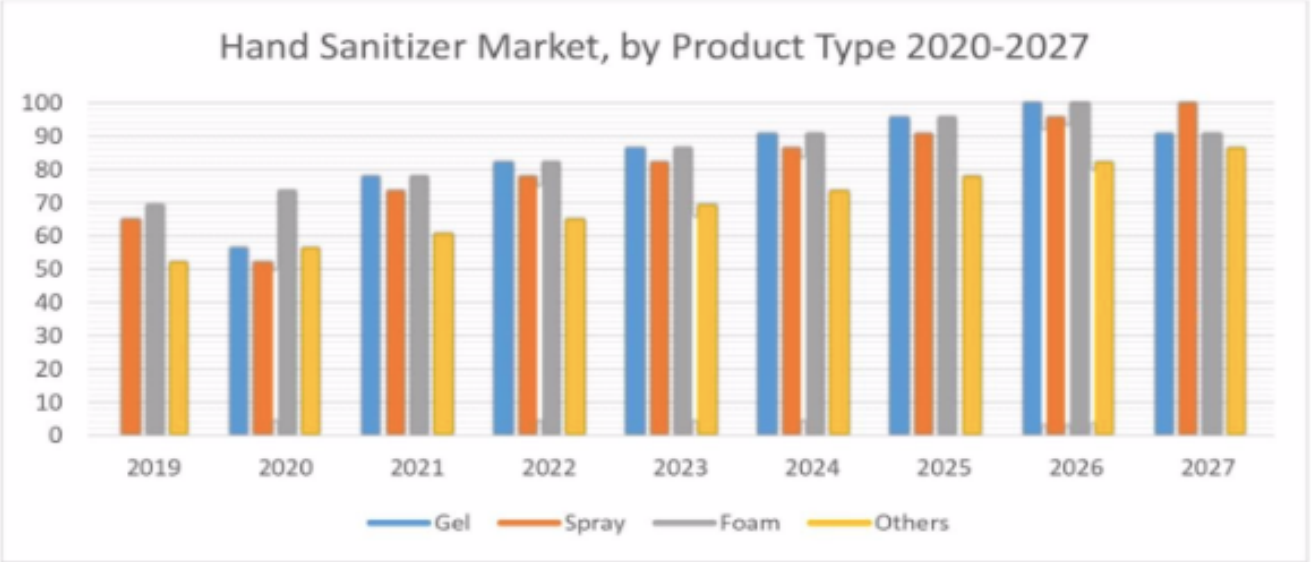
https://drive.google.com/file/d/1bjQU8xvGJMTRdq-MwhrB1V3zrIC4TN_-/view?usp=sharing

Hygiene- the only armour against COVID-19

Focusing on interdisciplinary competencies, the team at St. Soldier school put together an assignment for their students

- Draw scientific evidence-based conclusions as which ingredients are to looked for on the label while buying a hand sanitizer and whether alcohol based hand sanitizers can prevent infection against coronavirus? Evaluating and designing scientific enquiry by analyzing the replacement of isopropyl alcohol by methanol in hand sanitizers and to examine the effectiveness of usage of hand sanitizer against microbes?
- To deduce the meaning of graphic texts, managing, retrieving specific information and evaluation of data by representing it meaningfully to form opinions as in the type of hand sanitizer mostly used in the present time with comparison to be used in the future as per the graphic illustration. To statistically conclude the information in the form of pie chart.
- Describing and appraising investigations, assimilating details and evaluating data, claims and arguments with the help of visual aid by reflecting and addressing information like 'Usage of hand sanitizers and hand wash by Third World Countries: Issues and Challenges', Information on Covid-19, Meaning of Third World Countries, WHO guidelines on the use of hand wash and hand sanitizer and why these guidelines are not followed.

The report includes the forecast analysis of the use of types of hand sanitizers from 2020-2027.



On the basis of the above information answer the following questions:

Science:
Q1. What ingredients should you look for on the label while buying a hand sanitizer?
Q2. How should we use hand sanitizer for it to be effective against microbes?
Q3. Can methanol replace isopropyl alcohol in hand sanitizers? Why / Why not?
Q4. How can alcohol based hand sanitizers prevent infection against corona virus? Name and explain the process.

- Enhancing creative thinking through factual writing on the topic 'Covid-19 and the surge to maintain Hygiene' and communicating ideas effectively which also incorporates competencies like vocabulary building, reflecting and assessing information which further magnifies the comprehensive and cognitive skills of the students.
- Understanding technicalities of poetry, literary appreciation and evoking concentrated imaginative awareness of experience through the medium of poetry on the theme 'Let's Unanimously Fight Against Corona' and authentic integration of art with language by drafting posters on the same. An analytical report 'The forecast analysis of the use of types of Hand Sanitizers from 2020-2027' inclusive of a graph was shared with the students. On the basis of the report, different activities for respective subjects were conducted. To highlight the importance of hygiene during COVID-19, PISA competency tasks were centred and themed basically around this topic. It was a week long venture.

You can get the ready to use assignment and go through more evidences of this activity on the following link:
https://drive.google.com/drive/folders/1qsWvfTryj6eCQJbG5yvDgu16kIqi-01X?usp=sharing

Real life Mathematics and Science

The team of DAV Model School, sec 15 integrated mathematical and scientific competencies for enabling students to explain the phenomenon scientifically. Students set up an experiment using 3 different soil samples to find which soil type dominates in their area.By comparing the soil samples and finding the abundance of which soil type in a given sample, students completed the data table and calculated the percentage. After the calculation of percentage of each soil type students plotted the pi chart using the same data table. Since this activity involved reading and comparing different data sets it enhances mathematical application ability of students as well. Such activities help students apply their knowledge to real life situations. It enables them to gain the procedural knowledge when they perform the experiments systematically.

Students also develop the epistemic knowledge by developing the rationale about their own course of action followed during the experiment and conclude.

More details about this activity can be found at this link

https://drive.google.com/folderview?id=1_6klrzOXzBaZHKtwd_AQnitnOjQCbkqO

Science Rangoli - Organs and Organ Systems

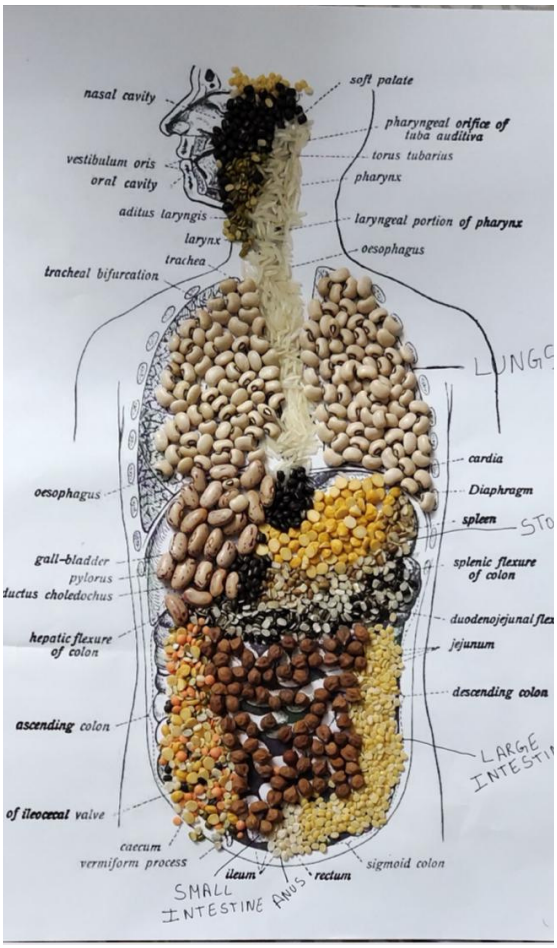
A ‘Science Rangoli’ competition was conducted by the team at Carmel Convent School to enhance students’ subject knowledge and creativity.

Students were given an opportunity to present any topic from the chapter Nutrition in Animals in the form of a colourful Rangoli on an A3 sized sheet using any available edible items from the kitchen such as fruits, vegetables, spices,pulses etc. This was followed by a Viva, comprising 2 questions for each student.

A few students went even beyond this, thinking out of the box and using their imagination to design a game. An engrossing game in SCRATCH language (which the students learnt as the ATL activity) with sound effects and different sprites.This activity was multidisciplinary and beautifully integrated software designing and life processes. Simple programming concepts grasped by them in their preceding classes was taken as a starting step and further extended to advanced programming.

A PISA based written Quiz was also organized for students on Garbage Management after a presentation and oral class discussion.

Aiming at creating an environment where students can use their scientific temperament, learn by doing and think critically is eventually the goal of the teachers.



Multidisciplinary Project

Teachers of Delhi Public School designed the module for joyful learning, conceptual clarity and practice of multi-disciplinary, integrated topics.
The module has items that are intrapersonal, where all the elements involved belong to the world of planning, fall within the scientific context. It also explains the change and the relationships with appropriate functions, creating, interpreting and translating among symbolic representations of relationships.
The module was designed with four different tasks followed by an integrated sheet as assessment tool.

- First task encouraged students to use their English writing skills in a creative manner while designing the e-card.
- Second task helped students to use their mathematical skills to plan a budget and keeping control on their expenses.
- Third task motivated the learners to show their creativity in designing and integrate art with shapes.
- Fourth task helped the learners to plan their own menu, thus focusing on the nutritional concept of balanced diet.

The module, attempted by almost 300 students, aimed at enhancing various PISA competencies which helped students in solving various types of problems with different responses and also helped them to think critically and creatively. This activity enhanced various skills to analyse a problem, apply concepts, interpret and evaluate to come to logical solutions.
You can find more details about this module at this link
https://drive.google.com/drive/folders/1nDeeqhZmjKZGnHMjtXaYkPYT1wr6j8

Assignments by Scientific Literacy Team

From time to time, all the CCT teams are taking new initiatives to enhance the critical and creative thinking skills of the students.

In October the Scientific Literacy team came up with a new initiative of CCT based assignments to be delivered to all the students with regular . online study material. All the three scientific literacy competencies and all content areas are covered in this activity

1. Explaining phenomena scientifically.
2. Evaluating and designing scientific enquiry.
3. Interpreting data and evidence scientifically

All the five Topic / Content areas

1. Health and disease
2. Natural Resources
3. Environmental Quality
4. Hazards and
5. Frontiers of science and technology

Questions in these CCT based assignments cover almost all the chapters of class 9 of NCERT. A number of examples from daily life are included not only to enhance creativity and critical thinking but also to revise the entire syllabus. Numerical and diagram based questions are also included. d)

These assignments will cater to the needs of both English and Hindi medium students simultaneously.

Being healthy and fit is not a trend or a fad, it is a lifestyle

POTENTIAL HEALTH RISK:
Fully hydrogenated oils are the same thing as saturated fat. Partially hydrogenated oils (PHOs) or trans fats are harmful for health. One of the health concerns of trans fat is the increased risk of heart disease. Diet plays an integral role in the health of this vital organ, so it's imperative not to overlook the quality of the fat you eat.

The current pandemic situation demands that we lay more emphasis on understanding our body and mind and imbibe a routine to improve our immunity.In this regard an integrated, interdisciplinary module was created by the team at St. John's school. This module incorporated conceptual learning by performing activities for a sound body and a sound mind. The purpose of the module was to infuse fun, easy and inexpensive ways to remain fit and at the same time encourage students to think critically and find solutions to a problem.

The Scientific aim was to bring about awareness in students about carbon containing molecules in different food items and their significance in nutrition. Since the food that we consume is ultimately carbon based, a connection was established by performing a hands-on activity on making 3D structures of hydrocarbons. The stimulating questions that had to be

answered at each step of the activity led them to move from the known to the unknown and enabled conceptual understanding and drawing of conclusions. The conversion of unsaturated hydrocarbons to saturated hydrocarbons learnt through the activity could easily be related to oils and fats and the students could interpret the health benefits of certain foods in comparison to others. The critical thinking skills were enhanced as students moved from one challenge to another. With such activities conducted, the students of today who have been taught to analyse and evaluate data scientifically, will surely become well informed citizens capable of making healthy life choices.

The Mathematical aim of the assignment encouraged students to calculate their BMI and take up physical activities according to their individual need. The students were able to apply their knowledge of Physics and Coordinate geometry to formulate a plan which involved their family members, thus promising quality family time.

The English assignment was based on evaluating and analysing the difference between the traditional treadmill with the newer version of a treadmill bicycle. Discussion was conducted about the viability of the newer versions and inputs about which would be a better way of exercise were discussed in the class. The students practised their cognitive skills, sharpened their ability to make considered decisions and draw conclusions by answering questions based on the text. They enhanced their geographical skills and comprehension skills through interpretation of the text and decoding the visual. Through the task they were also made aware about how innovation and improvisation can create a new product. Language skills were encouraged in the form of a dialogue between a customer and a marketing agent.

This activity has helped students strengthen their preparation for PISA by

- Encouraging them to explore the various dimensions of a concept.
- Leading them into ' how to think' rather than 'what to think'.
- Equipping them with the ability to understand the dynamics of the world around them and evolve into a generation that is abreast with the happenings around the world.
- Broadening their horizon by adopting a multi-dimensional approach to a problem and become aware global citizens.
- Fueling their minds into applying the knowledge acquired inside the classroom to the outside world.
- Arousing curiosity and lead them into investigating, formulating and finding solutions.
- Sharpening the skills of analysis, comparison, fetching information, interpretation and decision making.
- Stimulating the students' imagination towards making innovative products

Please find a detailed presentation on the same at this location
https://drive.google.com/drive/folders/1OpGcI9FXyTKa1luQMf5zb7_siXzqe9vA?usp=sharing

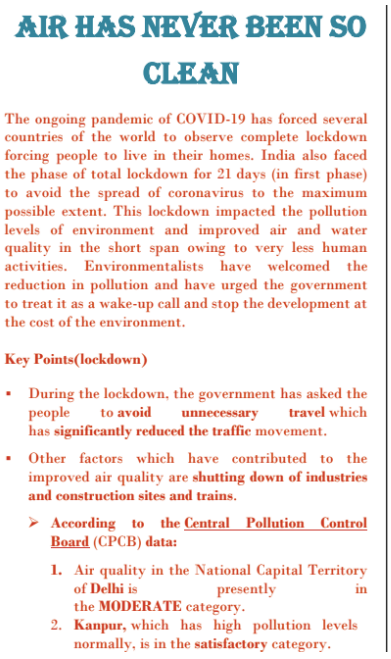
हिंदी रचनात्मक गतिविधि

The team at Sacred Heart Senior Secondary School designed an activity to inculcate scientific temperament among students of 6th grade along with language proficiency by letting them observe and interact with the nature around them. Students were asked to understand the catering, lifestyle and needs of the animals and birds in an activity based on the lesson "Nadaan Dost" (class 6 Vasant part 1) related to birds.

Their support and safety was set as the main point of study. The students constantly observed the trees and gardens around them and helped the animals and birds by providing them them with food and protection. They did this with interest and enthusiasm. An attempt was made to capture the amazing view of the nature in the camera. Then everyone shared those pictures. They were also discussed in the class. There was a new enthusiasm in the students. Everyone enjoyed the activity thoroughly.Children got an opportunity to get in touch with nature and analyse it, and in the process also understood their obligation towards it. This ability to engage with natural phenomena and critically analyse it, is key to developing problem-solving and decision-making skills, which are essential not only for PISA but also for life ahead.

Life before COVID-19

Frequency polygon reading



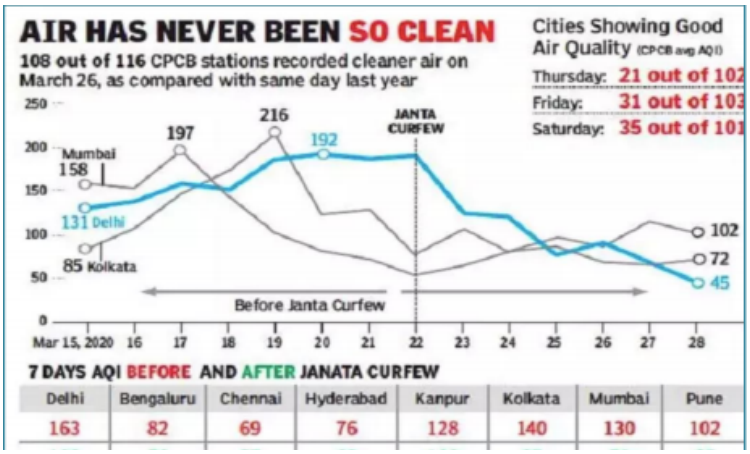
AIR HAS NEVER BEEN SO CLEAN

The ongoing pandemic of COVID-19 has forced several countries of the world to observe complete lockdown forcing people to live in their homes. India also faced the phase of total lockdown for 21 days (in first phase) to avoid the spread of coronavirus to the maximum possible extent. This lockdown impacted the pollution levels of environment and improved air and water quality in the short span owing to very less human activities. Environmentalists have welcomed the reduction in pollution and have urged the government to treat it as a wake-up call and stop the development at the cost of the environment.

Key Points(lockdown)

- During the lockdown, the government has asked the people to **avoid unnecessary travel** which has **significantly reduced the traffic** movement.
- Other factors which have contributed to the improved air quality are **shutting down of industries and construction sites and trains.**
  - **According to the Central Pollution Control Board (CPCB) data:**
    1. Air quality in the National Capital Territory of **Delhi** is presently in the **MODERATE** category.
    2. **Kanpur**, which has high pollution levels normally, is in the **satisfactory** category.

Different levels of air quality index and what they mean



To develop the mathematical competency of interpreting, applying and evaluating mathematical outcomes and focusing on the topic data collection, representation and interpretation, the team at Government Model Senior Secondary School, Raipur Khurd designed an activity of reading a Frequency Polygon by integrating it with science and current situation of Covid-19. All students were given a worksheet having News on AQI and frequency polygon. Students were asked questions based on the paragraph. This was also in line with the PISA-style of questions, where questions are based on a given piece of information. Through this activity, students will learn to process information in different forms - text and graph, and apply that information in the real-world context.

The assignment can be found at this location
https://drive.google.com/file/d/1en_lp4SUvd9nCGFx8N2Slbu5ytnImlaN/view?usp=sharing

Wrapper: A great source of information

The team at Government High School, Karsan undertook an activity to develop the competency of retrieving information (reading literacy) through an activity that also improved their students' awareness as consumers. Students were asked to bring the wrappers of eatables that they consumed at home like packets of milk, bread, biscuits, chips etc. They were then asked to read the content on the wrappers and find out answers to a specific set of questions (that were altered each time), such as the nutritional value, price etc.

After finding the answers, each student shared the information available on his/her wrapper with the other students. The activity taught students to read non-continuous text, and the art of searching for specific information. This will be a useful skill for attempting reading based questions in all kinds of assessments, including PISA, and is also a useful skill in general that will help students become informed and aware citizens.

More information can be found at this location -- https://drive.google.com/file/d/1fslmYLrbVYCTpyAA3XPNcGsaX9p0ZBUD/view?usp=sharing

Teacher Talk

PISA, the Program for International Student Assessment has become a word synonymous with Education System in Chandigarh since 2019, when it was first announced that Chandigarh would represent India, at this forum.

The preparations for the same were in full swing when our world was jolted by the COVID-19 pandemic. PISA assesses skills and competencies and not the content taught. PISA to me stands for Persistent, Integrated and Smart Attempt.

Persistence in guiding our students through experiential modes, Integration of all subjects, Smartly focusing on skills & competencies and providing opportunities to students to develop ability to Attempt skill-based tasks. Naturally to achieve all this we need to have an action plan. We need to work together as a resilient organisation. An Organisation which moves forward with a common vision, all stakeholders take responsibility and perform individual specific roles while supporting each other. We all work together to tap the resources already available and adapt to the changing needs and situations. As this saying goes-“Go the extra mile, Give the best, Let the effect of the work we do be the signature we leave behind in this world.” (Anonymous)Chandigarh as a team has proven to be the best many times and this time too we will triumph and not let the adversities pull us back, and “be the change we want to see in the world” (Mahatma Gandhi ji), for Chandigarh will be in memory of the world for a long time. Let us make it a pleasant one.

-Dr. Openderjeet Kaur
Academic Resource Person (Biology), Samagra Shiksha, UT Chandigarh
Member- Scientific Literacy Group

A bend towards excellence

Do you remember when you learned to multiply? You repeated the same multiplication tables without understanding what you would do later with this information. You also learned simple mathematical formulae and as many data related to numbers. Similarly, you memorised the names of countries and their capitals, states, rivers, musical notes, elements of the periodic table etc.
Rote memory has been used in primary and secondary education for over a century, and it is still the primary way that many subjects are taught in Western and Eastern schools. Among students, it is quite common to take an exam relying on rote learning. However, when the question is relatively ambiguous or requires critical thinking, the security of memorised information begins to fade. One of the biggest problems with the use of rote memory in primary and secondary education is that it doesn't prepare you for higher learning or on-the-job memory applications.

One study found that the most common learning disability among undergraduates is incomplete comprehension. This is a direct result of using rote memory to memorise base facts without being able to understand or learn the complexities of the subject matter. This evolving world always demands and needs novel thinking for development. The rote-based learning dominant in Indian schools has to be replaced with a competency based one and PISA will help India do just that.

Competency-based learning is an approach to education that focuses on the student's demonstration of desired learning outcomes as central to the learning process. It is similar to outcome-based learning in which said outcomes i.e. 'competencies' are identified beforehand, and students are frequently assessed.

Our education is immersed in rote learning and memorisation. PISA requires experiential learning and out of the box thinking and its aim is to give a comprehensive analysis of how education systems are working in terms of preparing its students for higher education and subsequent employment. The focus is placed on deep understanding that is demonstrated through application. This means that learning outcomes are proven by action, and focus on building the skills students need to become better learners into adulthood.

The purpose of education is an elevated one – creating problem solvers, creative thinkers, fearless innovators and collaborators of the future. As an educator our role is to help students develop and demonstrate mastery over a topic, build a culture of equity and inclusivity, and prepare students for life beyond the walls of their school. Let us all free their minds from the cramped cage of cramming and direct them to the vast forests of understanding.

-Anita Kapoor (TGT, English)
Bhavan Vidyalaya

From books to reality

We often come across parents complaining of the work load mounting due to the extra work imposed on the students due to PISA preparations.

Let me assure you parents, PISA is the need of the hour The 21st century skills expect our students to think critically and creatively. PISA is one such platform that prepares our children to inculcate 21st century skills.

This will prepare them for a world beyond books.

We lag behind in Emotional Quotient.
PISA prepares them for the same through Collaboration.

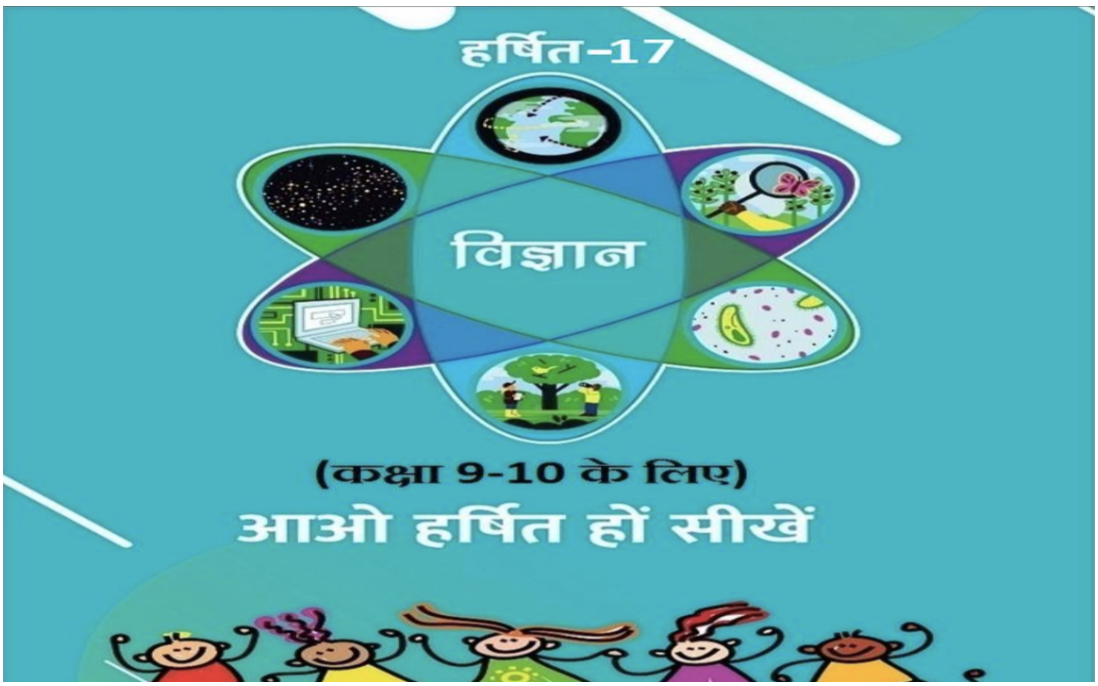
We can already see a wave of change in our students where they enthusiastically interpret the graphs, pie charts , advertisements and are keen on exploring more.

We as a Nation are taking this exam to
reform our Education system for the betterment of our students

-Yogeeta Khanna
Government Model Senior Secondary School -16.

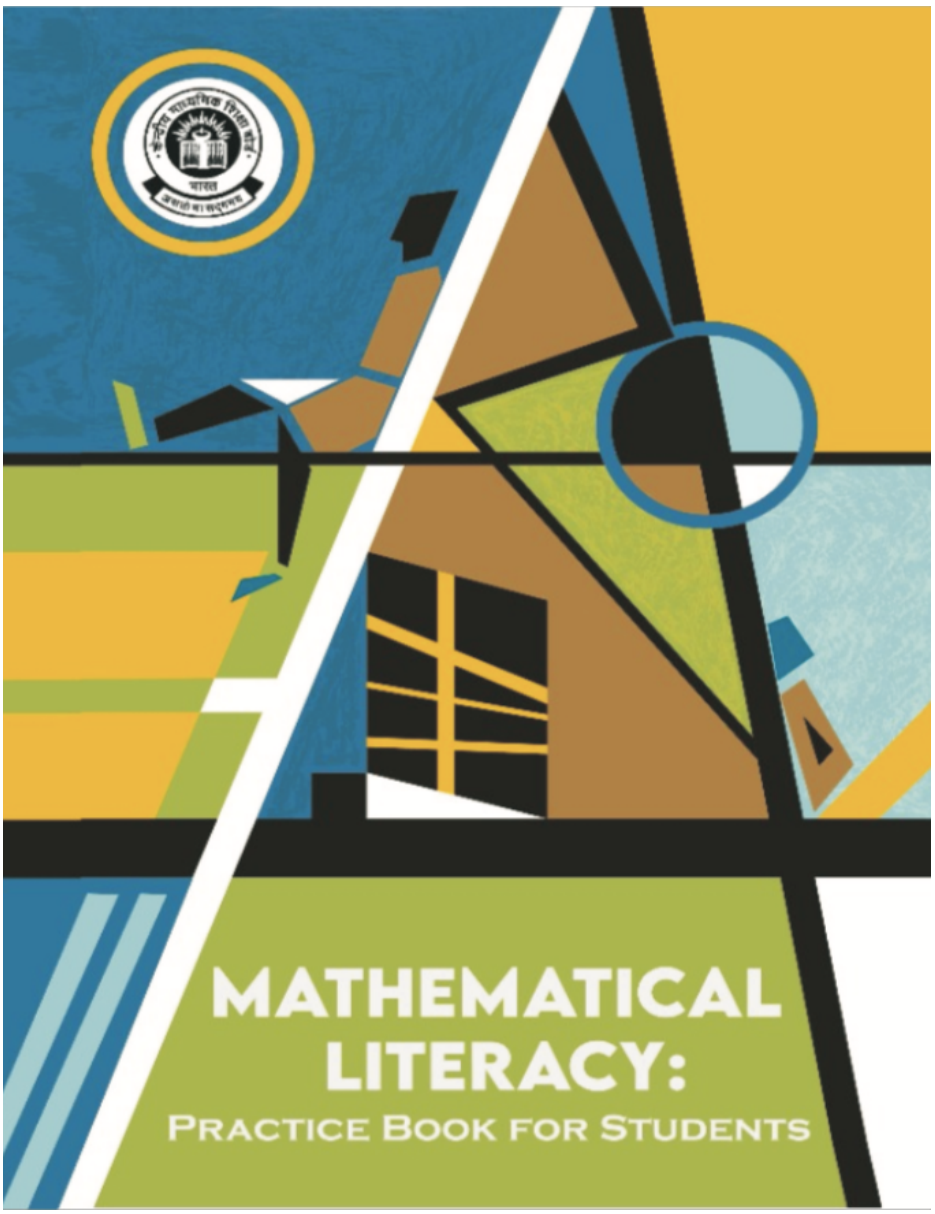
Resource in Focus

हर्षित हो सीखें



Joy captures the thrill of true learning – the curiosity, the passion, the collaboration, the connection, the effort, the fun, the pride, the sharing. Joyful learning speaks to both the learning process, where there is considerable evidence that a focus on techniques that we would describe as joyful are far more effective, and to an outcome that we believe should be valued highly. During this lockdown when the students could not come to the school, and their connectivity with their teachers was hampered. The Scientific literacy team under the mentorship of Mrs. Ravinder Kaur (DEO, U.T. Chandigarh) and Mrs. Anuja Sharma (Principal, DAV Model School, Sector 15 A Chandigarh) brainstormed and collaborated to create something which would help our students learn the concepts of science in an interesting and fun way. Thus the first of the joyful learning series was created in Hindi and English. It evoked a good response which motivated the team to create more. Till date, seventeen joyful learning series have been published for classes 6-8 and 9-10. Through the joyful learning process a student is always improving knowledge of self and the world. We recognize, however, that joy is experienced individually and that context matters a great deal.The team strives to reach out to students and evoke an interest in learning science.

A Little Mathemagic!



This Mathematics Practice book aims to simplify important mathematical concepts and clear common misconceptions in a fun, engaging and relatable way for students. The practice book contains interesting situations based on everyday life, such as climate, ordering food at a restaurant, travelling etc. and questions based on them. The book is full of colourful images, puzzles and graphs so that students have fun while studying. It is built in a way that students can work on their own with little support from parents and teachers.

Printed copies of this practice book will be made available to all schools. It can also be accessed on the given QR code.

P7S7D9

Poll of the month

How would you spend this holiday season?

https://forms.gle/8QBhFdyQ7nVxTNxw7

Your opinion matters!

Please share your feedback on this edition of Samvaad

https://forms.gle/Z5AeiqS1wG5cGM6FA