



# 21<sup>st</sup> Century Skills

A Handbook



CENTRAL BOARD OF SECONDARY EDUCATION, DELHI





# 21<sup>st</sup> Century Skills

A Handbook



**CENTRAL BOARD OF SECONDARY EDUCATION, DELHI**

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# भारत का संविधान

## उद्देशिका

हम, भारत के लोग, भारत को एक सम्पूर्ण प्रभुत्व-संपन्न समाजवादी पंथनिरपेक्ष लोकतंत्रात्मक गणराज्य बनाने के लिए, तथा उसके समस्त नागरिकों को:

सामाजिक, आर्थिक और राजनैतिक न्याय,  
विचार, अभिव्यक्ति, विश्वास, धर्म  
और उपासना की स्वतंत्रता,  
प्रतिष्ठा और अवसर की समता

प्राप्त कराने के लिए

तथा उन सब में व्यक्ति की गरिमा

<sup>1</sup>और राष्ट्र की एकता और अखंडता

सुनिश्चित करने वाली बंधुता बढ़ाने के लिए

दृढ़संकल्प होकर अपनी इस संविधान सभा में आज तारीख 26 नवम्बर, 1949 ई० को एतद्वारा इस संविधान को अंगीकृत, अधिनियमित और आत्मार्पित करते हैं।

1. संविधान ( बयालीसवां संशोधन ) अधिनियम, 1976 की धारा 2 द्वारा ( 3.1.1977 ) से "प्रभुत्व-संपन्न लोकतंत्रात्मक गणराज्य" के स्थान पर प्रतिस्थापित।
2. संविधान ( बयालीसवां संशोधन ) अधिनियम, 1976 की धारा 2 द्वारा ( 3.1.1977 ) से "राष्ट्र की एकता" के स्थान पर प्रतिस्थापित।

## भाग 4 क

### मूल कर्तव्य

**51 क. मूल कर्तव्य** - भारत के प्रत्येक नागरिक का यह कर्तव्य होगा कि वह -

- (क) संविधान का पालन करे और उसके आदर्शों, संस्थाओं, राष्ट्रध्वज और राष्ट्रगान का आदर करे;
- (ख) स्वतंत्रता के लिए हमारे राष्ट्रीय आंदोलन को प्रेरित करने वाले उच्च आदर्शों को हृदय में संजोए रखे और उनका पालन करे;
- (ग) भारत की प्रभुता, एकता और अखंडता की रक्षा करे और उसे अक्षुण्ण रखे;
- (घ) देश की रक्षा करे और आह्वान किए जाने पर राष्ट्र की सेवा करे;
- (ङ) भारत के सभी लोगों में समरसता और समान भ्रातृत्व की भावना का निर्माण करे जो धर्म, भाषा और प्रदेश या वर्ग पर आधारित सभी भेदभाव से परे हों, ऐसी प्रथाओं का त्याग करे जो स्त्रियों के सम्मान के विरुद्ध हैं;
- (च) हमारी सामासिक संस्कृति की गौरवशाली परंपरा का महत्त्व समझे और उसका परिरक्षण करे;
- (छ) प्राकृतिक पर्यावरण की जिसके अंतर्गत वन, झील, नदी, और वन्य जीव हैं, रक्षा करे और उसका संवर्धन करे तथा प्राणिमात्र के प्रति दयाभाव रखे;
- (ज) वैज्ञानिक दृष्टिकोण, मानववाद और ज्ञानार्जन तथा सुधार की भावना का विकास करे;
- (झ) सार्वजनिक संपत्ति को सुरक्षित रखे और हिंसा से दूर रहे;
- (ञ) व्यक्तिगत और सामूहिक गतिविधियों के सभी क्षेत्रों में उत्कर्ष की ओर बढ़ने का सतत प्रयास करे जिससे राष्ट्र निरंतर बढ़ते हुए प्रयत्न और उपलब्धि की नई उंचाइयों को छू ले;
- <sup>1</sup>(ट) यदि माता-पिता या संरक्षक है, छह वर्ष से चौदह वर्ष तक की आयु वाले अपने, यथास्थिति, बालक या प्रतिपाल्य के लिये शिक्षा के अवसर प्रदान करे।

1. संविधान ( छयासीवां संशोधन ) अधिनियम, 2002 द्वारा प्रतिस्थापित।

# THE CONSTITUTION OF INDIA

## PREAMBLE

**WE, THE PEOPLE OF INDIA**, having solemnly resolved to constitute India into a <sup>1</sup>**SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC** and to secure to all its citizens :

**JUSTICE**, social, economic and political;

**LIBERTY** of thought, expression, belief, faith and worship;

**EQUALITY** of status and of opportunity; and to promote among them all

**FRATERNITY** assuring the dignity of the individual and the<sup>2</sup> unity and integrity of the Nation;

**IN OUR CONSTITUENT ASSEMBLY** this twenty-sixth day of November, 1949, do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

1. Subs, by the Constitution (Forty-Second Amendment) Act. 1976, sec. 2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
2. Subs, by the Constitution (Forty-Second Amendment) Act. 1976, sec. 2, for "unity of the Nation" (w.e.f. 3.1.1977)

# THE CONSTITUTION OF INDIA

## Chapter IV A

### FUNDAMENTAL DUTIES

#### ARTICLE 51A

**Fundamental Duties** - It shall be the duty of every citizen of India-

- to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;
- to cherish and follow the noble ideals which inspired our national struggle for freedom;
- to uphold and protect the sovereignty, unity and integrity of India;
- to defend the country and render national service when called upon to do so;
- to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;
- to value and preserve the rich heritage of our composite culture;
- to protect and improve the natural environment including forests, lakes, rivers, wild life and to have compassion for living creatures;
- to develop the scientific temper, humanism and the spirit of inquiry and reform;
- to safeguard public property and to abjure violence;
- to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement;
- <sup>1</sup>(k) to provide opportunities for education to his/her child or, as the case may be, ward between age of 6 and 14 years.

1. Subs, by the Constitution (Eighty-Sixth Amendment) Act. 2002.



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# Curtain Raiser



Do you remember us? We are Uday and Roshni. We met you in Handbook for Students. In that Handbook, we got to know how to ready ourselves for the 21st Century.

We are again with you. This time we have brought a ready reckoner on 21st Century Skills for all of you.

We studied a lot, researched various digital resources and prepared this ready reckoner.

DISCLAIMER: ALL READERS MAY PLEASE NOTE THAT WE HAVE USED SEVERAL FACTS, CARTOONS AND IMAGES, WHICH HAVE BEEN TAKEN FROM VARIOUS SOURCES ON THE INTERNET. ALL THESE HAVE BEEN USED BY US FOR EDUCATIONAL PURPOSES ONLY, AND NOT FOR ANY KIND OF COMMERCIAL USE. WE ARE GRATEFUL TO THE CREATORS OF THESE FACTS, IMAGES AND CARTOONS AND GRATEFULLY ACKNOWLEDGE THEIR CONTRIBUTION.



## CHAPTER 1



# INTRODUCTION

Let us begin by asking a question to ourselves! What or who is the centre of all activities in a society, a nation and the world? Is it not by an individual, for an individual? Yes! It is so because all actions are taken by an individual, for another or for self. This means that an individual is the nucleus of everything that happens or is done. And, therefore, the development of a society, a nation and the world go hand-in-hand with the development of an individual. When a society/ nation/ world develops, this has a direct impact upon the development of an individual and vice-versa.

With the onset of the 21<sup>st</sup> century, the entire world has witnessed an era of intense transformation in all areas, whether it is education, global trade and economy, technology or society. Recently, the covid-19 pandemic is also throwing up challenges for an individual to cope with its impacts. Naturally, for such times, a different skill-set is required that would enable an individual to cope-up and succeed in facing the challenges in real-life, leading to his holistic progress. These skills are addressed as **21<sup>st</sup> Century Skills/ Learning Skills/ Transversal Competencies etc.**

Thus, the 21<sup>st</sup> Century Skills are the skills that are required by an individual for his/ her holistic development so that he/she can contribute to the progress and development of his society/ nation and world.

Empowering our students with these skills is another challenging task, which the Board is committed to accomplish. While the Board has already adopted and initiated several innovative policies and practices to empower our students with the 21<sup>st</sup> century skills, it is required that all CBSE stakeholders should not only have a clear understanding of them, but also collectively collaborate

towards attaining the 21<sup>st</sup> century skills in each learner. The present Handbook on 21<sup>st</sup> Century Skills has been prepared with the same aim.

*Do we remember all the marks that we scored in class 1, 2, 3, 4, 5, 6, 7, 8 and so on? Some of the greatest and most successful people were neither 'A graders', nor do they care enough about it to try and remember their graders either.*

*But we do remember the incidents/ experiences that we had in school/ in market/ with friends/in travels, because those experiences have given us various skills and have made us what we are today. In fact, more the skills we gain through our experiences, the better the human beings we become.*

## CHAPTER 2



## 21<sup>ST</sup> CENTURY SKILLS

## 2.1. Meaning of 21<sup>st</sup> Century Skills

The Glossary of Education defines 21<sup>st</sup> Century Skills<sup>1</sup> as follows:

*“The term 21<sup>st</sup> century skills refers to a broad set of knowledge, skills, work habits, and character traits that are believed—by educators, school reformers, college professors, employers, and others—to be critically important to success in today’s world.”*

In simple terms, 21<sup>st</sup> Century Skills refer to the skills that are required to enable an individual to face the challenges of the 21<sup>st</sup> century world that is globally-active, digitally transforming, collaboratively moving forward, creatively progressing, seeking competent human-resource and quick in adopting changes.

## 2.2. Background Literature Review

Since the beginning of life on earth, understanding of the skills to survive and live began. Survival of the fittest itself tells us the importance of Life Skills. Over the last twenty five years, several institutions and international organisations have proposed frameworks and outlined competencies needed to address twenty- first century challenges.

- **The Delors Report (1996)** produced by the International Commission on Education for the Twenty-first Century proposed one of the first frameworks

to identify competencies needed in the coming century. The Delors Report also formulated four principles identified as the Four Pillars of Education: *Learning to Know, Learning to Do, Learning to Be and Learning to Live Together.*<sup>2</sup>

- **Wagner (2010) and the Change Leadership Group<sup>3</sup>** at Harvard University identified another set of competencies and skills. Informed by several hundred interviews with business, non- profit and education leaders, Wagner stressed that students need seven survival skills to be prepared for twenty-first century life, work and citizenship:
  - ✓ Critical thinking and problem solving
  - ✓ Collaboration and leadership
  - ✓ Agility and adaptability
  - ✓ Initiative and entrepreneurialism
  - ✓ Effective oral and written communication
  - ✓ Accessing and analysing information
  - ✓ Curiosity and imagination
- **The Asia-Pacific Economic Cooperation (APEC)** has identified the development of twenty-first century competencies among youth as a ‘pressing international concern’. These competencies are defined as the knowledge, skills and attitudes necessary to be competitive in the

---

<sup>1</sup> [https://www.edglossary.org/21<sup>st</sup>-century-skills/](https://www.edglossary.org/21st-century-skills/) accessed on 13.03.2020

<sup>2</sup> Adapted from UNESCO Working Paper ‘The Future of Learning 2)

<sup>3</sup> Adapted from UNESCO Working Paper ‘The Future of Learning 2)

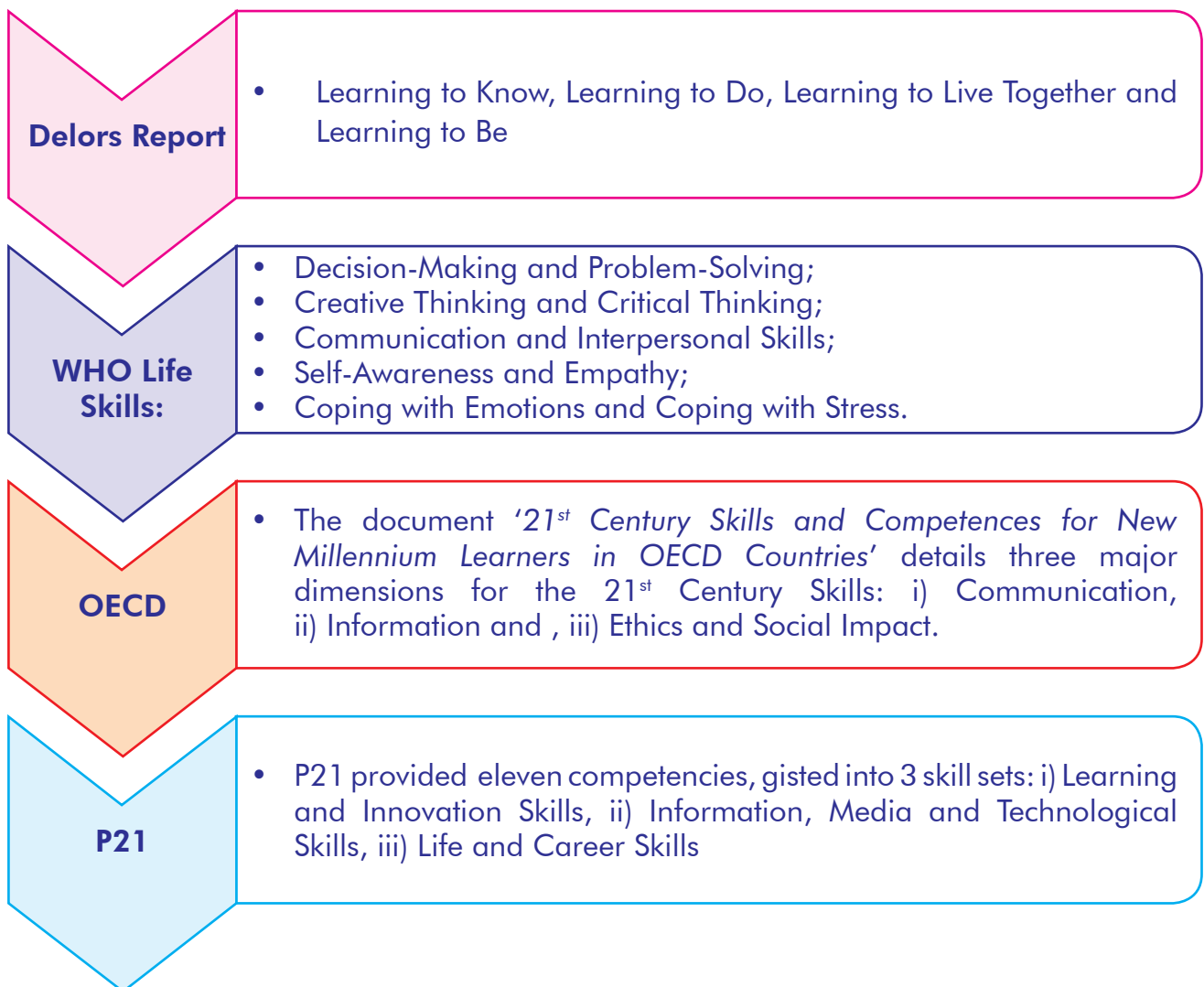


twenty-first century workforce to participate appropriately in an increasingly diverse society, use new technologies and cope with rapidly changing workplaces.

- **Partnership for 21<sup>st</sup> Century Skills (P21)**, a coalition of business leaders and educators, proposed a *Framework for 21<sup>st</sup> Century Learning*, identified essential competencies and skills vital for success in twenty-first century work and life (P21, 2007a, 2011). These included 'The 4Cs' – *communication, collaboration, critical thinking* and

*creativity*, which are to be taught within the context of core subject areas and twenty-first century themes. This framework is based on the assertion that twenty-first century challenges will demand a broad skill set emphasizing core subject skills, social and cross-cultural skills, proficiency in languages other than English, and an understanding of the economic and political forces that affect societies.<sup>4</sup>

Thus, when we chart the historical development, the following major developments emerge:



<sup>4</sup> Adapted from UNESCO Working Paper 'The Future of Learning 2)

### ATCS

- ATCS categorized 21<sup>st</sup> century skills into four types: i) Ways of Thinking, ii) Ways of Working, iii) Tools for Working and, iv) Living in the World.

### UNESCO Working Paper

- Revisited and divided all above -researched Skills into Learning to Know, Learning to Do, Learning to Live

## CHAPTER 3

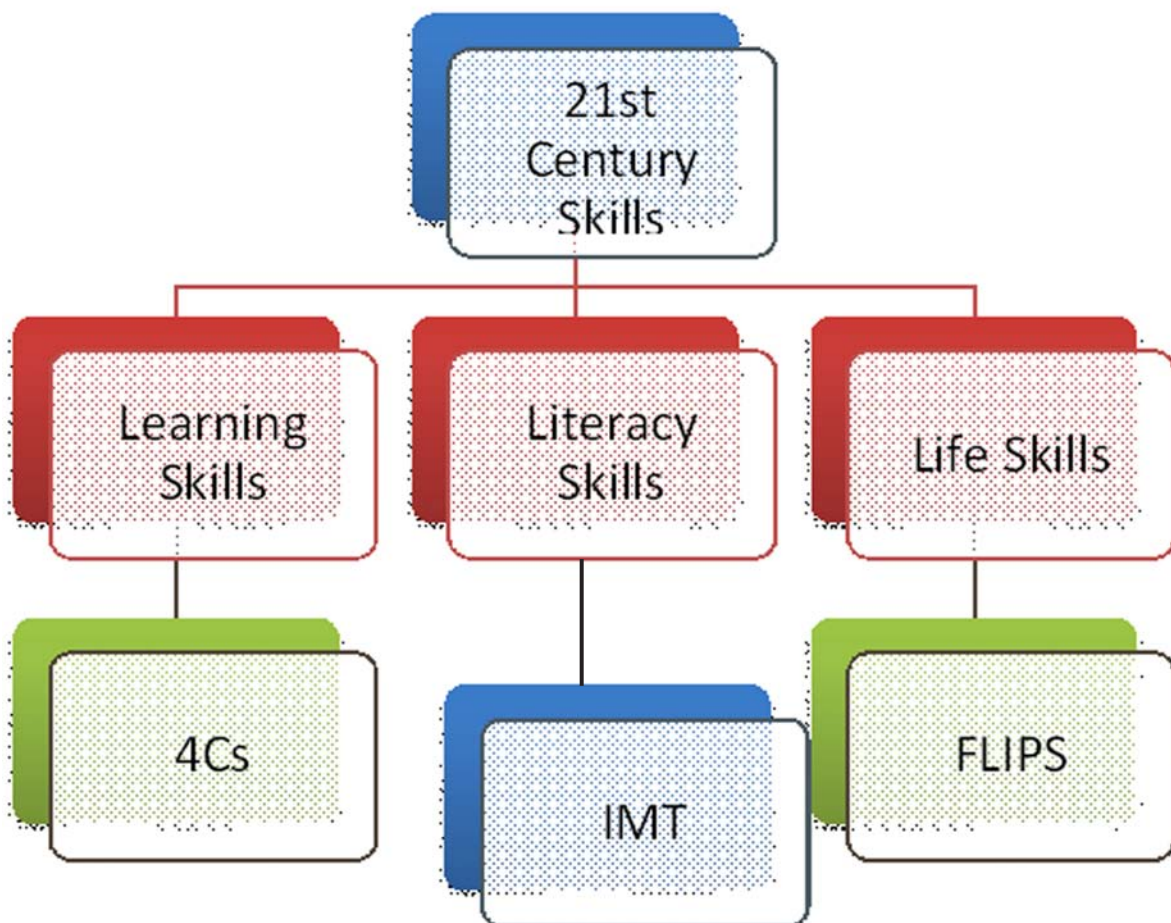


**COMPONENTS OF  
21<sup>ST</sup> CENTURY SKILLS  
3 Ls : 4Cs, IMT, FLIPS**

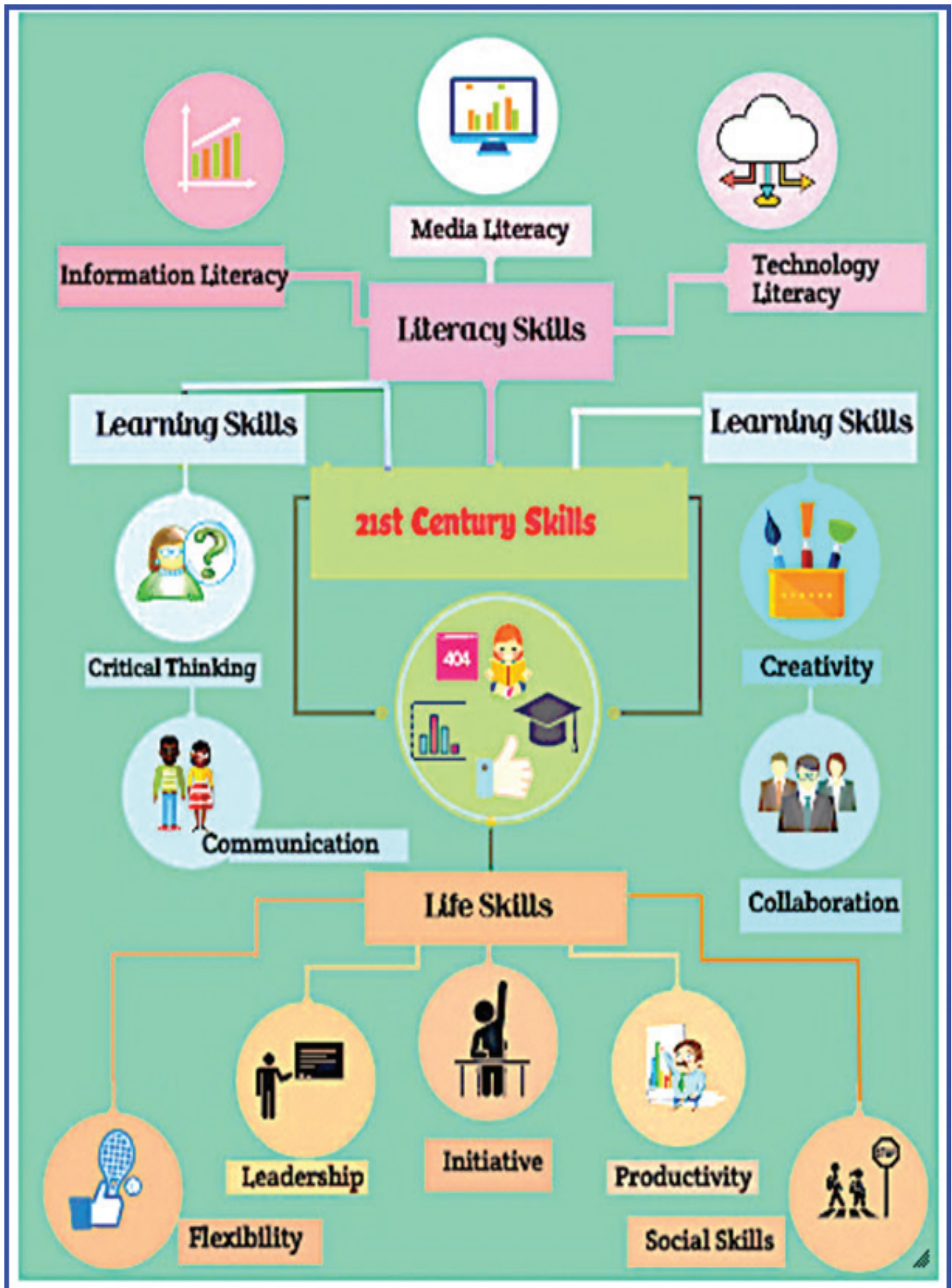
On the basis of the historical development of 21<sup>st</sup> Century Skills, it can be stated that 21<sup>st</sup> century skills broadly consist of three main skill sets or 3 Ls - namely, **Learning Skills, Life Skills and Literacy Skills.**

- **Learning Skills:** skills required for the acquisition of new knowledge.
- **Literacy Skills:** skills that help in creating and gaining new knowledge through reading, media and digital resources
- **Life Skills:** skills required for successfully leading everyday life.

### 3.1. An easy way to understand and remember the classification is



- **4Cs:** **C**ritical Thinking, **C**reativity & Innovation, **C**ollaboration, **C**ommunication
- **IMT:** **I**nformation Literacy, **M**edia Literacy, **T**echnology Literacy
- **FLIPS:** **F**lexibility and Adaptability, **L**eadership and Responsibility, **I**nitiative and Self-Direction, **S**ocial and Cross-Cultural Interaction



Please note that this is not an exhaustive list. There are more as given ahead.

### 3.2. Definitions

S.NO.	SKILL	DEFINITION
1.	<b>Critical Thinking and Problem Solving</b>	<p><b>Critical Thinking</b> is the capability of objective analysis of information and includes the following qualities:</p> <ul style="list-style-type: none"> <li>• fairness and open-mindedness;</li> <li>• activeness and being informed;</li> <li>• willingness to question or to entertain doubts;</li> <li>• being independent.</li> <li>• recognizing and assessing values, peer pressure and the media influences (for a creative understanding of critical thinking, refer to CBSE’s comic book ‘Cogito’)</li> </ul> <p><b>Problem Solving</b> is the skill of:</p> <ul style="list-style-type: none"> <li>• identifying the relevant piece of information when faced with a mass of data (most of which is irrelevant),</li> <li>• discarding information that may not be useful to give new information, and finally,</li> <li>• relating one set of information to another in a different form by using experience, relating new problems to ones we have previously solved.</li> </ul>
2.	<b>Creativity And Innovation</b>	<p>These are the skills to explore and create fresh ways of thinking. <b>Creativity</b> refers to new way of seeing or doing things and includes four components:</p> <ul style="list-style-type: none"> <li>• fluency (generating new ideas),</li> <li>• flexibility (shifting perspective easily),</li> <li>• originality (conceiving of something new), and</li> <li>• elaboration (building on others' ideas).</li> </ul> <p><b>Innovative Skills</b> mean skills for thinking creatively to develop something new/ unique / improved / distinctive.</p>



3.	<b>Collaboration</b>	<b>Collaboration</b> is the ability to effectively work together with others. This skill involves working together while taking actions respecting others' needs and perspectives and contributing to and accepting the finale. Collaboration helps to develop interest and fun in the teaching learning process. It effectively broadens the cultural, social, and environmental boundaries and helps a child to understand social and environmental concerns better.
4.	<b>Communication</b>	<b>Communication</b> refers to the ability to express one's opinions, desires, needs, apprehensions etc. oneself appropriately, verbally and non-verbally.
5.	<b>Information Literacy, Media Literacy, Technology Literacy</b>	These skills involve the ability to <b>access information</b> (traditional or digital), <b>media and technology</b> , to understand and critically evaluate different aspects of content and information and create and communicate effectively.
6.	<b>Flexibility And Adaptability</b>	<b>Flexibility and Adaptability</b> refer to a person's ability to change his actions and steps taken by him according to a new situation, and efficiently facing an unprecedented situation, without compromising on ethics and values.  <b>Adaptability</b> can be defined as creating modifications or changes in oneself to suit the new environment. For students, these can be understood as the skills required to be flexible and adaptive to the situations around them and find the best possible solution to go forward despite adverse conditions.
7.	<b>Leadership And Responsibility</b>	<b>Leadership</b> is the ability to lead a team and be capable of effective team management in relation to real world challenges. These skills teach a child how to support the development of key personal qualities such as perseverance, being committed and responsible, resilience and self-confidence and how to foster a commitment to life-long learning.

		Being <b>Responsible</b> means being a good and effective/sensitive citizen. Be aware of the important social and national issues that may have an impact on our daily lives both as a human-being and as a student, be aware of the important social and national issues that may have an impact on lives in future both as a human-being and as a student, be aware of our fundamental duties and rights and embed the core democratic values of India and strive to live by them.
8.	<b>Initiative And Self-Direction</b>	<b>Initiation</b> skill involves the ability to begin a task independently. It helps the child to build his/her own path of development.  <b>Self-direction</b> is a skill to work with integrity on self-motivation and taking initiatives.
9.	<b>Productivity And Accountability</b>	<b>Productivity</b> in the student can be understood as fulfilment of any task within a given time period.  <b>Accountability</b> can be understood as feeling responsible for any task done. Developing these skills in a student helps him/her to work effectively and also make him/her reliable for other peers by being accountable for his/her actions.
10.	<b>Social And Cross-Cultural Interaction</b>	These are the skills to communicate, work collaboratively and effectively in diverse social and cultural environments

Please note :“There is no single widely-accepted definition of ‘21<sup>st</sup> Century Skills’.”<sup>5</sup>

<sup>5</sup> [https://www.cambridgeassessment.org.uk/Images/461811-the-cambridge-approach-to-21<sup>st</sup>-century-skills-definitions-development-and-dilemmas-for-assessment-.pdf](https://www.cambridgeassessment.org.uk/Images/461811-the-cambridge-approach-to-21st-century-skills-definitions-development-and-dilemmas-for-assessment-.pdf)

## CHAPTER 4



# NEED OF 21<sup>ST</sup> CENTURY SKILLS

## 4.1. Why do we need 21<sup>st</sup> Century Skills?

- ✓ Learning is complete and holistic only when a student is able to effectively perform and fulfil his/her responsibilities and duties towards self, school, family, society and above all, the nation. The goal is to enable today's student to be a good citizen and a responsible human-being who is well-aware of his potential and competence.
- ✓ Simply teaching to test or learning for exams is not going to help a student face everyday life situations. 21<sup>st</sup> Century Skills are key to the empowerment of Children and adolescents to deal with the issues and concerns related to their life. They experience a number of feelings, many of which are related to their growth and development from childhood to adolescence and beyond.
- ✓ These are important for Children with Special Needs for developing their independence in their home, school, and community environments.

Andreas Schleicher, OECD Education Directorate, 2010<sup>6</sup> explains the need for 21<sup>st</sup> century skills as follows:

*“Today, because of rapid economic and social change, schools have to prepare students for jobs that have not yet been created, technologies that have not yet been invented and problems that we don't yet know will arise.”*

## 4.2. National Curriculum Framework on Life Skills (one of the components of 21<sup>st</sup> Century Skills)

Life Skills are one of the components of 21<sup>st</sup> Century Skills. We shall deal with these in detail in the following sections. The need of Life Skills is also stated in the National Curriculum Framework (2005). We have already seen above that Life Skills constitute an important part of the 21<sup>st</sup> Century Skills. The importance of the integration of Life Skills can be seen in the following excerpts from the National Curriculum Framework (2005):

- *“Development of life skills such as **critical thinking skills, interpersonal communication skills, negotiation/refusal skills, decision making/problem solving skills and coping and self-management skills** is/are also very critical for dealing with the demands and challenges of everyday life.”*
- *“The process of **acquiring a sense of self** is linked to physiological changes, and also **learning to negotiate the social and psychological demands of being young adults**. **Responsible handling** of issues like independence, intimacy, and peer group dependence are concerns that need to be recognized and*

<sup>6</sup> [https://www.cambridgeassessment.org.uk/Images/461811-the-cambridge-approach-to-21<sup>st</sup>-century-skills-definitions-development-and-dilemmas-for-assessment-.pdf](https://www.cambridgeassessment.org.uk/Images/461811-the-cambridge-approach-to-21st-century-skills-definitions-development-and-dilemmas-for-assessment-.pdf) accessed on 14.03.2020

appropriate support be given to cope with them.”

- “It is important to recognize that adolescents need social and emotional support that may require reinforcement of norms of positive behaviour, development of life skills essential to cope with the risky situations that they encounter in their

lives, manage peer pressure and deal with gender stereotypes.”

- Health & Physical Education has the potential to motivate learners to acquire generic skills like agility, balance coordination and life skills, especially critical and creative thinking, communication, problem solving, decision making, management of emotions and stress.

### 4.3. Need and Inter-Connectedness of 21<sup>st</sup> Century Skills at Various Age-Levels

An individual’s needs of skill-sets vary at different age-levels. Skills required by an adolescent may differ from the ones required by a pre-teen. However, one important point to note is that, whatever may be the age level, an individual’s personality develops through effective inculcation of 21<sup>st</sup> century skills, and all these skills are inseparable and develop in cohesion with each other. For example, *Social Skill* is a part of *Life Skills* and *Communication* comes under *Learning Skills*. But development of Social Skills will be incomplete without developing effective Communication Skills; similarly, a creative person is more likely to be self-directed and innovative and research has also proven that Innovations are often done through Collaboration. An article published on Research Gate states, “IT-endowed

collaboration within and between groups will catalyze creativity, which in turn will facilitate multidisciplinary innovation.”<sup>7</sup>

This inter-connectedness of skills at different age-levels is evident from the detailed table given below. This table is in fact prepared on the basis of the recommendations stated in the NCF (2005) and several discussions<sup>8</sup> held at various forums. These discussions have centered around: *What Core Skills are required at what age and what other 21<sup>st</sup> Century Skills aid the development of the Core Skills?* These Core Skills are actually the Core Life Skills given by WHO in 1999 which have also been adopted by CBSE in its Life Skills Programme.

This table delineates the mutual-connectedness of Core Life Skills and other components of the 21<sup>st</sup> Century Skills for the development of an individual’s self at various age-levels.

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<sup>7</sup> [https://www.researchgate.net/publication/220474984\\_Creativity\\_Innovation\\_and\\_E-Collaboration](https://www.researchgate.net/publication/220474984_Creativity_Innovation_and_E-Collaboration) accessed on 14.03.2020

<sup>8</sup> MHRD Chintan Shivir on Life Skills

Age	Dimensions of Self of an Individual	Core Life Skills	21 <sup>st</sup> Century Skills	Learning Outcomes
3-5 Years	Understanding and Expressing Self	Self- Awareness	Communication	<ul style="list-style-type: none"> <li>Identifies parts of human body</li> <li>Expresses needs and emotions</li> <li>Demonstrates personal hygiene</li> <li>Recognizes safe and unsafe touch</li> <li>Seeks help</li> </ul>
	Enhancing Self	Problem solving	Critical Thinking, Communication	<ul style="list-style-type: none"> <li>Solves problems by demonstrating curiosity, exploration and observation</li> </ul>
	Building and Maintaining Relationships	Managing Emotions	Communication, Social Skills, Creative Thinking, Flexibility	<ul style="list-style-type: none"> <li>Approaches and responds to people beyond primary caregiver</li> <li>Interacts with objects in the environment</li> </ul>
Age	Dimensions of Self	Core Life Skills	21 <sup>st</sup> century Skills	Learning Outcomes
6-10 Years	Understanding and Accepting Self	Self-Awareness, Effective Communication, Decision making	Critical Thinking	<ul style="list-style-type: none"> <li>Demonstrates positive view of self</li> <li>Demonstrates positive body image and celebrates oneself</li> <li>Identifies what s/he is good at and where help is required</li> <li>Recognizes gender stereotypes</li> </ul>

	Managing and Expressing Self	Self-Awareness, Effective Communication, Managing Emotions, Critical thinking, Decision Making, Problem Solving	Social Skills, Adaptability	<ul style="list-style-type: none"> <li>• Demonstrates healthy habits</li> <li>• Identifies needs and emotions</li> <li>• Expresses needs and emotions assertively</li> <li>• Respects boundaries for self and others</li> <li>• Differentiates between safe and unsafe behaviours</li> <li>• Participates in staying safe</li> </ul>
	Enhancing Self	Self -Awareness, Effective Problem Solving	Social Skills, Communication, Critical Thinking, Creative Thinking	<ul style="list-style-type: none"> <li>• Explores their area of interest</li> <li>• Represents ideas using expressive Forms</li> <li>• Participates in class activities involving speaking in front of groups</li> <li>• Participates in group activities using interaction skills</li> <li>• Takes responsibilities in classroom activities</li> </ul>
	Building and Maintaining Relationships	Empathy, Interpersonal Relationships, Problem Solving	Critical Thinking, Creative Thinking, Communication, Initiative	<ul style="list-style-type: none"> <li>• Demonstrates understanding of others' viewpoints and emotions</li> <li>• Respects differences and diversity</li> <li>• Demonstrates alignment with collective goals</li> <li>• Contributes in achievement of collective goals</li> </ul>



				<ul style="list-style-type: none"> <li>• Exhibits sharing and caring behaviour towards family and friends</li> <li>• Cares for the environment</li> </ul>
Age	Dimensions of Self	Core Skills	21 <sup>st</sup> Century Skills	Learning Outcomes
11-13 Years	Understanding and Accepting Self	Decision Making, Self-Awareness, Problem Solving	Critical Thinking, Creative Thinking, Social Skills, Effective Communication,	<ul style="list-style-type: none"> <li>• Describes physical, psychological and socio-emotional changes in self and peers</li> <li>• Demonstrates comfort with changes during adolescence</li> <li>• Explains strategies to enhance strengths and improve upon weaknesses</li> <li>• Expresses what s/he values about oneself</li> </ul>
	Managing and Expressing Self	Self-Awareness, Managing Emotions, Decision Making, Problem Solving, Empathy	Communication, Creative Thinking, Social Skills, Critical Thinking, Information/Technology/Media Literacy	<ul style="list-style-type: none"> <li>• Displays healthy habits consistently</li> <li>• Demonstrates healthy expression of needs, thoughts and emotions</li> <li>• Demonstrates ownership of one's actions</li> <li>• Manages expectations of self and others to prevent stress</li> <li>• Discerns different influences (peers, media) and makes informed and responsible choices</li> </ul>

				<ul style="list-style-type: none"> <li>• Identifies online and offline safe and unsafe situations</li> <li>• Practices safety guidelines for self and others</li> <li>• Participates in staying safe</li> <li>• Accesses support systems when needed</li> <li>• practice responsible use of social media</li> </ul>
	Enhancing Self	Self-Awareness, Decision Making, Problem Solving, interpersonal Relationships, empathy,	Communication, Creative thinking, Critical Thinking, Flexibility, Initiative, Productivity	<ul style="list-style-type: none"> <li>• Exhibits readiness to work and interact with diverse groups</li> <li>• Demonstrates multiple constructive roles in diverse settings</li> <li>• Participates in interest-based projects demonstrating innovation and creativity</li> <li>• Manages routines and resources</li> </ul>
	Building and Maintaining Relationships	Self-Awareness, Managing Emotions, Empathy, Interpersonal Relationships, , Decision Making, Problem Solving	Critical Thinking, Effective Communication, Creative Thinking	<ul style="list-style-type: none"> <li>• Identifies and builds positive relationships</li> <li>• Identifies harmful relationships</li> <li>• Deals effectively with harmful relationships to reduce/minimize harm</li> <li>• Builds harmonious relationships with friends, family and environment</li> </ul>

				<ul style="list-style-type: none"> <li>• States commonalities with the group and individual uniqueness</li> <li>• Identifies stereotypes and stigmas in day to day life</li> <li>• Questions and challenges the stigmas and stereotypes and builds arguments around it</li> <li>• Identifies causes of conflicts and responds appropriately</li> <li>• Make responsible decisions about sexual behaviour</li> </ul>
Age	Dimensions of Self	Core Skills	21 <sup>st</sup> Century Skills	Learning Outcomes
14-18 Years	Understanding and Accepting Self	Self-Awareness, Decision making, Problem Solving, Managing Emotions, Empathy	Social Skills Critical Thinking, Creative Thinking, Communication, Information/Technology/ Media Literacy	<ul style="list-style-type: none"> <li>• Relates to various experiences of growing up that have contributed to their development</li> <li>• Demonstrates and expresses comfort with all aspects of their personality (<i>including individual differences</i>)</li> <li>• Accesses information and analyzes it to distinguish between facts and myths</li> <li>• Questions/ Challenges myths and demonstrate behaviour informed by scientific thinking</li> <li>• Demonstrates individual and social identity that s/he values</li> </ul>

	Managing and Expressing Self	Empathy, Self-Awareness, Managing Emotions, Problem Solving, Inter-personal relationships	Critical Thinking, Communication, Creative Thinking	<ul style="list-style-type: none"> <li>• Makes healthy choices related to hygiene, nutrition and physical activity</li> <li>• Analyzes different influences and makes informed and responsible choices (<i>in the interest of self and others</i>)</li> <li>• Demonstrates skills to manage emotions effectively</li> <li>• Minimizes stress by identifying and delivering on realistic expectations</li> <li>• Recognizes, resists, challenges, seeks help, reports concerns and incidents of safety and security related to self and others</li> <li>• Analyzes thoughts and does not engage in behaviours that compromise safety and security of self and others</li> <li>• Demonstrates responsible behaviours that minimize risk and reduce harm</li> <li>• Accesses and provides support individually and collectively when required</li> </ul>
	Enhancing Self	Self-Awareness, Decision Making, Problem Solving, Interpersonal Relationships, Empathy	Communication, Creative Thinking, Critical Thinking	<ul style="list-style-type: none"> <li>• Exhibits personal and interpersonal skills necessary for independent living</li> </ul>

				<ul style="list-style-type: none"> <li>• Identifies goals, motivates self, plans and manages resources to achieve them</li> <li>• Motivates self and team members to achieve shared goals</li> <li>• Exhibits language to communicate about their skills, knowledge and career potential.</li> </ul>
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## CHAPTER 5



# IMPLEMENTATION AND OUTCOMES OF 21<sup>ST</sup> CENTURY SKILLS



## 5.1. Various Frameworks

The 21<sup>st</sup> Century skills are essentially the outcome of experiential learning, i.e. they are imbibed through observing, understanding, practising and experiencing. Before beginning details about the implementation of these skills in the teaching-learning process, let us understand what various frameworks propound in this area. The following literature-review brings forth a few important points:

- ✓ Ackerman and Perkins (1989)<sup>9</sup> have suggested teaching thinking skills as a “meta-curriculum” blended with core subjects. Students would be given a far more coherent set of learning experiences—they would know why they were being taught various “skills,” and they would know better how to mobilize themselves to make sense of curriculum content.
- ✓ Tucker and Coddling of the US-based National Center on Education and the Economy (1998) have advised to adopt such a curriculum that provides deeper understanding of the subject and the ability to apply that understanding to the complex, real-world problems that the student will face as an adult<sup>10</sup>.
- ✓ The US-based Partnership for 21<sup>st</sup> Century Skills, a coalition of business

leaders and educators, proposed a *Framework for 21<sup>st</sup> Century Learning*, which identified essential competencies and skills vital for success in twenty-first century work and life. This framework is based on the assertion that *twenty-first century challenges will demand a broad skill set emphasizing core subject skills, social and cross-cultural skills, proficiency in languages other than English, and an understanding of the economic and political forces that affect societies*<sup>11</sup>.

*Assessment and Teaching of 21<sup>st</sup> Century Skills (ATC21S project 2013)*<sup>12</sup>: The international collaboration among academics, governments and three major technology companies (ATC21S 2013) researchers concluded that 21<sup>st</sup> Century skills can be grouped into four broad categories: (i) ways of thinking; (ii) ways of working; (iii) tools for working; and (iv) skills for living in the world (Binkley, Erstad, Herman, Raizen, Ripley and Rumble, 2010). Within these categories, they identified ten skills as encapsulating all others and accommodating all approaches. In particular, problem-solving, and ICT operations and concepts, are listed by all organisations in the following table. Communication, collaboration, and information literacy.

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<sup>9</sup> <http://www.ascd.org/publications/books/61189156/chapters/Integrating-Thinking-and-Learning-Skills-Across-the-Curriculum.aspx> accessed on 14.03.2020

<sup>10</sup> [https://unesdoc.unesco.org/ark:/48223/pf0000242996\\_pp2-3](https://unesdoc.unesco.org/ark:/48223/pf0000242996_pp2-3) accessed on 14.03.2020

<sup>11</sup> [https://unesdoc.unesco.org/ark:/48223/pf0000242996\\_pp2-3](https://unesdoc.unesco.org/ark:/48223/pf0000242996_pp2-3) accessed on 14.03.2020

<sup>12</sup> The Cambridge approach to 21<sup>st</sup> Century skills: definitions, development and dilemmas for assessment IAEA Conference, Singapore, 2014, Irenka Suto and Helen Eccles, Cambridge Assessment

## Categorisation of 21<sup>st</sup> Century Skills : Various Frameworks

ATC21S		21 <sup>st</sup> C skills reviewed by ATC21S			
21 <sup>st</sup> Century skill category	21 <sup>st</sup> century skills	Partnership for 21 <sup>st</sup> C skills (2013)	Lisbon Council (2007)	ISTE NETS (2013)	ETS Skill (2013)
Ways of thinking	Creativity & innovation	Creativity & innovation		Creativity & innovation	Creativity & innovation
	Critical thinking, Problem solving, Decision making	Critical thinking, Problem solving, Decision making	Problem solving	Critical thinking, Problem solving, Decision making	Critical thinking, Problem solving
	Learning to learn, metacognition				
Ways of working	Communication	Communication		Communication	Communication
	Collaboration	Collaboration	Collaboration		Collaboration
Tools for working	Information literacy	Information literacy, Media literacy	Information literacy	Information literacy	Information literacy
ICT literacy	ICT operation and concepts	ICT operation and concepts	ICT operation and concepts	ICT operation and concepts	ICT operation and concepts
Living in the world	Citizenship				
	Life and career	Initiative, Flexibility, Leadership	Flexibility, Adaptability		Initiative, Self-direction
	Personal and Social Responsibility				

Thus, the above literature brings forth the two elements essential for the implementation of 21<sup>st</sup> Century Skills in the teaching-learning process. These are: Core Subjects/Areas and 21<sup>st</sup> Century Themes:

**5.1.1. Core Areas:** These include Native Language/Reading, World Language(s) including English, Arts, Geography, History, Mathematics, Science, Government/Civics.

### 5.1.2. 21<sup>st</sup> Century Themes

#### 5.1.2.1. Global Awareness

- ✓ Learn from and work in collaboration with individuals from diverse cultures, countries, religion etc.
- ✓ Mutual respect everywhere and all communication/conversation

- ✓ Understand other cultures and languages from other nations

#### 5.1.2.2. Financial, Economic, Business and Entrepreneurial Literacy

- ✓ Making appropriate personal economic selections
- ✓ Knowing the role of the economy in everyday life
- ✓ Enhancing productivity and career options.

#### 5.1.2.3. Civic Literacy

- ✓ Effective participation in Civic Life
- ✓ Staying informed about Governmental systems and processes
- ✓ Exercising the rights and duties of

being a responsible citizenship at local, state, national and global levels.

- ✓ Understanding national and international implications of civic decisions.

#### 5.1.2.4. Health Literacy

- ✓ Awareness and understanding about basic health, safety and services related to that and using that to improve health
- ✓ Knowledge and understanding of holistic wellbeing, including proper diet, nutrition, exercise and being stress - free
- ✓ Using available information to make appropriate health-related decisions.
- ✓ Establish and monitor personal and family health goals.

#### 5.1.2.5. Environmental Literacy

- ✓ Knowledge and understanding of the environment and the circumstances and conditions that affect;

- ✓ Awareness about the impact of everyday life and actions, like rising pollution, population etc. on the nature

- ✓ Investigate and analyze issues affecting environment to reach proper conclusion and solutions

- ✓ Individually and collectively acting for addressing issues and challenges related to environment

**This actually means framing and implementing curricula having:**

- ✓ 21<sup>st</sup> century skills, core subjects and 21<sup>st</sup> century themes blended in to teaching-learning;

- ✓ comprehensiveness as well as flexibility;

- ✓ content that promotes thinking and reasoning;

- ✓ freedom for learner's input and is interdisciplinary



The above framework presents the implementation framework with a meta-curriculum wherein the curriculum,

pedagogy, learning environment, and assessments are woven around Core Subjects and 21<sup>st</sup> Century themes.

## 5.2. Broad Outcomes of 21<sup>st</sup> Century Skills

S.NO.	SKILL	OUTCOMES
1.	Critical Thinking	<ol style="list-style-type: none"> <li>1. <b>Effective reasoning</b> <ul style="list-style-type: none"> <li>✓ Being able to use reasoning appropriate to the situation</li> </ul> </li> <li>2. <b>Using Systems and Preocess with Intelligent and Rational Thinking</b> <ul style="list-style-type: none"> <li>✓ Analyze how various parts of a system/ process unite/complement each other for a complete picture</li> </ul> </li> <li>3. <b>Judging and Taking Decision on an issue after proper evaluation of evidences, claims, arguments etc.</b> <ul style="list-style-type: none"> <li>✓ Analyze and evaluate various perspectives</li> <li>✓ Making correlation between various types of information available</li> <li>✓ Interpret the available information and form conclusions after effective analysis</li> <li>✓ Reflect the pros and cons of experiences to solve problems</li> <li>✓ Devise innovative solutions of different kinds of non-familiar problems</li> <li>✓ Identify and ask relevant and vital questions to bring forth various perspectives and for getting better solutions</li> </ul> </li> </ol>
2	Creativity And Innovation	<ol style="list-style-type: none"> <li>1. <b>Think Creatively</b> <ul style="list-style-type: none"> <li>✓ Use various techniques for creating and evolving new ideas (such as brainstorming)</li> <li>✓ Use all available concepts to create or conceive &amp; perceive novel and useful ideas</li> <li>✓ Elaborate, refine, analyze and evaluate ideas to improve one's own creative efforts</li> </ul> </li> </ol>

		<p><b>2. Work Creatively with Others</b></p> <ul style="list-style-type: none"> <li>✓ Develop, implement and communicate new ideas to others</li> <li>✓ Be open and responsive to diversity</li> <li>✓ incorporate group input and feedback into the work</li> <li>✓ understand the practical limits for adopting new ideas</li> <li>✓ Treat failure as an opportunity to learn and improve</li> </ul> <p><b>3. Implement Innovations</b></p> <ul style="list-style-type: none"> <li>✓ Implement creative ideas for a useful contribution</li> </ul>
3	<b>Collaboration</b>	<p><b>Collaborate with Others</b></p> <ul style="list-style-type: none"> <li>✓ Ability to work effectively and respectfully in diverse scenarios</li> <li>✓ Be adaptable to accomplish a common goal</li> <li>✓ Assume shared responsibility for collaborative work, and value the individual contributions made by each team member</li> </ul>
4	<b>Communication</b>	<p><b>Communicate Clearly</b></p> <ul style="list-style-type: none"> <li>✓ Effective oral, written and nonverbal communication in a variety of forms and diverse social, cultural, linguistic contexts</li> <li>✓ Listening effectively to infer meaning</li> <li>✓ Use communication for a variety of purposes and functions</li> <li>✓ Use several forms of media and technologies and know their effectiveness</li> </ul>
5	<b>Information Literacy, Media Literacy, Technology Literacy</b>	<p><b>1. Information Literacy</b></p> <ul style="list-style-type: none"> <li>✓ Efficiently and critically access and evaluation of Information</li> <li>✓ Use information accurately and creatively for resolving issue or problem</li> </ul>

		<ul style="list-style-type: none"> <li>✓ Manage the flow of information from a wide variety of sources</li> <li>✓ Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information</li> </ul> <p><b>2. Media Literacy</b></p> <ul style="list-style-type: none"> <li>✓ Understand the preparation and purpose of media messages</li> <li>✓ Examine various manners/ways of interpreting messages</li> <li>✓ Understand the ethical/legal issues regarding the access and use of media</li> <li>✓ Understand and utilize the most appropriate media creation tools, characteristics and conventions</li> <li>✓ Understand and effectively utilize the most appropriate expressions and interpretations in diverse, multi-cultural environments</li> </ul> <p><b>3. Technology Literacy</b></p> <ul style="list-style-type: none"> <li>✓ Use technology as a tool to research, organize, evaluate and communication information</li> <li>✓ Use digital technologies, communication networks, and tools to access, manage, integrate, evaluate and create information for functioning in the real life</li> </ul>
6	<b>Flexibility And Adaptability</b>	<p><b>1. Ready to Change</b></p> <ul style="list-style-type: none"> <li>✓ Adapt to varied and multiple roles, jobs responsibilities, schedules and contexts</li> <li>✓ Work effectively in scenarios of changing priorities</li> </ul> <p><b>2. Be Flexible</b></p> <ul style="list-style-type: none"> <li>✓ Incorporate feedback effectively</li> <li>✓ Deal positively with praise, setbacks and criticism</li> <li>✓ Understand, negotiate and balance diverse views and beliefs to get solutions, particularly in multi-cultural environments</li> </ul>



7	Leadership And Responsibility	<ol style="list-style-type: none"> <li>1. <b>Lead while Guiding</b> <ul style="list-style-type: none"> <li>✓ Use interpersonal and problem-solving skills to influence and guide others toward a goal</li> <li>✓ Involve strengths of others to accomplish a common goal</li> <li>✓ Inspire others to attain their best by example</li> <li>✓ Demonstrate integrity and ethical behaviour in using influence and power</li> </ul> </li> <li>2. <b>Be Responsible to Everyone</b> <ul style="list-style-type: none"> <li>✓ Act responsibly keeping in mind the welfare of society and nation</li> </ul> </li> </ol>
8	Initiative And Self-Direction	<ol style="list-style-type: none"> <li>1. <b>Managing Goals and Time</b> <ul style="list-style-type: none"> <li>✓ Set goals with tangible and intangible success criteria</li> <li>✓ Utilize time and manage workload efficiently</li> </ul> </li> <li>2. <b>Work Independently</b> <ul style="list-style-type: none"> <li>✓ Monitor, define, prioritize and complete your tasks</li> </ul> </li> <li>3. <b>Be Self-Directed Learners</b> <ul style="list-style-type: none"> <li>✓ Explore new information to achieve mastery in a task</li> <li>✓ Take initiative to get skills up to the professional level</li> <li>✓ Be a life-long learner</li> <li>✓ Critically and positively analyse past to make the future better</li> </ul> </li> </ol>
9	Productivity and Accountability	<ol style="list-style-type: none"> <li>1. <b>Manage Projects</b> <ul style="list-style-type: none"> <li>✓ Set and meet goals, even in the face of obstacles and competing pressures</li> <li>✓ Prioritize, plan and manage work to achieve the intended result</li> </ul> </li> </ol>

		<p><b>2. Give Results</b></p> <ul style="list-style-type: none"> <li>✓ Practice values, ethics and skills of professionalism, time management, punctuality, discipline, patience, collaboration and receptiveness to give proper results</li> </ul>
10	<b>Social And Cross-Cultural Interaction</b>	<p><b>1. Effective Interaction</b></p> <ul style="list-style-type: none"> <li>✓ Listen more</li> <li>✓ know when to speak</li> <li>✓ Behave respectfully</li> </ul> <p><b>2. Working in a team with diversity</b></p> <ul style="list-style-type: none"> <li>✓ Respect differences and work effectively with people from diverse backgrounds</li> <li>✓ Be open to various perspectives</li> <li>✓ Blend and use ideas from diverse teams to innovate and implement</li> </ul>

## CHAPTER 6



**21<sup>ST</sup> CENTURY SKILLS:  
PURPOSE, OUTCOMES,  
STRATEGIES AND ACTIVITIES**

*Thinking is a skill in itself. What we require is:*

- 1) *a set of information and beliefs, generating and processing skills, and*
- 2) *the habit, based on intellectual commitment, of using those skills to guide behaviour.*

### **Thinking itself is a Skill. How?**

Skill is the ability to do something well.

Thinking is the processing of thoughts to consider or reason about something.

When thoughts are channelized and used properly to understand, analyse, interpret and reach to a conclusion, then it can be seen as thinking skill.

Anything when used systematically can do wonders; same goes with thinking.

We shall now go through the details of each of these skills to understand the purpose and outcomes along with the strategies and activities to develop these skills. These suggestive strategies and activities have been crowd-sourced.

**Please Note: These activities can be blended with the subjects during classroom transaction, or can be conducted in the zero period or integrated with Art and Sports.**

# Questions a Critical Thinker Asks

## What's Happening?

Gather the basic information and begin to think of questions



## Why Is It Important?

Ask yourself why it's significant and whether or not you agree

## What Don't I See?

Is there anything important missing?



## How Do I Know?

Ask yourself where the information came from and how it was constructed

## Who Is Saying It?

What's the position of the speaker and what is influencing them?



## What Else? What If?

What other ideas exist and are there other possibilities?



## 6.1. Critical Thinking

# CRITICAL THINKING SKILLS

<b>1</b> <b>Knowledge</b>  Identification and recall of information	define fill in the blank list identify	label locate match memorize	name recall spell	state tell underline
	Who _____? What _____? Where _____? When _____?		How _____? Describe _____? What is _____?	
<b>2</b> <b>Comprehension</b>  Organization and selection of facts and ideas	convert describe explain	interpret paraphrase put in order	restate retell in your own words rewrite	summarize trace translate
	Re-tell _____ in your own words. What is the main idea of _____?		What differences exist between _____? Can you write a brief outline?	
<b>3</b> <b>Application</b>  Use of facts, rules, and principles	apply compute conclude construct	demonstrate determine draw find out	give an example illustrate make operate	show solve state a rule or principle use
	How is _____ an example of _____? How is _____ related to _____? Why is _____ significant?		Do you know of another instance where _____? Could this have happened in _____?	
<b>4</b> <b>Analysis</b>  Separating a whole into component parts	analyze categorize classify compare	contrast debate deduct determine the factors	diagram differentiate dissect distinguish	examine infer specify
	What are the parts or features of _____? Classify _____ according to _____. Outline/diagram/web/map _____.		How does _____ compare/contrast with _____? What evidence can you present for _____?	
<b>5</b> <b>Synthesis</b>  Combining ideas to form a new whole	change combine compose construct create design	find an unusual way formulate generate invent originate plan	predict pretend produce rearrange reconstruct reorganize	revise suggest suppose visualize write
	What would you predict/infer from _____? What ideas can you add to _____? How would you create/design a new _____?		What solutions would you suggest for _____? What might happen if you combined _____ with _____?	
<b>6</b> <b>Evaluation</b>  Developing opinions, judgements, or decisions	appraise choose compare conclude	decide defend evaluate give your opinion	judge justify prioritize rank	rate select support value
	Do you agree that _____? Explain. What do you think about _____? What is most important?		Prioritize _____ according to _____? How would you decide about _____? What criteria would you use to assess _____?	

We have already seen that 'Thinking' itself is a skill. Every individual possesses the skill to think critically; it is only the degree and the motivation that varies. Machiavellian thoughts are also an example of Critical Thinking but they are motivated with selfish

ends. When motivated with justice, values and integrity, Critical Thinking can be of a great service to humanity. For this reason, the development of critical thinking skills and dispositions is a life-long endeavour.

<p><b>Basis</b></p>	<p>Fact/ Opinion/ Thought/Hypothesis etc.</p> <ul style="list-style-type: none"> <li>• Analyzing</li> <li>• Arguing</li> <li>• Classifying</li> <li>• Comparing and contrasting</li> <li>• Defining</li> <li>• Describing</li> <li>• Evaluating</li> <li>• Explaining</li> <li>• Problem solving</li> <li>• Tracking cause and effect</li> </ul>
<p><b>Purpose</b></p>	<p>Critical thinking is required for a learner to think in a clear, rational, logical, and independent manner.</p>
<p><b>Strategy</b></p>	<p>Move the comfort zone:</p> <ul style="list-style-type: none"> <li>• It is important to shake the comfort zone of a learner/ student by cross questioning.</li> <li>• This cross questioning will make students uncomfortable and impatient to search for answer and think.</li> </ul>



# Critical Thinking



Adla Badli (Impromptu Debate)



Ask Yourself (Made Questions)



Gol Mol (Asking Riddles)



Gap Fill in



Puchho to samjhe (Cross questioning)

**Activities**

#### **6.1.1.1. AdlaBadli (Impromptu Debate)**

It will be same as a debate activity.

- ✓ Topics will be given to students and they will choose sides accordingly but on the day of activity the teacher will reverse the sides and will give some time to prepare.
- ✓ This sudden change in sides will make children uneasy but they will also try to think differently for the changed sides.

#### **6.1.1.2. Ask yourself (Self-made Questions)**

- ✓ An activity can be organised in which students have to prepare questions other than the textbooks questions.
- ✓ This exercise will help children to think differently for creating questions. Teacher will see if the questions are original or not.

#### **6.1.1.3. Gap Fill In**

- ✓ Give paper and pen to students and after showing a picture ask them to write on the top of the paper what is happening in the picture.
- ✓ Then ask them to write at the bottom what you believe is happening in the picture.
- ✓ In the space remaining blank write down what are the steps you take to come to the conclusion.

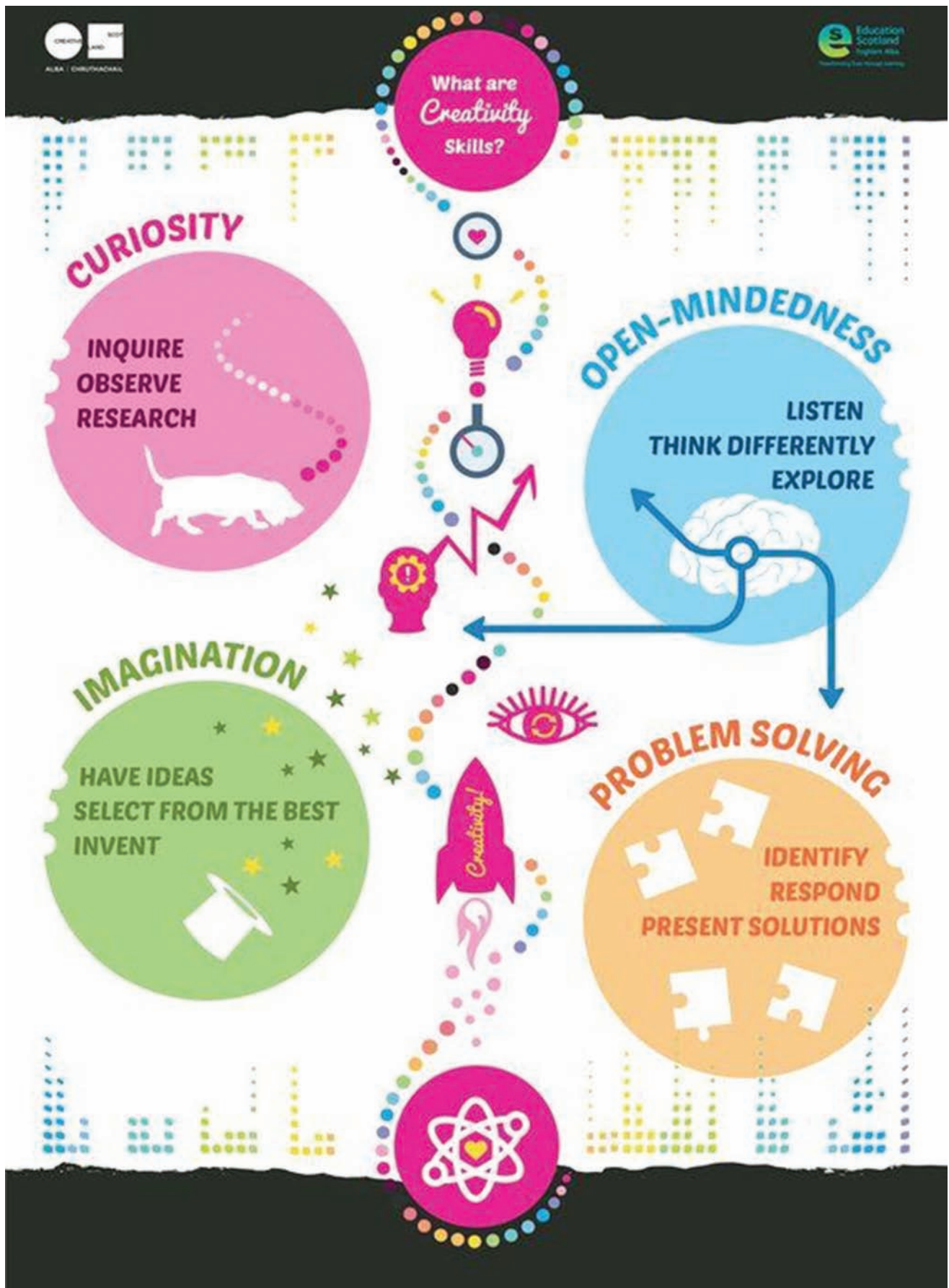
#### **6.1.1.4. Pucho to Samjhe (Cross-Questioning)**

- ✓ This is the extended version of ask yourself. In this children will present their questions in front of the class and his/her peers will cross question him/her, like why this question, how this can happen etc.
- ✓ This will encourage critical thinking in both the students who ask the question and who reply.

#### **6.1.1.5. GolMol (Asking Riddles)**

- ✓ In this activity, teacher will ask riddles from different subjects so that children need to think in different directions for different subjects

## 6.2. Creativity And Innovation



Creativity is the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others.<sup>13</sup>

### How to know if I am a creative person<sup>14</sup>?

You are a creative person, if you are :

1. energetic and restful as per need

2. innocent but not gullible ,
3. smart
4. playful yet disciplined, responsible.
5. both imaginative and romantic at one end, and firm with reality at the other.
6. humble and firm
7. passionate about your work, yet objective<sup>15</sup>.

<b>Basis</b>	<ul style="list-style-type: none"> <li>• <b>Imagining</b></li> <li>• <b>Accessing Information and Using Technology</b></li> <li>• <b>Brainstorming</b></li> <li>• <b>Questioning</b></li> <li>• <b>Entertaining</b></li> <li>• <b>Improvising</b></li> <li>• <b>Overturing .</b></li> <li>• <b>Problem solving</b></li> <li>• <b>Designing</b></li> <li>• <b>Creating</b></li> </ul>
<b>Purpose</b>	<p>To encourage students to try and learn new things;</p> <p>To improve communication and social skills</p> <p>To develop lateral thinking</p> <p>To know there are multiple approaches to a situation</p>
<b>Strategy</b>	<ol style="list-style-type: none"> <li>1. <b>Setting an example-</b> Try a different ending to the existing story and ask your students. Friends to explore new endings.</li> <li>2. <b>Foster a Question-Friendly Environment (Ask why)-</b> Encouraging students to develop the habit of asking “why” questions about information, ideas, and beliefs normally taken for granted.</li> </ol>

<sup>13</sup> Franken, Robert E. Human Motivation, 3rd ed.,page 396

<sup>14</sup> Csikszentmihalyi.Mihaly Creativity - Flow and the Psychology of Discovery and Invention, pp 58-73

<sup>15</sup> <https://www.csun.edu/~vcpsy00h/creativity/define.htm> accessed on 15.03.2020

6.2.1. ACTIVITIES

**Creativity**

**Image talk**

**Creative Space**

**S.C.A.M.P.E.R.**

**Alternative way of learning lesson**

**Wrong is Right**

**Activities**



### 6.2.1.1. Image talk

- ✓ Under this activity, children will use a variety of images to talk and express their opinions and views. They can use emojis, things like pencils, pens, colours, tablets, board, notebook etc. whatever they can think of, for expressing their views.
- ✓ This will help children to think differently from the normal pattern and also understanding through things will also help in opening the new way of thinking.

### 6.2.1.2. S.C.A.M.P.E.R.

It is essentially exploring new ideas by testing and questioning them from different angles. For each letter of the mnemonic, ask yourself a related question about your task or the problem at hand:

- ✓ **Substitute**, e.g.: What would happen to the task if we exchange X with Y?
- ✓ **Combine**, e.g.: What would happen to the task if we combine X and Y?
- ✓ **Adapt**, e.g.: What changes would need to be made to adapt this task to a different context?
- ✓ **Modify**, e.g.: What could we modify to create more value on this task?
- ✓ **Put to another use**, e.g.: What other uses or applications might this task have?
- ✓ **Eliminate**, e.g.: What could we remove from the task to simplify it?
- ✓ **Reverse**, e.g.: How could we reorganize this task to make it more effective?

This method enables to approach a task or problem in unforeseen ways. Each question needs deep thinking on the issue and considering new possibilities.

### 6.2.1.3. Wrong is Right

- ✓ In this activity, team of two individuals will be made and one individual will ask questions from the other individual and the first individual will have to give the wrong answers of the questions asked.

This activity will help children to think quickly and differently from the given answers.

### 6.2.1.4. Creative Space

- ✓ This will include providing space for creative activities like drama, quiz, painting, music competition etc. Teacher will make sure that these activities are held from time to time in the class so that children can get their creative space integrated with their curriculum.

### 6.2.1.5. Alternative way of learning Lesson

- ✓ As part of the lesson, the teacher can also encourage creativity by asking children to present their own version of the story after the completion of the textbook story.
- ✓ This will encourage children to become a storyteller. Children can also present their stories in written form.

## 6.2.2. ACTIVITIES



### 6.2.2.1. Project Based Learning (PBL)

- ✓ In this method, Students inquire, investigate and analyze a question or a problem or a challenging issue to find novel solutions.

### 6.2.2.1.1 Phenomena Based Learning (PhenoBL)

- ✓ This is a multi-disciplinary and constructive way of teaching-learning which has a real-world phenomenon, like water, health, energy etc. as the starting point, not the usual subjects as per the school culture. It encourages a student to inquire, and be an active learner.





Collaboration is the ability to effectively work with others. This skill involves working together while taking actions, respecting others' needs and perspectives and contributing to and accepting the final outcomes. Collaboration helps to develop

interest and fun in the teaching learning process. It effectively broadens the cultural, social, and environmental boundaries and helps a child to understand social and environmental concerns better.

<p><b>Basis</b></p>	<ul style="list-style-type: none"> <li>• Allocating resources</li> <li>• Brainstorming</li> <li>• Decision-making</li> <li>• Delegating</li> <li>• Evaluating</li> <li>• Goal setting</li> <li>• Leading</li> <li>• Managing time</li> <li>• Resolving conflicts</li> <li>• Team building</li> </ul>
<p><b>Purpose</b></p>	<p>Collaborative Skills empower students to work together in groups to solve a given problem.</p>
<p><b>Strategy</b></p>	<ol style="list-style-type: none"> <li>1. <b>Model What We Expect :</b> We need to facilitate and model ourselves for what we aspire and expect our students to be and do.</li> <li>2. <b>Teach Them How To Negotiate:</b> Students need to understand that being loud does not mean being listened. A good negotiator listens well, is patient and flexible, shares ideas and areas of consensus, and can think under pressure.</li> </ol>

### 6.3.1. ACTIVITIES



#### 6.3.1.1. 'Save the Last Word for Me'

Children participate actively through speaking as well as listening. They work in groups, share and discuss their responses and perspectives on an issue. This can be used to build up their collaborative skills, critical thinking and problem solving skills.

#### 6.3.1.2. Hands-on projects

Use Experiential Learning activities. Refer to CBSE Handbook on Experiential Learning and Guidelines on Art Integrated Education.

#### 6.3.1.3. Integrate Sports in Teaching-Learning

Sports encourages teamwork, collaboration and decision-making. Integrating any sport activity to teach a difficult topic will involve everyone collaboratively. Try indigenous games like Mallakhamb for teaching MATHEMATICS.

#### 6.3.1.4. Search to Win

In this, teacher will divide the students in groups of 4-5 and give them some questions whose answers children have to find through different clues given by teacher. This will be a fun activity and collaboration is needed to complete this activity.

### 6.3.1.5. Dumb charades

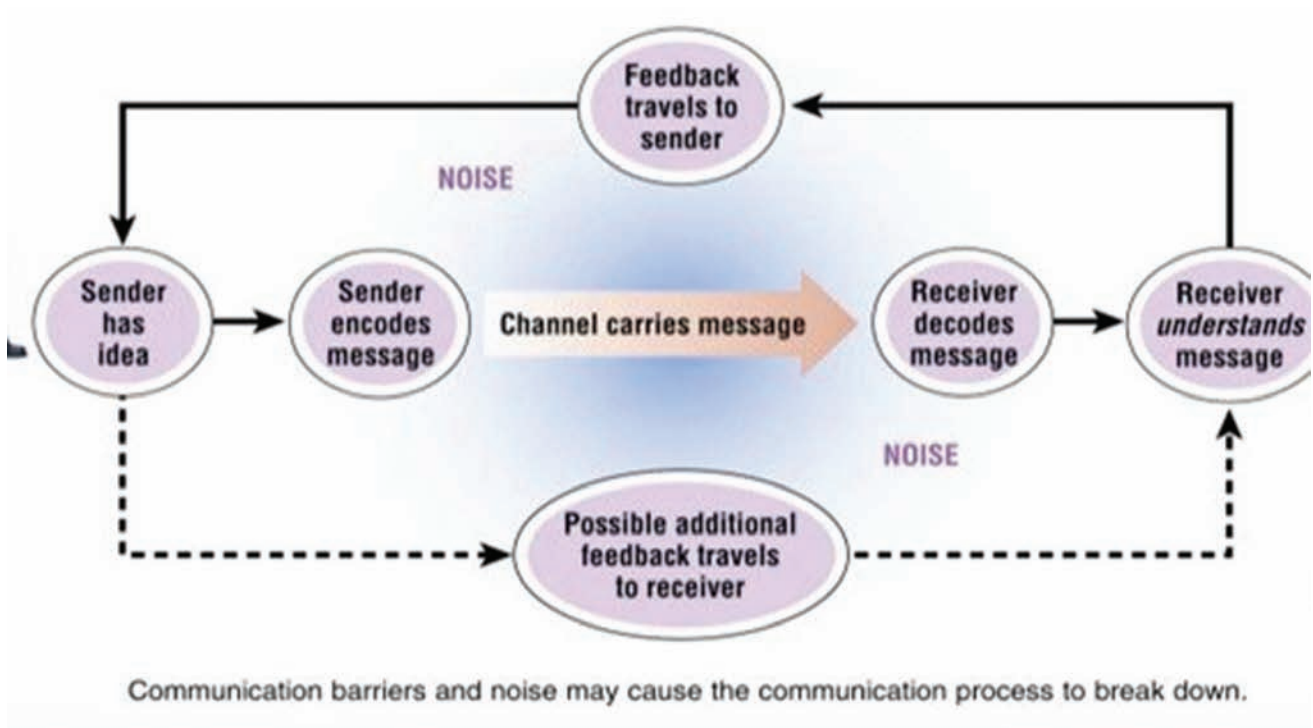
In this activity, children will be divided into 4-5 groups. The teacher will prepare cards with different concepts/topics written on them from the given subject. Every group will be given the chance to guess the topics/concepts by one member of that group charading or acting out the topic/concept. While one member of the group charades, the rest of the children have to understand

what is the concept/topic and guess it, for example photosynthesis, or Highest Common Factor, etc. After guessing the concept/topic, the whole group has to answer a question on that concept/topic already kept ready by teacher. This activity will be fun in learning lessons and this can be performed if students co-operate and collaborate with each other.

## 6.4. COMMUNICATION

### Process of Communication

Process of Communication needs three things: Message, Sender and Receiver/ Recipient.





# THE 7

## Essential Elements of Communication Skills



01

### Listening

Strong observational skills to fully understand the message being conveyed

02

### Non-verbal Communication

Body language like posture, gestures and eye movement

03

### Being Clear

Choosing the right words to deliver a message that's easy to understand

04

### Being Concise

Using fewer, well-chosen words to convey your message

05

### Being Confident

The right message with the appropriate non-verbal communication

06

### Being Personable

A friendly tone and a simple smile can go a long way

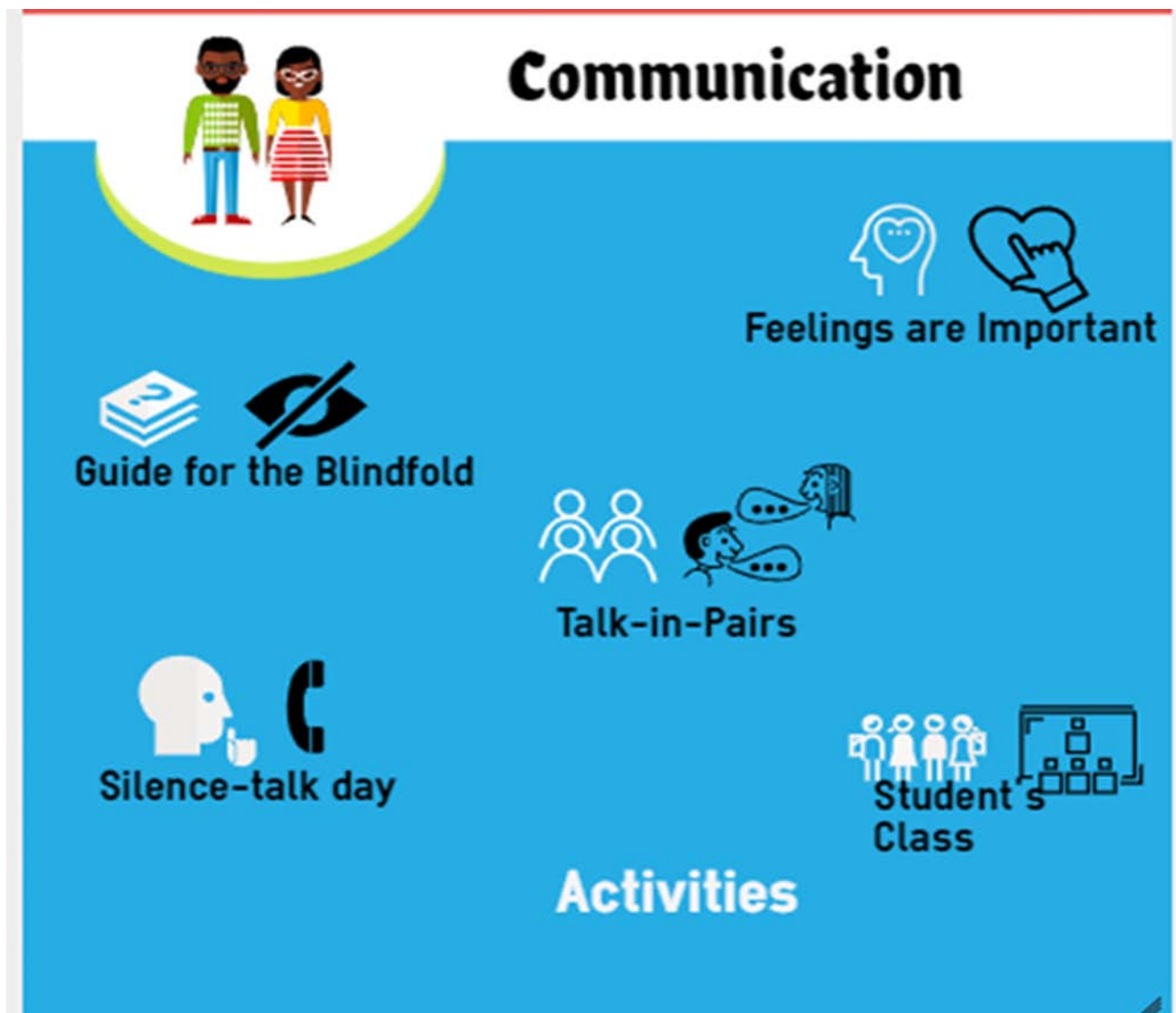
07

### Being Patient

Being composed and not rushing when conveying your message

<b>Basis</b>	<ul style="list-style-type: none"> <li>• Analysis of the situation</li> <li>• Choose a medium of communication</li> <li>• Evaluating messages</li> <li>• Listening intently and patiently</li> <li>• Reading</li> <li>• Speaking</li> <li>• Writing</li> <li>• Turn taking and initiation</li> <li>• Use of technology</li> </ul>
<b>Purpose</b>	<ul style="list-style-type: none"> <li>• Provide information</li> <li>• Seek Information</li> <li>• Expression</li> <li>• Build up social and interpersonal skills</li> </ul>
<b>Strategy</b>	<ol style="list-style-type: none"> <li>1. <b>Reflective self:</b>  <p>There can be a reflective class in which students can share their experiences, good or bad, or they can share a story/incident/feeling/opinion which they have not shared with anybody so far. This period will help children to listen carefully to each other and communication will also improve.</p> </li> <li>2. <b>Paired Communication:</b>  <p>Teachers can divide the class into pairs of students and give them time to interact to know each other better. The students will ask each other questions to know about the students likes/dislikes/favourite sport/music/art/books, etc. They can then present the paired student to the class by talking about the uniqueness of that student. This will show how much those two listened to each other. Continuous practice of this will improve communication.</p> </li> </ol>

## 6.4.1. ACTIVITIES



The infographic is titled "Communication" and "Activities". It features a header with an illustration of a man and a woman. Below the header, there are five activity icons: "Feelings are Important" (a head with a heart inside and a hand pointing to a heart), "Guide for the Blindfold" (a stack of books and a blindfolded eye), "Talk-in-Pairs" (two people talking), "Silence-talk day" (a head with a speech bubble and a telephone handset), and "Student's Class" (a group of people and a classroom layout). The word "Activities" is written at the bottom.

# Communication

Feelings are Important

Guide for the Blindfold

Talk-in-Pairs

Silence-talk day

Student's Class

## Activities

### 6.4.1.1. Guide for the blindfolded

- ✓ Arrange your classroom in a way that is unfamiliar to the students, making sure that it is safe to get around.
- ✓ Have students pair up. One will wear a blindfold while the other is to function as the "eyes" and stand in a designated space.
- ✓ The goal is for the eyes to guide the blindfolded partner through the classroom through a specific path using only words.
- ✓ The fewer guidelines you provide the more creative the students' methods will be.



#### 6.4.1.2. No-talk day

- ✓ Nonverbal communication is just as important, and it is easy to provide students with practice in following nonverbal cues: just don't speak.
- ✓ At the start of a day, use signals to let students know that the day will be spent using nonverbal communication, then continue to use signals throughout class when direction is required.
- ✓ Make it known that you expect them to do the same. Everyone will be amazed at how quickly a class "language" built on signals and nonverbal cues begins to form.

#### 6.4.1.3. Feelings are Important

- ✓ In this activity, there will be a board with different feelings written on it. Daily, students shall choose one from that feeling and give in written how they feel about that.
- ✓ Teacher will take one period for dealing with that feeling and discuss them with the children. Some children who need privacy to discuss, can be given separate time by the teacher.

#### 6.4.1.4. Talk-in-Pairs

- ✓ Teacher will ask children to make pairs. Pairs should be such that the two children in the pair do not know much about each other.
- ✓ Teacher will give time to the class and they will talk to each other and get to know each other. After that the teacher will ask questions from one student about the other student.

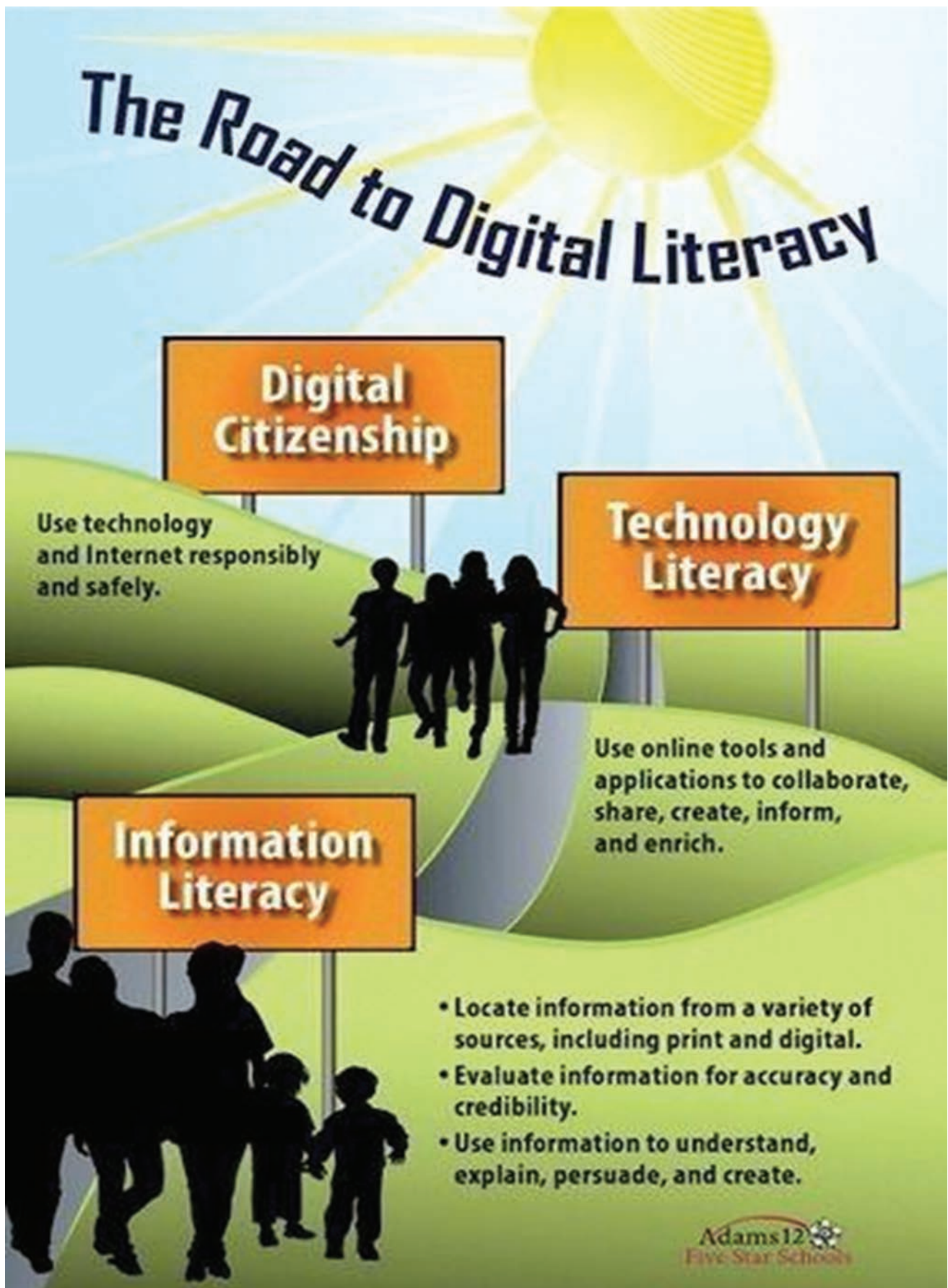
This activity will help students to know each other better and this will also improve communication among students.

#### 6.4.1.5. Student's Class

- ✓ Ask students to organise a class themselves in which they will choose the topic, present the topic, frame questions and activity related to the topic etc.

This activity will encourage conversations among children about how to organise the class and they will also learn the importance of maintaining the decorum of the class.

## 6.5. INFORMATION, MEDIA AND TECHNOLOGY LITERACY



Information, both from the traditional sources like Books, Newspapers, etc and other digital sources like the Internet sites, social media, Apps etc. is to be used effectively and judiciously by students. It is to be seen carefully by the teachers that information available is used at all levels of Bloom's Taxonomy. They need to be able to remember, understand, apply, analyze, evaluate the given information and create new information .

Don Tapscott, in *Growing Up Digital: How the Net Generation Is Changing Your World*,

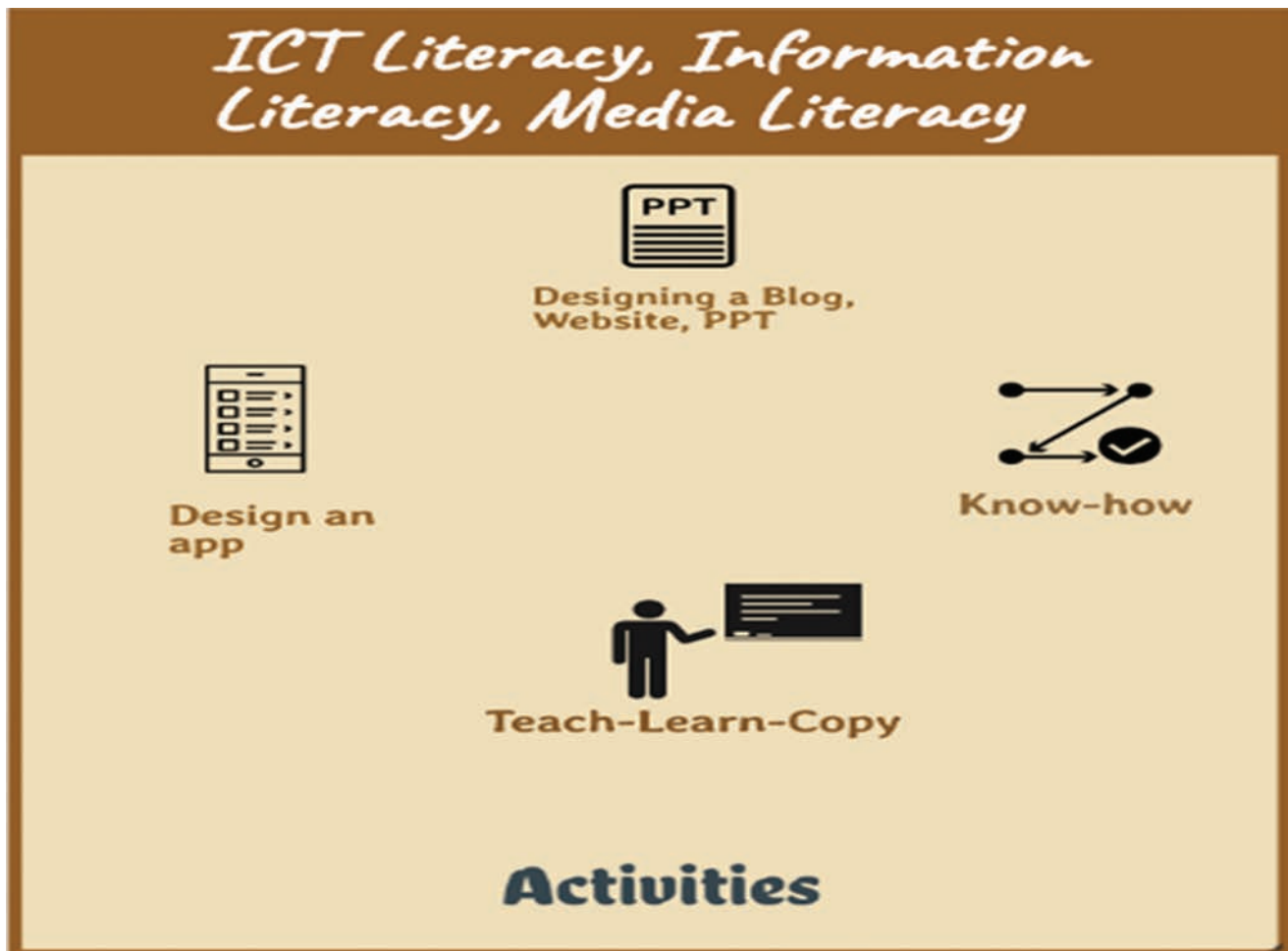
gives the following eight reasons why students use technology<sup>16</sup>:

- ✓ Freedom of expression
- ✓ Facility to use it as per likings
- ✓ Multiple resources of information
- ✓ Open interaction
- ✓ Blend of work and play
- ✓ Connecting and collaborating
- ✓ Exploring and Innovating

<b>Basis</b>	<ul style="list-style-type: none"> <li>• <b>Accessing Information</b></li> <li>• <b>Collaborating</b></li> <li>• <b>Communicating</b></li> <li>• <b>Using Information</b></li> <li>• <b>Analysing Information</b></li> <li>• <b>Interpreting Information</b></li> <li>• <b>Creating New Information</b></li> </ul>
<b>Purpose</b>	<p>IMT makes the learning environment more interesting than a traditional classroom environment and helps the students perform better in their respective careers.</p>
<b>Strategy</b>	<p><b>Digital classroom:</b></p> <ul style="list-style-type: none"> <li>• With traditional blackboard, digital interactive boards should be placed in the classroom.</li> <li>• This will aid in the teaching-learning process. In teaching of lesson related to space, teachers can show videos of space to children for long lasting memories.</li> </ul>

<sup>16</sup> [http://socium.ge/downloads/komunikaciisteoria/eng/Grown\\_Up\\_Digital\\_-\\_How\\_the\\_Net\\_Generation\\_Is\\_Changing\\_Your\\_World\\_\(Don\\_Tapscott\).pdf](http://socium.ge/downloads/komunikaciisteoria/eng/Grown_Up_Digital_-_How_the_Net_Generation_Is_Changing_Your_World_(Don_Tapscott).pdf) accessed on 14.03.2020

## 6.5.1. ACTIVITIES



### 6.5.1.1. Know-How

- ✓ In this activity the teacher will demonstrate to the children how to search and where to search for information. Then the teacher will give them topics to search and will see how children are searching and if they were following her instructions or not.

### 6.5.1.2. Design an App

- ✓ Students will be asked to identify a problem (environment/ societal / school related) and design an App using ICT to offer a viable solution to it.
- ✓ Even if they do not have the technical knowhow to design an App, they will

design it on paper by preparing a detailed write-up on the why, what, how, etc. of the App

- ✓ This would also enhance their critical thinking and decision making.

### 6.5.1.3. Designing a Blog, Website, PPT

- ✓ Ask children to design a PPT or blog and see how they do that. Tell them what all can be done in the PPT or blog.
- ✓ This will help children to get information about how to use Powerpoint and Microsoft word etc.





# Flexibility and Adaptability



**Different uses of household Items**



**Make up a new Game**



**Flipped Classroom**



**Shuffle**

Activities

#### 6.6.1.1. Different Uses of Household Items

- ✓ Encourage thinking about things differently, like different utensils and furniture items to create individual music
- ✓ Children learn to see things differently as they need to be flexible in their thinking for considering utensils as musical instruments.

#### 6.6.1.2. Make up a New Game

- ✓ Invent new games by slightly changing the rules, or by taking rules from one game and adding them to another.
- ✓ Changing the rules in a game can be very difficult for children who are inflexible.
- ✓ For these children, it is important to play or create games in which rules do change frequently.

#### 6.6.1.3. Shuffle

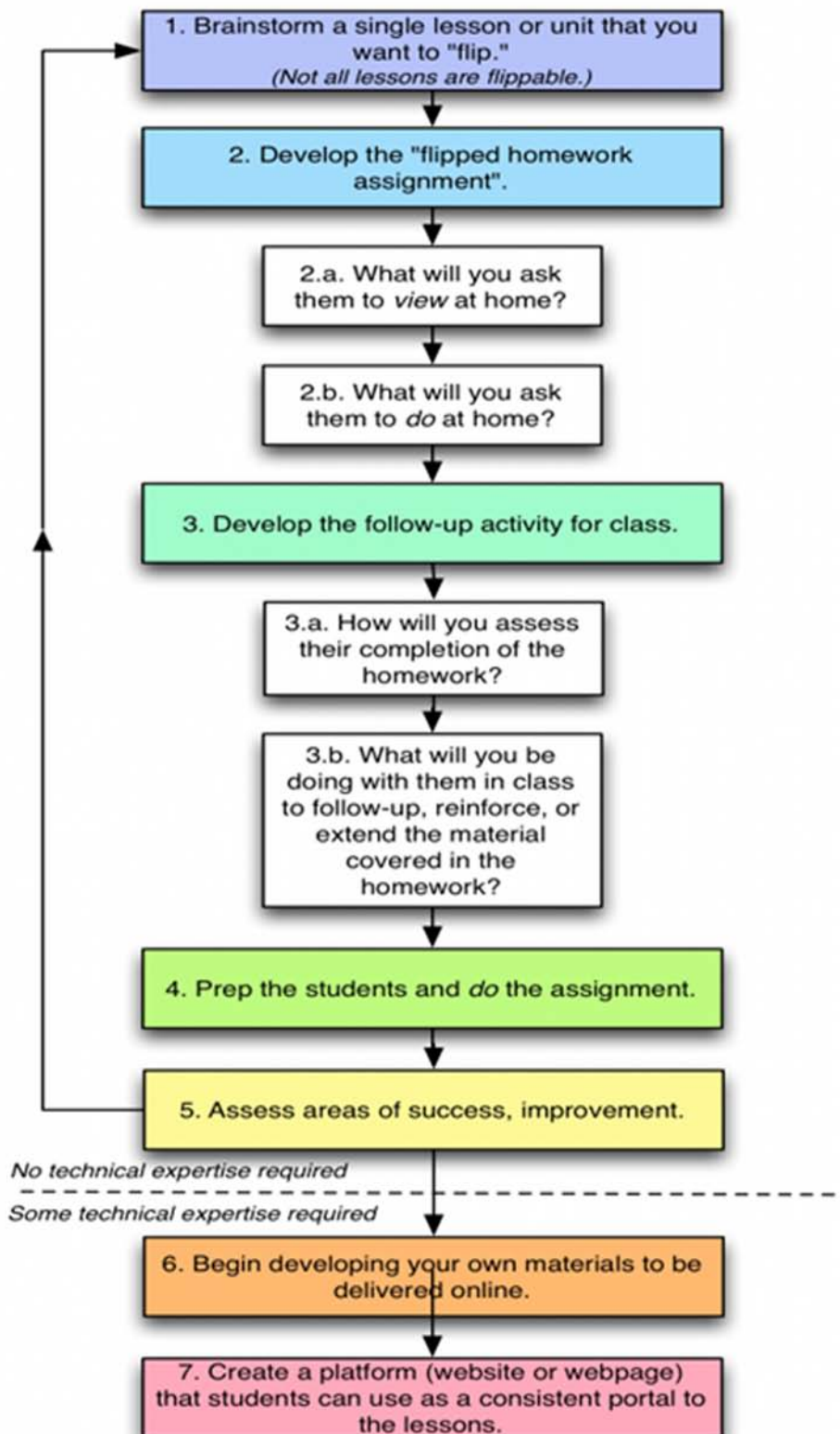
- ✓ Give students group activities and use a chit system for dividing the students into groups.
- ✓ This random distribution of students will make most of the students uncomfortable but this is the challenge.
- ✓ Students should be flexible enough to work with anybody in various conditions.

#### 6.6.1.4. Surprise-Surprise

- ✓ Give children different activities to perform from time-to-time but don't fix the activity.
- ✓ For example, fix one period every Wednesday as an activity period, but don't reveal the activity beforehand.
- ✓ This will come as a surprise to the students; some may feel uncomfortable, but gradually they will learn to become flexible with this.



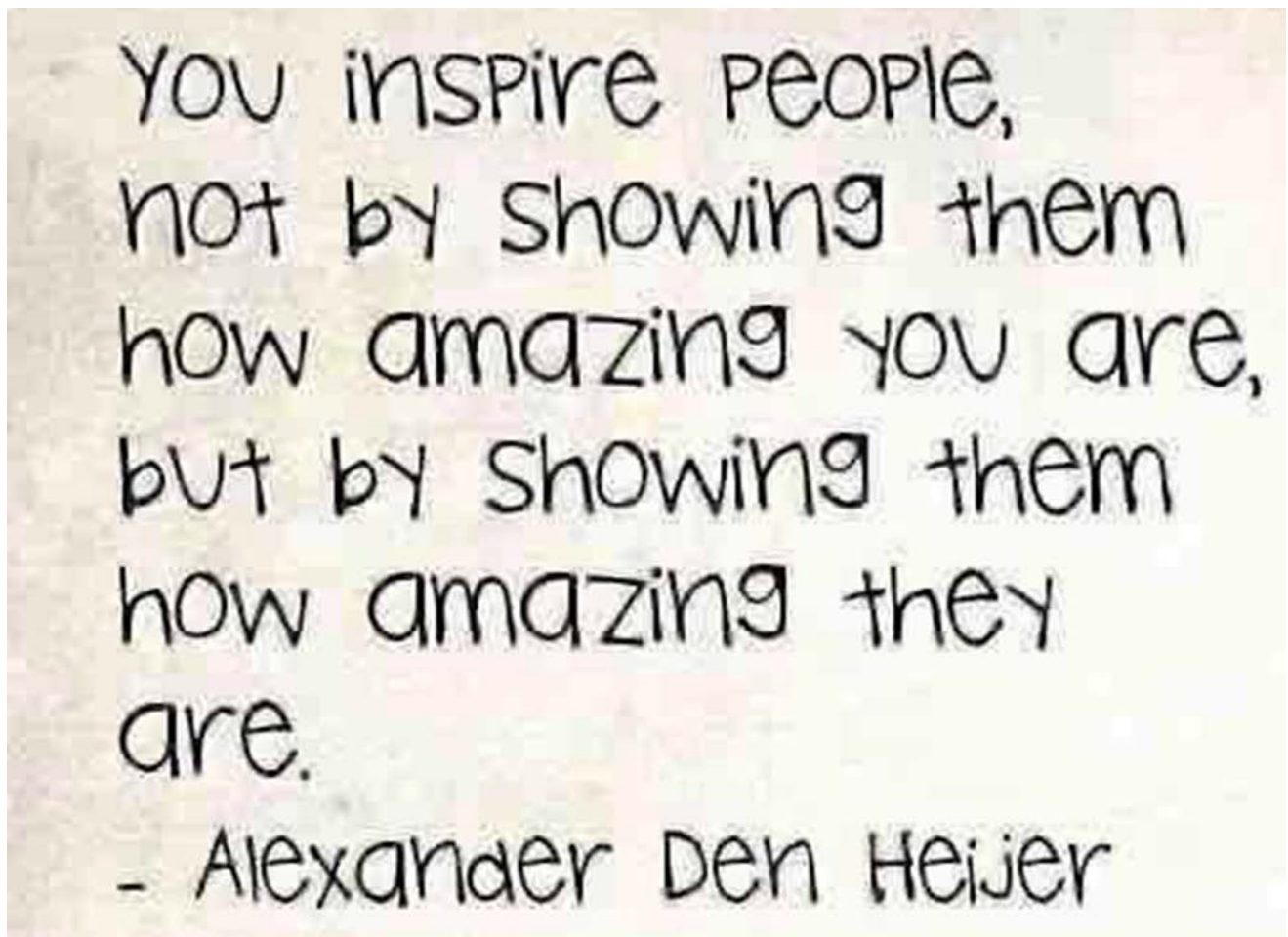
## A Flipped Classroom in 7 Easy Steps



©2012, Richard White

(<https://in.pinterest.com/pin/851461873281378907/> accessed on 16.05.2020)

## 6.7. LEADERSHIP AND RESPONSIBILITY



<b>Basis</b>	<ul style="list-style-type: none"><li>• Identifying goals collectively and individually</li><li>• Creating a group and providing them chance to explore their own abilities</li><li>• Resolving issues</li><li>• Encouraging team members to attain their aims</li><li>• Helping group members solve problems and improve performance</li><li>• Acknowledging work done by each and everyone</li></ul>
<b>Purpose</b>	<p><b>Leadership</b> is the life skill that helps one learn the art of building relationships within teams, define identities and achieve tasks effectively.</p> <p>Responsibility includes demonstrating integrity and ethical behaviour by the students towards building safe and positive classroom environment</p>



## 6.7.1. ACTIVITIES

# Leadership

**Quiz to Lead**



**Round Tables**



**Number Game**



**Do se Bhale Chaar  
(Team work is better)**



**Leaders you Admire**



**Activities**

### 6.7.1.1. Quiz to Lead

- ✓ Hold a quiz competition, row-wise, in the classroom; make one leader per row; make rules of the game such that the leader will select the student who will answer.
- ✓ This will develop leadership qualities among children and also motivate other children to develop leadership quality.

### 6.7.1.2. Number Game

- ✓ Divide the class into two groups and write the numbers 1 to 25 randomly on the floor with chalk.
- ✓ Select two students to lead the groups

and give them a few minutes to see the numbers, then start the game.

- ✓ Every member of the team has to jump on each of the numbers, and say the number loudly so that other members can listen to the number; this requires a huge amount of coordination in the team.
- ✓ Whichever team completes the game in less time will be the winner.
- ✓ This activity will help the children to develop leadership skills as they have to manage their team to work in coordination.



### 6.7.1.3. Leaders You Admire

- ✓ This activity helps in understanding the characteristics and quality of a good leader.
- ✓ Group participant discuss about the leader whom the admire
- ✓ In subsequent group discussions they communicate and share each other's findings.

### 6.7.1.4. Round Tables

- ✓ This activity requires four tables. Each table has a different group with a different task to perform.
- ✓ Each group will have a group leader who will delegate the task and steps of the task to the group members.
- ✓ .Once they begin, the task time is measure for each group and the group which takes minimum time will be the winner.

- ✓ This activity will improve delegation skills.

### 6.7.1.5. Do Se Bhale Chaar (Teamwork is better)

- ✓ As the name says, the teacher will divide the class into groups of four and give all of them the same lesson to perform and present before the class.
- ✓ They/ The teacher can use any method to present, such as skit, role-play, flip chart, powerpoint presentation, etc.
- ✓ Teacher will observe how they plan their activity and after their performance, will ask questions to the group members about how they decided on this method.
- ✓ This activity will show how each group presentation becomes better with teamwork.

## 6.7.2. ACTIVITIES

# RESPONSIBILITY ACTIVITIES



**Making Own classroom Rules**



**Helping hands**



**Break the chain**



**WANTED! Responsible**

Go to Settings to activate V

### 6.7.2.1. Making Own classroom Rules

- ✓ Students will be encouraged to make the class rules in the beginning of the session. The most suitable ones may be finalised and displayed prominently in the classroom and followed throughout the year by each student.
- ✓ They may also decide what action the whole class will take if any student is found violating any of the class rules.
- ✓ This will foster a sense of responsibility in them.

### 6.7.2.2. Helping hands

- ✓ Teacher will divide the class into pairs and take some of the belongings from each of them so that their belongings together will become whole.
- ✓ Teacher will then give them some work to do in which children will need to share each other's belongings.
- ✓ For example, They would ask students to share their geometry boxes to make a maths project.
- ✓ With this activity, children will

understand their responsibility of helping their peers.

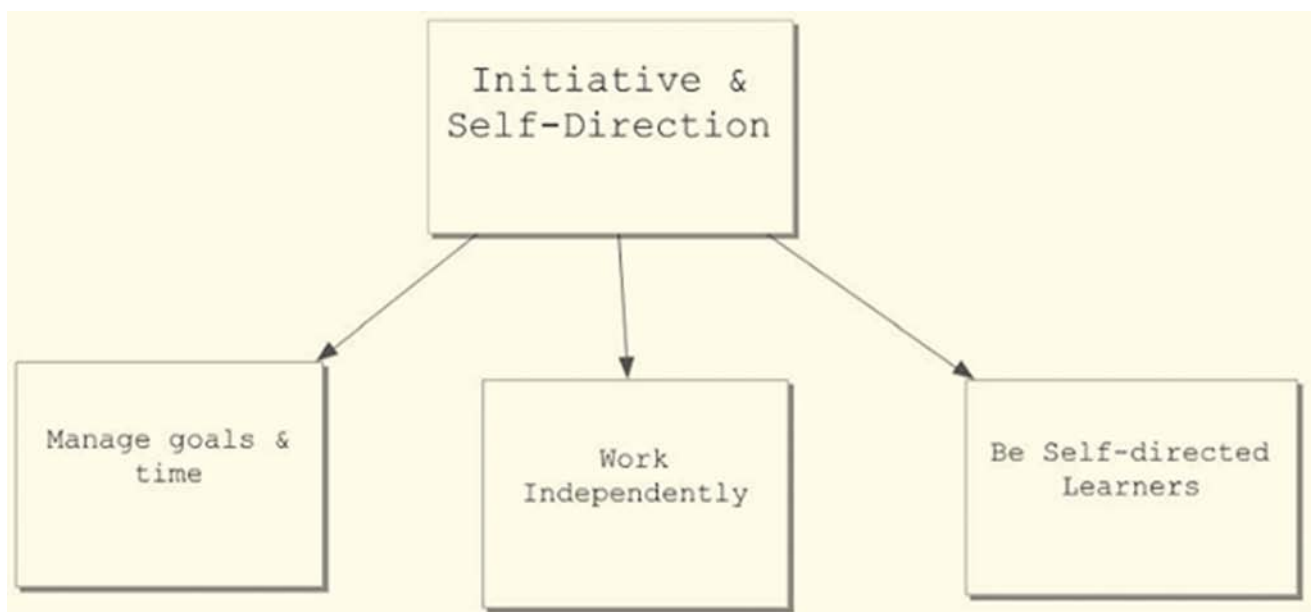
### 6.7.2.3. Break the chain

- ✓ Select a lesson/ story having chain of events based on values.
- ✓ Ask the students to list out the sequence of events and find an alternative step to stop or change the chain of events
- ✓ The story/ lesson will be rewritten by the students adding their perspectives to change the chain of events

### 6.7.2.4. WANTED! Responsible..

- ✓ Ask the class to prepare an advertisement for hiring a responsible person and specify the qualities of the person.
- ✓ Children should start this advertisement with the words ...Wanted a responsible person.
- ✓ This will help children to know and the teacher to guide them in understanding what kind of a person can be considered a responsible person.

## 6.8. INITIATIVE AND SELF-DIRECTION





Basis	<ul style="list-style-type: none"> <li>• Questioning</li> <li>• Planning</li> <li>• Research</li> <li>• Creating</li> <li>• Improving</li> <li>• Presenting</li> </ul>
Purpose	<p><b>Initiative</b> provides an opportunity to act or take charge before others.</p> <p><b>Self-direction</b> is the ability to set goals related to learning, plan for the achievement of those goals, independently manage time and effort, and assess the quality of learning experience.</p>
Strategy	<ol style="list-style-type: none"> <li>1. <b>Teacher First</b> Teacher/s will initiate acting on an activity to set an example and motivate students to come forward and take part in it.</li> <li>2. <b>Initiative to improve</b> The teacher should try to talk in class about sharing a secret which may be affecting their confidence. Teacher will share her own secret first and then students will start. This will improve their confidence.</li> <li>3. <b>Assess Readiness</b> Before any student can achieve their learning goals, it's important to know their current situation. Teachers can perform a short exercise and design the self-direction process for the students.</li> </ol>

### 6.8.1. ACTIVITIES



### 6.8.1.1. Bunch of Activities

- ✓ Teacher can use a bowl and put several chits in it with different activities written on the chit.
- ✓ For example, acting like a bangle seller, sing a song, dance like someone, and speak a film dialogue, etc.
- ✓ This will have various benefits such as taking initiative to perform an activity, making class joyful
- ✓ Chits can also be related to chapters given in the book, such as, act out the process of distillation, sing the Periodic Table in the tune of your favourite Bollywood song, etc;
- ✓ Ensure that everyone takes part in it.

### 6.8.1.2. Everyone Matters

- ✓ Organise any activity in which every child has to perform/present in front of the whole class so that each child also gets an opportunity.

### 6.8.1.3. Teacher First

- ✓ Teacher will arrange a separate class for sharing stories of achievement, failure, things which matter, etc.
- ✓ Teacher will start this class by sharing his/her part of the story first; this will encourage children to share their stories.

### 6.8.1.4. Teamwork

- ✓ Class will be divided into groups of 4-5 students and give them a scene to perform and every child has to do some role playing.
- ✓ One child can help another but everyone has to perform one's own role.
- ✓ This activity will help children to work in groups yet maintaining their own individuality.

## 6.8.2. ACTIVITIES

**• SELF-DIRECTION ACTIVITIES**

**SELF-ADVOCACY**

**LET THEM BE**

**DESIGN THINKING:**

**CONNECTIONS TO EXPERTS**

### 6.8.2.1. Self-Advocacy

- ✓ For many students, self-advocacy doesn't come naturally.
- ✓ Teaching students how to ask for help, through role playing or other guidance is the motive of this activity.

### 6.8.2.2. Let them Be

#### A Scene:

#### Tuesday: Maths Class at Sopan: the School

The teacher asks students to decide what they want to do in the class. Students start whispering. Devyani, Vikram, Chris, Taveesh, Samar, Tanveer, Denis, Garima, Danya, Yogvid and Kuladitya decide they want to play chain game, like this video:

<https://www.facebook.com/the.akanksha.foundation/videos/10154397169224317/>

Teacher lets them do it along with the entire class.

Naturally, it enhanced their self-direction, teamwork and initiative-taking. **So, let them be....**

### 6.8.2.3. Connections to Experts

- ✓ It is becoming easier every day to broaden horizons of students by reaching out to the community.
- ✓ Get students to identify a larger problem that needs solving and then help them to connect with experts in that area, to gather more knowledge and perspective.

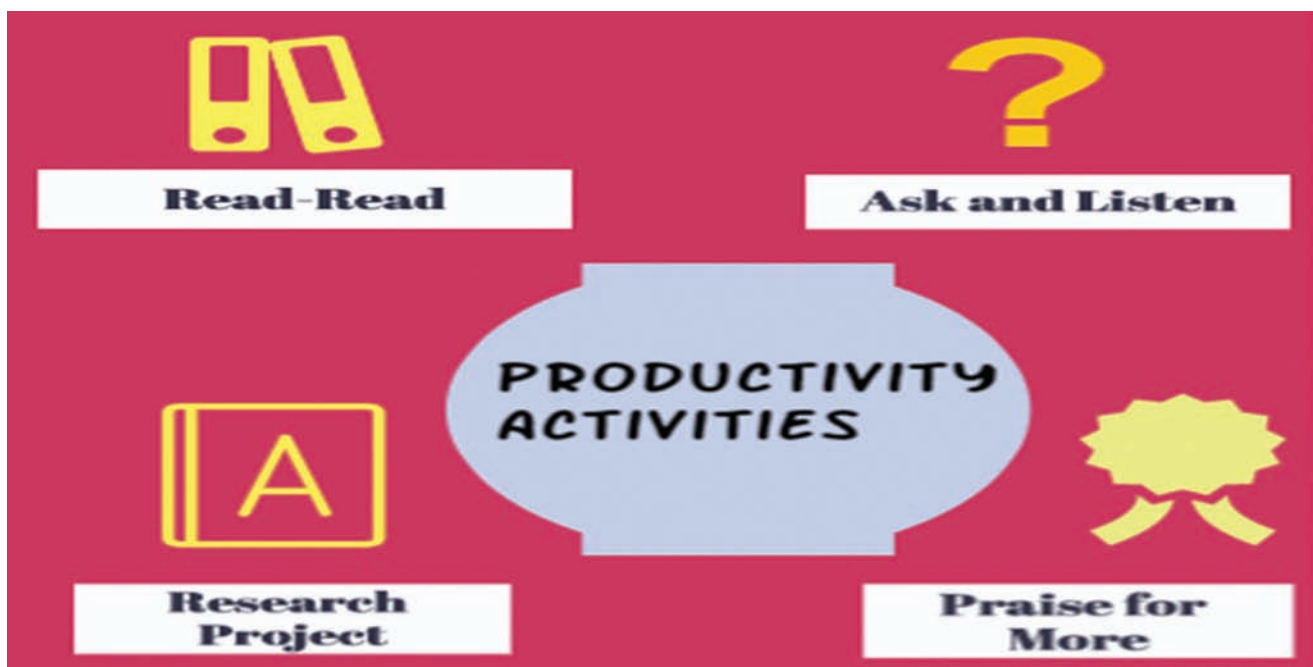
### 6.8.2.4. Design Thinking

- ✓ The teacher should offer opportunities in the classroom where students can write their own critical questions about content.
- ✓ They should be allowed to question the credibility of the content and offer their perspective on the same.
- ✓ At least one topic per semester may be planned in a manner to foster self-direction in the students.

## 6.9. PRODUCTIVITY AND ACCOUNTABILITY

Basis	<ul style="list-style-type: none"> <li>• Goal setting</li> <li>• Planning</li> <li>• Time management</li> <li>• Research</li> <li>• Development</li> <li>• Evaluation</li> <li>• Revision</li> <li>• Application</li> </ul>
Purpose	<p><b>Productivity</b> is prioritizing, planning, and applying knowledge and skills to make decisions to enhance quality of work in an ever-changing environment.</p> <p><b>Accountability</b> is demonstrating personal integrity through appropriate resource allocation and effective time management.</p>
Strategy	<p><b>Proper allocation and Time management</b> - The proper allocation of tasks and duties to the students and proper analysis of time required to perform a task are key factors in measuring the students' performance. They should be encouraged to keep a track of their academic and non-academic progress.</p> <p><b>Positive Environment</b> - Teacher will create a type of environment in the class that if any student or teacher does any mistake, they will accept that and take full responsibility of it without any fear of judgment.</p>

### 6.9.1. ACTIVITIES



#### 6.9.1.1. Research Project

- ✓ Students (individually/group) shall research a topic by collecting information from various sources.
- ✓ Students then create a document discussing their research topic and take feedback from their peers.
- ✓ Then each student compiles a reflective paper using what they have researched and the input from their peers.
- ✓ This would enhance their performance and lead to increased productivity.

#### 6.9.1.2. Expo 2020

- ✓ Students participate in a “young innovator” program where they give life to their productive ideas. A model of this can be made for the classroom where children will make different items/models for the class.

#### 6.9.1.3. Praise for More

- ✓ Teacher should recognize and praise children’s work. Appreciation for their work , increases their productivity and motivates them to work more.

#### 6.9.1.4. Read-Read

- ✓ Teacher will set a particular time for reading books other than textbooks.
- ✓ Teacher and students can even choose a book from the school library which they can read together in the class.

- ✓ Students and teachers will set weekly targets for the reading of books and whoever fulfils the target will have their name written on the school board/ wall magazine as the “Reader of the Week”.
- ✓ This will encourage children to fulfil the weekly targets and also improve their productivity in class.

#### 6.9.1.5. Ask and Listen

- ✓ In the beginning of the class, the teacher will talk to students about how they are feeling, what happened yesterday with them, why someone is not feeling good, and why they are feeling this way, etc.
- ✓ Asking children these questions will help them clear their minds and it will also make them positive and understand that it is alright to have different emotions and that they matter in the class. Their productivity will increase by adding these things in the class.

# ACCOUNTABILITY ACTIVITIES



**Student Accountability  
Project**



**Monitors and in  
Charges**



**Ownership of the  
learning Process**



**Do as you say**

Activate Windows



#### **6.9.2.1. Student Accountability Project**

- ✓ At the beginning of the term, students will write a letter to their future self, one year hence, about the personal goals they had set up for themselves, and how they intend to achieve them in one year.
- ✓ Teacher will seal each of these letters in separate envelopes addressed to the student who wrote the letter and keep these letters away.
- ✓ Students will create a time chart to monitor their own progress towards their goals.
- ✓ At the end of the term, they will write and share how they achieve their goal and whether they have been successful in achieving what they have planned for.

#### **6.9.2.2. Monitors and In-Charges**

- ✓ Every classroom, materials, educational resources, facilities can be allocated with monitors and in-charges. This makes students accountable for the work they are doing.

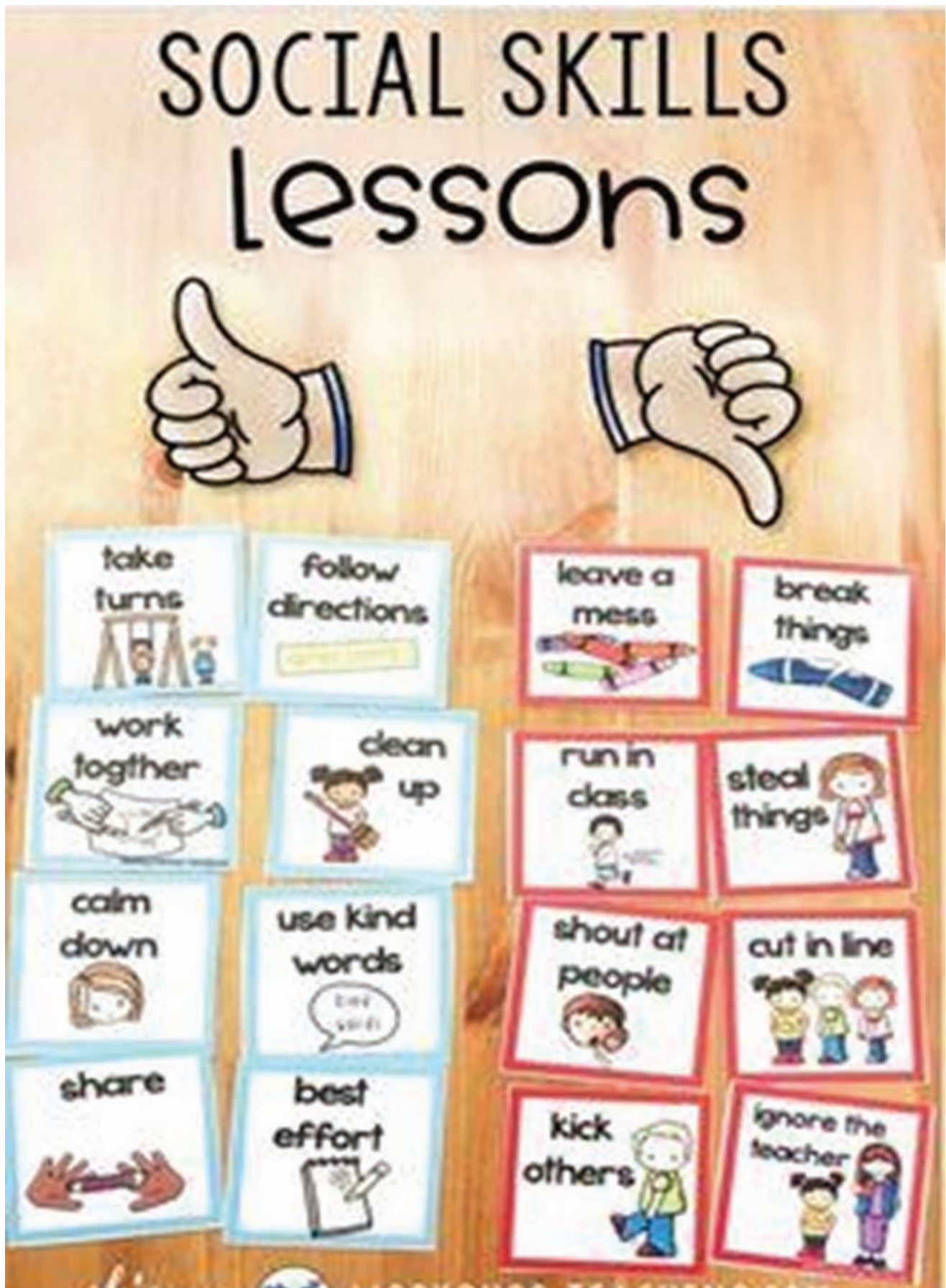
#### **6.9.2.3. Ownership of the learning Process**

- ✓ Giving students a say in how they will learn has been linked to gains in student effort and achievement.
- ✓ This will help children to work and take full responsibility of it and be accountable for it.

#### **6.9.2.4. Do as you say**

- ✓ The best way to teach kids about personal accountability is by being accountable yourself.
- ✓ When they see you make amends, they learn to be accountable for their own behaviour.

## 6.10. SOCIAL AND CROSS-CULTURAL INTERACTION



<p>Basis</p>	<ul style="list-style-type: none"> <li>• Cooperation</li> <li>• Compromise</li> <li>• Decision making</li> <li>• Communicating</li> <li>• Using emotional intelligence</li> <li>• Using constructive criticism</li> <li>• Trusting others</li> <li>• Delivering on promises</li> <li>• Coordinating work</li> </ul>
<p>Purpose</p>	<p>To make students adaptive, flexible, appreciative of diversity.</p>
<p>Strategy</p>	<p>Group work is a great way for students to work hands-on with other students who are different from themselves. Also children will know when it is appropriate to listen and when to speak. It can be applied in the classroom by dividing the students into the groups to do classwork. When grouping students, teachers should create socially and culturally diverse groups. Teachers should incorporate this group work into their lesson plans, forcing students to interact in order to complete their assignments.</p>

### 6.10.1. ACTIVITIES



The poster features a decorative border at the top and bottom with a repeating pattern of colored squares in shades of red, orange, yellow, and green. A large red banner at the top center contains the title "Social Skills Activities" in yellow text. Below the banner, the poster is divided into four sections by horizontal dashed lines. Each section includes an icon and a red box with white text. The first section shows four human figures (three green, one red) and two emotion faces (sad and happy) next to a red box labeled "Emotion Charades". The second section shows two running figures and theater masks next to a red box labeled "Relay Culture". The third section shows a person with a lightbulb and two people at a table next to a red box labeled "Face It". The fourth section shows a group of diverse human figures next to a red box labeled "'Social' Circle Time".

## Social Skills Activities

Emotion Charades

Relay Culture

Face It

"Social" Circle Time

### 6.10.1.1. Relay Culture

- ✓ Class will be divided in 4-5 groups with equal number of children in each group depending on the class strength.
- ✓ Each group has to choose one state or culture and has to wear or have something from that culture and move towards another student and pass on and exchange something of each other's chosen culture.
- ✓ Each group/team must try and pass on something uncommon and unique about their chosen culture.
- ✓ Upon being passed something from another culture, the team has to do quick research about that aspect of the culture that has been passed to them and prepare a flip chart/presentation on what they have learnt.
- ✓ This way if there are 4 teams, they would have learnt something unique about 4 different cultures. This will help children to understand and appreciate different cultures.

### 6.10.1.2. Face It

- ✓ This activity can be done with small Children.
- ✓ Make pairs and ask students to stand in front of each other.
- ✓ Ask them to make funny faces which their partner can copy.
- ✓ Children who are outgoing will be able to copy each other.

### 6.10.1.3. "Social" Circle Time

- ✓ At circle time, have each child say something pleasant about the person next to them as they go around the circle.
- ✓ This can be theme based (cooperative, respectful, generous, positive, responsible, friendly, empathetic etc.) or about their uniqueness, etc. and it can change every day to stay fresh.



## CHAPTER 7



## SOME FACILITATION METHODS



Following are some common and frequently used methods :

**CLASS DISCUSSION (in small or large groups)**

**BRAIN - STORMING**

**ROLE PLAY**



**SMALL GROUP/BUZZ GROUP**

**GAMES AND SIMULATIONS**

**SITUATION ANALYSIS AND CASE STUDIES**

**DEBATE**



**STORY TELLING**

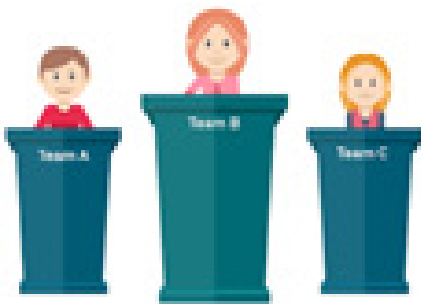
## PAINTING



## DANCE




## QUIZ







## QUESTIONNAIRES




In addition to the above, some more suggestive, creativity-based, facilitation methods for implementing 21<sup>st</sup> Century Skills are being given as under:

Facilitation Method	Description	Benefits	Process
<p>YOGA AND CLASSICAL TEXTS</p> 	<p>Yoga encompasses physical, mental and spiritual practices. Students can be encouraged to learn about various asanaas or yogic exercises with the help of a yoga instructor. They must be explained that Yoga not only leads to massaging of internal organs (Yoga is the only form of physical endeavour that helps in that) and flexibility (a precursor for good health) of the body, it also helps reduce cortisol from the body. Cortisol suppresses immunity.</p> <p>The ancient Indian texts like the Vedas, Upanishads, Thirukkural, etc. are enriched with the principles of living a healthy life which can be used to inspire students.</p> <p>The lessons of life can be learnt through the short stories, quotes etc. mentioned in literary works such as Jataka tales, Panchtantra texts, etc.</p>	<p>Yoga can help students in increasing flexibility and mind-body balance. Improves energy and vitality, strengthens memory skills, decision making and problem solving and reasoning skills, focus and concentration. Yoga relieves stress, helps in managing anger and attaining better regulation over emotions. The classical texts consist of inspirational quotes and messages from various life stories which can inculcate humility and abstract thinking among the students</p>	<ul style="list-style-type: none"> <li>• Regular yoga classes to be held.</li> <li>• Starting with simple yoga exercises and gradually increasing the level.</li> <li>• Students can be taken to a calm and open space devoid of any distraction.</li> <li>• Make sure to explain the benefits of each and every exercise. In fact, you can turn it into a science class, by explaining which internal organ/ muscle/skeletal movement is involved in which exercise, etc.</li> <li>• The excerpts from the classical texts can be made available in simple language to the students for reading and teachers can guide them through</li> </ul>

<p>JINGLE MAKING/ RAP SONG MAKING</p> 	<p>A jingle is a short slogan, verse or tune designed to be easily remembered and typically to advertise or highlight an issue or a product.</p> <p>Rap is a popular style of music, where the words and the music is set to a recurrent beat, often appearing like someone speaking in fast-paced verse.</p> <p>Students can be encouraged to create jingles/rap songs regarding whatever they wish to express and raise awareness about that among masses.</p>	<p>Jingle/rap song can act as an entertaining source of expression of thoughts and ideas among students. Helps in bringing out creativity of students. Issues and ideas which are difficult to put into plain words are expressed through tunes and lyrics which are listened and remembered more effectively.</p>	<ul style="list-style-type: none"> <li>• Groups can be formed on the basis of mutual interests among the students.</li> <li>• Writing of the lyrics, themes, composing of music, etc. can be divided among the group members under the guidance of a teacher</li> <li>• Events can be organized in order to keep their motivation levels high and reach out to the masses.</li> </ul>
<p>PUPPETRY</p> 	<p>Puppetry is an art of making and manipulation of / manipulating puppets (objects or dolls resembling a human, animal or a mythical figure typically made using cloth and cardboards) for depicting theatre or drama. The puppeteer uses hand movements or control devices such as rods or strings to move the body parts of the puppet to show the enactment</p>	<p>Puppetry is a form of performance arts that can be used as a mode to showcase about the various adolescent mental health issues, social issues, different ideas and imagination of students in the form of story telling</p>	<ul style="list-style-type: none"> <li>• Students can be encouraged to be creative with the making of the puppets by using different art and crafts material under the guidance of an art teacher.</li> <li>• Workshops or special classes can be arranged for the students to learn the art of communication through puppetry.</li> <li>• Teachers can indulge students into making short plays or</li> </ul>

			performance on various themes and showcase them to the audience.
<p>LITERATURE</p> 	<p>A body of written works having artistic or intellectual value, often due to deploying language in ways that differ from the ordinary usage.</p>	<p>Compositions which capture events, themes and situations in a short and precise manner.</p> <p>Used in communicating feelings, opinions, ideas, habit and other experiences.</p> <p>Can be in the form of songs, recitations, chants, be dramatised to enhance the acquisition of various life skills.</p>	<ul style="list-style-type: none"> <li>• Various books and novels can be made available to the students for reading</li> <li>• The teacher can explain the meaning of the texts and help the students relate to the real life situations</li> <li>• Students can also be encouraged to read and enact in groups in order to understand better,</li> </ul>
<p>DRAMA</p> 	<p>Composition in verse or prose intended to portray life, character or to tell a story. It usually involves presenting conflicts and portraying emotions through action and dialogue.</p>	<p>Drama can provide a platform for self-expression, developing empathy and practicing skills in life like situations</p>	<ul style="list-style-type: none"> <li>• Students can be encouraged to enact any of their literature lessons, social issues or any theme they wish to</li> <li>• Guidance can be provided by the teachers while forming a play, character roles etc.</li> <li>• Students should be encouraged to express their feelings, thoughts and emotions through this medium.</li> </ul>

<p>SINGING</p> 	<p>Singing is the act of producing musical sounds with the voice and expression of regular speech by the use of sustained tonality, rhythm and variety of vocal techniques.</p>	<p>Singing is a form of expression of thoughts, ideas and feelings which is more effective than plain speech. Creativity and imagination of the students can be shaped into the form of singing in various styles, lyrics etc. Singing can be a stress buster and helps in regulating emotions and managing anxiety.</p>	<ul style="list-style-type: none"> <li>• Students can form groups or pairs on the basis of mutual interests.</li> <li>• A music teacher can encourage the students to put their thoughts and ideas into songs or music.</li> <li>• Various themes can be provided to the students and they can be motivated to take part in events and express themselves through singing.</li> </ul>
<p>MEDITATION</p>	<p>Meditation is not about religion. It is about focusing your awareness to such an extent that you lose track of your conflicting thoughts and of time. A person who is very involved in singing, painting, writing creatively, running, climbing a mountain, trekking, etc. is a person in meditation.</p>	<p>When a child focuses her awareness on something that she loves doing, even if it is playing with mud or water, the child is in meditation. This makes the child happier, reduces stress, improves memory, improves concentration, encourages compassion, etc.</p>	<ul style="list-style-type: none"> <li>• It is important that the teacher takes up activities that involve all children of the class and fire their imagination enough to work on that activity.</li> <li>• Before taking up any creative activity, the teacher can encourage students to sit in complete silence with eyes closed, to bring awareness to the activity at hand.</li> </ul>



## CHAPTER 8



# CBSE ACTIVITIES TO PROMOTE 21<sup>ST</sup> CENTURY SKILLS

Central Board of Secondary Education has taken various initiatives and has been conducting several activities to promote 21<sup>st</sup> Century Skills. The details of those are presented as follows:

### 1. Mandatory Art Integration

It is a cross-curricular approach to teaching and learning based on collaboration between the teaching of subject with the teaching of Art (Visual/performing etc.), where Art, in any of its multiple forms, becomes the primary pathway to learn the subject/topic and also of assessment.

This helps in encouraging creativity, collaboration and social skills among students by taking part in different arts activities and performing in groups.



### 2. Making Experiential Learning as Mandatory Pedagogy

It probes deeper into the essence of experiences to bring it to the class to make learning joyful, engaging and at the same time connected to real life.

It will help in developing problem-solving, communication and critical

thinking skills. By experiencing things, children will learn to relate the concepts with real life instances.

### 3. Heritage India Quiz

The CBSE Heritage India Quiz is an Inter School Quiz conceptualized by the Board with the objective of promoting interest and desire among students to learn and appreciate the history, tourism and sharing the vast cultural heritage of our country.

This competition helps children to be critical thinkers to find answers of the quiz questions, as well as promotes socio-cultural awareness among them.



### 4. Science Exhibition

The Central Board of Secondary Education has been taking many initiatives to generate curiosity and develop scientific attitude amongst learners. The activity aims at providing a platform to students



to demonstrate such learnings that encourage construction of knowledge by connecting new ideas to existing concepts as well as enriching one's understanding from other's experiences and perspectives.

This activity will also help develop literacy skills among students. This will also help children to be creative and critical thinkers on how to choose topic and how to present it.

## 5. Art Exhibition

This competition is about generating interest of students in the vast Indian culture. Students have to create Art forms from eco-friendly products.



This will help children to develop thinking skills; their creativity will increase by making the product, their communication and collaboration will improve by presenting the details about their art form.

## 6. CBSE Storytelling Competition

Initiated in 2019, this competition aims to enable children to present subject topics and concepts through Stories. For example; explaining Adjectives, Periodic table through stories.



## 7. Aryabhata Ganit Challenge

It is an online test organised by CBSE to make learning mathematics joyful. In this competition, questions are based on analytical skills in which children think and relate mathematical problems to real life problems, leading to development of problem solving and critical thinking skills.



## 8. Reading Challenge

To encourage quality of reading among students, CBSE has organised reading challenge in which students



read different text and graphics and comprehend their meaning. Children will develop critical thinking when they are able to read. They will understand better. Their problem solving skills will be developed because now they can understand better and their creativity will also improve as they have to comprehend graphics as well.

## 9. Skill Education



CBSE has introduced different subjects like artificial intelligence, yoga, etc. These subjects aim at improving 21<sup>st</sup> century skills.

## 10. Creative and Critical Thinking Practice

Board has initiated another activity to increase creative and critical thinking among students. Board releases five questions weekly to test the creative ability of children for problem solving. You can access it at <https://diksha.gov.in/get/dial/R5Z7P5>

These can be given as homework or teacher will/ may or can start the class with these questions. It all depends on the teacher. This will also increase collaboration and communication between children as teachers can also divide the class into pairs of two children.

## 11. Science Promotion Test

This competency based assessment in Science would encourage students to connect the science curriculum areas to real life situations. The test would assess student's abilities to think rationally and critically. This will help children to understand science in a more better and fun way.

## 12. Fit Schools and Fit School Week

This is the Board's initiative taken to support government's Fit India movement. In this, several activities are organised to help children to remain fit. This also includes healthy eating habits. In the time of lockdown as well, online session with different experts are provided by the CBSE to maintain good health of the children. These include tips regarding healthy food habits, fitness sessions, mental health etc.



## 13. Ek Bharat Shreshtha Bharat

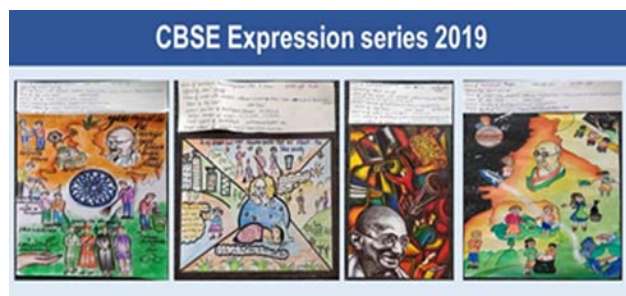
This initiative is taken by the Board to support Ek Bharat Shreshtha Bharat programme launched by our Hon'ble Prime Minister on Ekta Diwas (31st October 2015) on the occasion of birth anniversary of Sardar Vallabhbai Patel to foster national integration

among states, Union Territories, Central Ministries, Educational Institutions and general public. Board issued a list of pairing of states which schools need to follow and perform activities accordingly. These activities will help children to understand each other's culture and respect each other's differences, while integrating and imbibing cultural collaboration.



#### 14. CBSE Expression Series

It is an online competition aiming to improve inquiry, communication skills, evaluation and analysis skills digital literacy among children. Children express their views and thoughts through different mediums like paintings/essay/poems/poster making etc. Everytime Board provides topics on an important issue of national and global importance, like water conservation .



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**THERE ARE MANY MORE ACTIVITIES ON THE CARDS!**

# Adieu for Now



We hope this Handbook has been useful for you.

We shall be back again, after sometime, with a new concept, new Handbook, new theme and so many new things...

After all ,to evolve is human....

Meanwhile, see the painting below...







(Painting by Mr. Rohit Maurya, TGT Arts, Amity International School, Sector 6, Vasundhara , Ghaziabad).





**Central Board of Secondary Education**  
Shiksha Kendra 2, Community Centre, Preet Vihar, Delhi-110092