Dear Facilitator,

Welcome to the Level 1 manual to aid the delivery of the IBM-Quest Alliance STEM for Girls Program. This manual will break down the curriculum to explain the approach, the parts and activities to do with learners.

Why do we need such a curriculum/program?

The STEM (Science, Technology, Engineering and Mathematics) mindset and scientific process skills are the need of the 21st century as they

- help question and challenge stereotypes, myths and superstitions,
- enable better political decisions,
- enable better economic returns,
- enable improved individual behaviours, and
- help to create a more ethical world.

While preparing learners for the 21st-century, shifting one's abilities from being only a consumer of technology to a creator of technology will help learners to pursue their personal or professional goals. It will give them the right knowledge to know how and when to be concerned about their safety in this new digital world.

This new world, however, carries with it many of the inequities present for many decades from the old world. The lack of women leveraging the opportunities presented by this new sphere is only increasing the divide in society. This curriculum focuses on ensuring that all learners – regardless of gender, examine the opportunities and challenges present in pursuing STEM careers and recognise and challenge norms that lead to the creation of an unequitable world.

As a facilitator of this curriculum, we hope you will find the activities engaging and useful in achieving the objectives of the program and have a great experience with the students.

Good Luck!

CONTENTS

	Module 1- Finding my feet
1	**Going on a journey**
2	**Norms for collaboration**
3	**Learning to communicate better – part 1**
4	**Learning to communicate better – part 2**
5	**Who am I?**
6	**My identity**
7	**Common ground**
8	**Interests and abilities**
9	**My dreams**
	Growth chart – 1
	Module 2- Thinking beyond gender stereotypes
10	**Facts or myths**
11	**Gender stereotypes**
12	**Men and women are equal**
13	**Analysing gender stereotypes**
14	**Safe and unsafe touch**
	Growth chart – 2
	Module 3 – Creating solutions
15	**Let's learn computers!**
16	**Search engines**

17	**Algorithms**
18	**Emoji**
19	**Imagine the change you would like to see**
20	**Project planning**
21	**Project preparation and practising**
22	**Giving and receiving feedback**
23	**Final presentations**
	Module 3 – Basics of learning to make
24	**Learning to code**
25	**Let's make a game**
26	**Creating a Scratch project**
27	**Let's learn to present**
28	**Final presentations**
	Growth chart – 3

LEARNING OUTCOMES

Through the 3-year program, the learner will:

1. **Become aware of self:** their strengths, interests and abilities, aspirations, influences in terms of family and socialisation process, their beliefs, biases and mindsets including gender norms
2. **Become change agents creating solutions using tech and non-tech methods:** able to reflect on everyday lived realities to recognize the problem and apply scientific inquiry processes to create equitable and sustainable environments
3. **Expand their understanding of career and career options available:** able to research career information, understand the diversity of careers available, understand STEM careers, future career trends and technology, understand how gender influences career decisions
4. **Inculcate and demonstrate 21st-century skills including scientific literacy and computational thinking:** ability to communicate, express, work collaboratively, think critically, research, analyse and make informed decisions specially to challenge gender norms

In Year One, the focus is on:

SELF-AWARENESS

- Discover the importance of practising **self-awareness** specifically for personal and **professional goal-setting.**
- Recognize how **self-perception and esteem** and others' perception influences a confident identity creation. e.g. the **roles** they play, the qualities, aspirations they have
- Examine **self-beliefs, biases and mindsets** and recognise various stereotypes.

COMMUNICATION SKILLS

- Listen **actively and incorporate suggestions** from group feedback into own work after the evaluation.
- Demonstrate **constructive feedback giving practises** during project share-out sessions.
- Seek **information online** in an efficient manner i.e. using keywords, search engines.

CRITICAL THINKING

- Identify the role **gender stereotypes** play in influencing perception.
- Apply the **STEM mindset to challenge, question and verify** gender stereotypes and myths.
- Create projects that **demonstrate solutions** using design for change as an approach.
- Create projects that **demonstrate digital fluency**: **sequencing, looping, events, parallelism** using an open-source, visual programming platform called Scratch.
- Discover remixing of projects on the Scratch Platform and how to leverage it to create more projects.

CURRICULUM APPROACH

In this curriculum, learners are introduced to basic concepts around self, gender stereotypes, computational thinking and they do projects to consolidate their understanding and present to their communities: classmates, teachers and their parents.

Using an Open-Source Visual Programming platform

These projects are created using an open-source visual programming platform called Scratch developed at the MIT Media Labs, USA.

PARTS OF THE CURRICULUM

The curriculum has 4 or 5 elements depending on the availability of a computer and Scratch. These are:

1. **Facilitator Manual:** Classroom lesson plans on how to conduct the sessions and conduct student assessment

2. **Resource Kit:** A set of videos and resources to be used to introduce concepts through examples and exercises.

3. **Student Workbook:** A set of worksheets per session for students to plan their projects and reflect on their learning.

4. **Assessment Tools:** Tool to assess the learner's understanding and progress. It is a self-assessment growth chart (to be done at the end of each module)

5. **Sprite Bank:** A collection of images of Indian characters and backdrops to be used when making projects on Scratch

CURRICULUM OUTLINE

The curriculum includes a set of 3 modules to be done in sequential order. Each module is further broken down into multiple sessions.

Module 1 – Finding my Feet: An introductory module which gives students a glimpse of the entire year's activities. The activities range from discovering the importance of self-reflection, the impact of the other in defining self, identifying interests, dreams and aspirations.

Module 2 – Thinking beyond gender stereotypes: This module helps students recognise gender stereotypes in various life situations and examine their self-beliefs about gender. It encourages them to ask questions, think critically, verify and challenge the myths and stereotypes. There is an introduction to safe and unsafe touch.

Module 3 – Creating solutions: This module takes the students through the process of computational thinking. Students identify a change that they would like to bring about, brainstorm solutions, plan, share and present their learning. Creating solutions and

simultaneously developing communication skills required in creative collaborations are encouraged. They are introduced to the basics of computing and how the internet can be used for personal and professional goals.

This module is planned keeping in mind the fact that many schools lack lab facilities and infrastructure and as an alternative to coding and learning Scratch.

(OR)

Module 3 – Basics of learning to make: Covering the basics of doing projects on the open-source programming platform Scratch, it will set the foundations for the end-of-module projects they do in the entire curriculum. The sessions provide opportunities for creating stories and simultaneously developing communication skills required in creative collaborations.

Working towards a final project for the **Share-out Event**, they present a change that they would like to see in their school or surroundings or a Scratch project. They hone their presentation skills and participate at the end of program share-out events.

(Note to designer: Please add pg 8 and 9 from the previous curriculum, some aspects could be redesigned)

GOOD PRACTICES FOR UNDERTAKING AN ACTIVITY

- Prepare in advance for the activity with all the material in place.
- Make participants sit comfortably according to the requirements of the activity.
- Tell the participants the main LEARNING OBJECTIVES of undertaking the activity.
- Sum up the activity based on the responses of the participants and as instructed in the session plan.

GOOD PRACTICES FOR FACILITATING A DISCUSSION

- Discussions are the central part of any activity.
- Create a conducive environment for the participants to share their thoughts and feelings.
- Prepare your questions for discussion well in advance and pose appropriate questions.
- Moderate the discussion by ensuring that the participants discuss freely.
- Ensure that no small group or an individual monopolizes the discussion.
- Get the quiet or shy participants to share.
- Maintain a tight watch on the time allotted for discussions.
- After the discussions are over, connect them to the main topic.
- Summarize the main points that surfaced during the discussion.

GOOD PRACTICES FOR TELLING A STORY

- The success of the storytelling activity depends entirely on how powerfully the story is told to the participants and the discussion that follows after the story is completed.
- Make the participants sit comfortably. A semicircle is a good seating arrangement for a storytelling activity.
- Ensure that your voice is clear, loud and filled with energy.
- Maintain eye contact with all the participants.
- Modulate your voice to convey the drama behind the story.
- Begin by stating the main LEARNING OBJECTIVES of the story and what is expected out of the participants.
- Narrate the story without implying any value judgment or any bias towards any character of the story.
- Sum up the participants' reflections.

GOOD PRACTICES FOR INCLUSION

- The participants could have different needs and make sure that all of them are included.

- Change the activities to suit the needs of participants. For example, some may not be able to run and jump or some would be able to draw instead of being able to write. Change the activities or give alternative suggestions so that everyone can participate.

LESSON PLAN STRUCTURE

This section will help you understand how each session is written. Each session plan follows a similar structure. This outlines the intent of each section of the lesson plan.

Session Plan Title:

Time:

Executive Summary:

This outlines the session briefly and the activities that will be done in the session

Learning Objectives:

Outlines the expectations from the sessions in terms of what the intended learning would be for the participants

Prior Preparation and Material:

Material needed in terms of teaching and learning aids for the session and reference material for the learners

DO

Process:

This includes step by step instructions for the activities that need to be conducted within the session

- Activity description in steps and bullet points
- Activity description in steps and bullet points
- Activity description in steps and bullet points

Debrief:

This includes the points/insights that you need to cover in the debrief of the session.

Tips for The Facilitator:

If there are any notes for specific activities, those will be mentioned here.

Variations to The Activities:

This includes suggestions on different ways in which the activities can be conducted. It may give ideas on how to overcome constraints of time, space, material or large/small number of participants.

Parent Engagement:

If there are any questions to be asked to parents or as an extension of some of the activities, students could talk to their parents/ grandparents and find out more.

Module 1 – Finding my Feet

An introductory module which gives students a glimpse of the entire year's activities. The activities range from discovering the importance of self-reflection to the impact of the other in defining self to identifying interests, dreams and aspirations.

Session 1: Going on a journey

Time 35 to 45 minutes

Executive Summary In this session, the facilitator will play a few icebreaker games so that the students and the facilitator get to know each other better, and the students are comfortable. The facilitator briefs the students about the course and shares general instructions about the course.

Learning Objectives
By the end of this session learners will

- get to know each other better.
- understand the 'Big Picture' of the project.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session

Process

Step 1: Introduction
Start the session by introducing yourself**.**
Get the students to stand in a circle. Explain the activity – you will give some statements; if the statement applies to the students, then they have to react to the statements. For example:

- All those who have two feet, jump up and down.
- All those who are wearing clothes, exchange places with each other.
- All those who like to read stories, laugh out loud.
- All those who have worked on a computer before, shake hands with the person on the right.
- All those who like to write stories, turn around.

You can think of more statements to give. The statements can be such that help you know your students better.

You also join the circle and do the activity along with the students.

Step 2: About the program
Ask the class to name the subjects they learn in school. Get responses from the students and proceed to ask them if they know the importance of learning these subjects.

Talk about the importance of learning each of these subjects – our world around us can be understood better if we learn science, math, history, languages, etc. When we understand the world around us better, we can live with the awareness of how to participate in society and also shape society with the values we feel are important.

Ask them if there are any subjects, they want to know more about but are currently not taught in school. Take their responses for 2 or 3 minutes.
Proceed to tell them what the subjects of the program will be covering. You can connect it to what they mentioned in case there are any overlaps. The program will explore: -

- Who am I? – Get to know ourselves better, my interests, strengths, how I relate to others, what have been the influences on me.

- How to ask questions and verify? – This will help us examine our notions, stereotypes and myths. We will ask questions, collect data, infer and verify the information. This will help us think critically.

- How to use technology for my goals? – Learn the basics of digital literacy. We will learn how to identify the change that we bring about, brainstorm and share solutions as a project. If the computer and Scratch tool kit are available, we will learn how to work on the internet, and how to use computers to create our projects of stories, learning the basics of coding.

- How to be more confident? – Learn how to communicate better, making decisions, working in teams and building better relationships.

Talk to them about the importance of doing all of these together. The importance of knowing technical skills, also knowing who you are as a person and what you would like to do with those skills to impact the world.

Ask the learners questions to understand their prior experiences and, through the responses from the learners, understand how much prior knowledge they have about the above subject mentioned.

Talk to them about 'HOW' they will be learning. While they will be learning about these topics, they will be working with their classmates to create projects working collaboratively

- Duration of the course
- The number of hours the session will run
- The number of days in a week they will have this session

The end of the year Share-out Event:

Final Projects: Students will work together to prepare a project and create solutions to an

identified issue/ problem and share with the larger group of audience, or students will work together on a final project on Scratch and submit it at the end of the course. Share with the students that their final projects will be judged by external judges and will be shared with the whole class.

+ The State Hackathon wherein they can share their projects with other school children from the entire state

Elaborate on these 2 aspects of how they will be learning during the course:

Classroom Sessions: There will be classroom sessions where they will be learning concepts, gaining knowledge, and doing preparation activities.

They will work in groups to identify a change that would like to bring about, find and share solutions. They will present this project at the end of the course. They will be working on a computer (if available) with one or more partners and will learn by watching videos and creating projects on the computer.

Workbook: A workbook will be provided to them, which will have a recap section for quick reference, tasks to be done in class and worksheets that need to be completed by students at home. This will help reinforce the lessons taught in the sessions. This workbook is also a means for them to explore and understand more about all the various topics they will cover in the program and hence they should complete the worksheets.

Give the learners the workbook and tell them to write their names on the first page. Ask them to go through the workbook whenever they find the time. Tell them that they need to carry the workbook with them for every session.

Debrief

Ask the students to close their eyes for a minute and think about what was discussed in this session. Ask them what they understand about this project. You could take a few responses and summarise the scope of the project.

Tips for the facilitator

Additional activities that the facilitator can do with the learners if time permits

Activity 1

- Tell the students they will be playing the line-up game.
- Divide the students into groups. (E.g., If there are 40 students in the class, they can be divided into four groups of 10 each).
- Tell them that they need to arrange themselves within the group from shortest

to tallest as fast as they can before you count till 10. Whichever group does it fastest will be the winner.

Activity 2 (Only if time permits)

- Explain the rules of the activity with the same groups formed above - they need to rearrange themselves in the alphabetical order of their names.
- For ex: If a group has students with names like Aditi, Yogesh, Dhruv, Mahesh and Anjali then they need to arrange themselves as Aditi, Anjali, Dhruv, Mahesh and Yogesh.
- Whichever team finishes before you count till 10 is the winner.

Session 2: Norms for collaboration

Time 35 to 45 minutes

Executive Summary In this session, the facilitator will elaborate on how workbooks could be used in this program and set norms for the sessions.

Learning Objectives
By the end of this session learners will

- discover the role of their workbooks in the program.
- discuss the norms for the sessions to work together.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- Chart with norms written on it

Process

Step 1: Discussion on workbooks

Ask the students if they went through the workbook. Ask them- what did they like about it?

Take a few responses. Share with them that, like the workbook, the program is also designed very interestingly and that they will reflect on, think about, learn in and enjoy all the sessions.

Tell the learners that the workbook is for them, their copy and encourage them to add images, write on it, and make it like their own diary. Tell them that they should record any ideas that might come!

Step 2: Setting the norms

Ask the students how this program can be made successful and to work together what needs to be done?

Ask the students to turn to their neighbour and discuss some norms and ground rules for 2 to 3 minutes.

Take a few responses as students share. You could write on the board/ or a chart paper as students share.

Prompt them with the following rules if they are not able to come up with them. The following rules can also be put up on a chart paper in class.

- They will not disturb others when the video is being played or when the teacher is explaining something.
- Everyone will be included in the activities and get chance to participate.
- They will respect others' opinions and not interrupt when their fellow students are answering a question or asking their doubts.
- They will take turns while answering and wait for other students to complete their sentences.
- Since they have to work in pairs/groups, they will talk to each other in a lower voice so that all students can discuss easily.
- They should be both equally involved in doing the projects and not take a bossy role or a passive one.
- They should complete the work given by the teacher. If the teacher gives work as homework, they should make sure to complete it at home.
- They will not hesitate to ask questions or clarify their doubts in the class - it will help build understanding for everyone.
- They will help their friends when they have doubts or have any questions, and not make fun of others for not knowing something.
- There is no one right or wrong answer and hence students can share freely.
- They will be sensitive to the needs of their friends and include everyone.

If the students do not come up with some of these ground rules, put them up on a chart and ask them to read one by one and ask the meaning.

Ask students if they agree with the norms and would follow them.

Tips for the Facilitator

Get feedback from the students about what they expect from the coming sessions and if they are looking forward to the classes!

Session 3: Learning to communicate better - part 1

Time 25 to 30 minutes

Executive Summary

In the previous session, students discussed norms. This session would help to reiterate a few norms and demonstrate through activities how they can be practised. They will do activities that will help them experience different aspects of communication such as listening, speaking, giving feedback and non- verbal communication.

Learning Objectives

By the end of this session learners will

- Discover the need to communicate effectively
- Recognise non-verbal communication as an important communication method

Preparation and Material

- Student Workbook
- Instructor manual for this session
- Figures 1 and 2 printed on a sheet of paper
- A few blank or one-sided sheets

Before delivering this session, please read the following details about communication.

COMMUNICATION

Communication is an exchange of information. This exchange of information could be between two people or between a group of people. Communication can be verbal as well as non-verbal.

Verbal communication includes speaking and writing as a mode to express. Communication can also be non-verbal which includes body language, gestures and facial expressions. It also includes tone of voice, eye contact, hand and body movements and the amount of physical space between you and the other person.

A critical aspect of communication is listening. Some examples of how we listen are:

1. passive listening where we take in, absorb all that the other person has to say without necessarily responding verbally;
2. selective listening or paying attention only to some parts while pretending to listen to the whole message. For example, an adult 'listening' to a child's chatter while reading the newspaper and intermittently saying 'Oh and Aha' to convey the impression of attentiveness;
3. active listening where we nod, ask for clarifications and respond verbally.

It is important to remember that while listening to someone, you should pay attention to them and not think about what you are going to respond next. It is important to pay attention to not only the words but also to the non-verbal cues.
ASSERTIVE COMMUNICATION – Assertive communication means clearly expressing your thoughts and feelings. It means standing up for yourself but doing so in a way that does not go against the rights of others. It ensures that you respect your rights and feelings and the rights and feelings of others. When you communicate assertively, you communicate honestly but appropriately.

Being assertive is:
- Being honest without being rude or hurtful - Expressing what you want - Being respectful of yourself and others
- Having no intention to hurt others

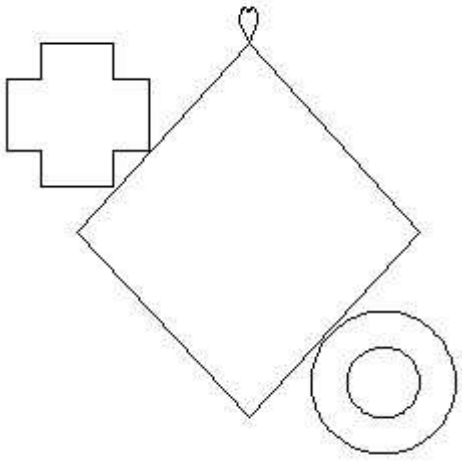
Process

Step 1- Listening game

This game is used to demonstrate the value of checking whether you heard correctly. It is played in pairs and has two rounds.

- Students need to be seated so that they will have their backs to each other.
- In the pairs, one of the participants is assigned the letter name A and the other is assigned the letter name B.
- All the 'A's are given the following figure-1 on a paper. The 'B's are asked to draw in a sheet of paper as A instructs.
- The 'A's are expected to communicate and give instructions to B so that the 'B's can draw a replica on the sheet of paper.

Fig: 1

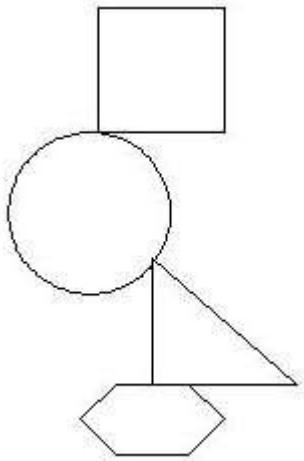


- In this round, a constraint is introduced. The 'B's are told not to speak while playing this round. They have to just listen and draw according to the instructions by 'A'.

- After everybody has finished, B's share their version of the figure with the 'A's. Very rarely does anybody get the figure right. There's usually quite a bit of laughter at the copies of the figure that the 'B's have made.

Step 2: Listening and clarifying

Fig: 2



- In the next round, the ’A's are given a second figure.
- This time the 'B's are allowed to speak and check with the 'A's about any instructions that they did not understand.
- After they have finished, 'B's show their figures. In this step, they discover that except for a couple of mistakes all the reproductions are similar to the above figure.

Debrief

You could start with questions like 'How do you feel?' and 'What did you observe?'
The idea is to have the group reflect on giving instruction and listening and how their diagram was better when they sought clarifications. Driving home the fact that to work effectively in a group listening to each other and clarifying is essential.

Session 4: Learning to communicate better – part 2

Time 25 to 30 minutes

Executive Summary

Students will play a small game to understand the various components involved in listening. The facilitator will share with them knowledge about communication: listening, body language, why this is connected to this course.

Learning Objectives

By the end of this session learners will

- analyse their listening behaviour.

Preparation and Material

- Student Workbook
- Instructor manual for this session

Process

Step 1: Speaker-Listener-Observer

- Ask the students to form groups of three.
- Ask each group to decide who will be the speaker, the listener and the observer.
- Ask the participants in each category to form separate groups far from one another for a briefing on their roles. Ex: Ask all speakers to come together, listeners come together and the observers come together.

Instructions for Speakers:

Instruct the speakers to think of something they feel strongly about, or like to talk about. They have to be prepared to speak on the topic for two minutes when they return to the group.

Instructions for Listeners:

Give each listener one written instruction to follow, from the list below. This should not be shared with the observer or the speaker:

a. Listen carefully and ask relevant questions

b. Interrupt and prevent the speaker from finishing his/her sentences

c. Change the subject frequently

d. Give compliments to the speaker frequently

e. Laugh when the speaker is serious

f. Talk to someone else while the speaker is talking

g. Look around the room and appear distracted while the speaker is talking

h. Give advice when you are not asked to.

Instructions for Observers:

Ask the observers to silently note all interactions between the listener and the speaker.

At the end of three minutes, ask the participants to reconvene. Discuss their reactions to the exercise, what happened in each group and how they felt. First ask the observer to explain, then the speaker and, finally, the listener may reveal the instructions.

During the discussion, ask the questions
- Were the listeners listening?
- How does it feel when someone doesn't listen to what you are saying?
- How was the experience of working in small groups?

Summarise the key points from the students' answers
- It is important to listen to what the other person has to say.
- Do not be hasty in making your point, wait for the other person to finish before voicing your opinion.
- Display appropriate listening behaviour through non-verbal cues

Step 2: Information Sharing
Explain to the students' key learnings from the last two sessions with the students:- Communication is a way of expressing oneself to others. It is important that how you communicate must be effective. Everyone around you should be able to understand what you are trying to say.

- Listening and body language are two aspects of communication, which are very important
- It is important that the way in which you communicate must be effective. Developing reasonably good skills in both verbal and written communication builds a person's personality.
- Share with them that, 'Throughout this course, we expect you to communicate effectively based on what you learned in this session. You must interact with your peers and the facilitator by communicating effectively.
- Working with peers will be an important mode of learning for you throughout the course. It is also crucial that you work effectively as a team with your peers.'

Debrief

Ask the learners to share the following from their understanding after the 2 sessions:

- What is communication?
- How can you make your communication skills more effective?
- How is this connected to the larger course they are doing?
- Did they gain any insight on any aspect of their communication skills?

- What is that they might work on or improve on?

Session 5: Who Am I?

Time 40 – 60 minutes

Executive Summary Who am I session begins the conversation on self and creating a safe space. The session involves posing simple and comforting questions to encourage students to reflect and express themselves.

Learning Objectives

By the end of this session learners will

- know themselves better.
- express and articulate about themselves
- reflect on themselves.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- Video reference for the activity: Mark Collard video: Walk & Stop (Part 1) - https://www.youtube.com/watch?v=JmcmffiXgFY

Go through the questions and answers in the session for yourself. Reflect on the question beyond one- or two-line responses and go deeper.
The depth of your reflection will enable you to help children reflect deeply on themselves.

Process

Step 1: Walk and Stop

- Ask the group to spread out in an open space and stand randomly.
- Start calling out different commands and have the students follow the commands.

    a. Walk - everyone walks
    b. Stop - Everyone stops
    c. Reverse - Walk - everyone stops and Stop - Everyone walks
    d. Clap - Everyone claps
    e. Name - Everyone shouts their name aloud
    f. Reverse - Clap - Everyone shouts their name aloud and Name - Everyone claps

Step 2: Stop and answer

- Stop and when I say stop, find a partner for every question given below. For every new question, they will have to find a new partner.
- Each partner must share their answers to the question with each other.
    1. Share the meaning of your name
    2. Share your favourite childhood memory

3. Share five things about yourself

Facilitator's Note: If the students are unable to share by themselves, you could give some examples of yourself to give them a line of thinking.

4. Share three things you like about your partner
5. Share one thing that is true about you and one false thing.
   Your partner has to guess which one is true and which is not.
6. Identify five things that are common between you and your partner
7. Share five things about your favourite person and why and what you love about them
8. Share your favourite hobby/song/time pass activity
9. Share what you would like to become when you grow up
10. Share a summary of all the above questions about yourself

Step 3: Two truths and a lie

Ask students to get into pairs

- Every student will get an opportunity to say three statements.
- The three statements will contain two truths and a lie.
- The three statements that a student will choose will be about themselves, more specifically related to career or interest/ abilities.
- Example. Student 1 gives three statements
  a. I am curious to explore the career journey of a footballer.
  b. I am curious to explore the career journey of a cricketer.
  c. I am curious to explore the career journey of an accountant

Student 2 will, based on his knowledge about Student 1, will attempt a guess on which two statements are truths and which one of them is a lie.

Repeat this process for Student 2 and Student 1 will figure out which of them is a lie.

Debrief

- Ask questions about their experience of doing the activity
- What was it like to share or talk about themselves?
- Did they discover something new about themselves/others? What was it?
- What was their learning from today's session?

Ask them to fill the 'Who am I' Worksheet as homework using their preferred form of expression - writing, drawing, poetry etc., or a combination of all.

Express and reassure them that filling the 'Who am I?' is not to assess their drawing or artistic skills or a competition. It is an expression of yourself in your style.

Tips for the facilitator

This activity could be conducted preferably in an open space. If not, it could be done even inside the classroom

- This could be done for both small groups and large groups.
- You can call out the commands - 'Walk' and 'Stop'; 'Name' and 'Clap' in varying voices and tones to make it sound more alive and funnier.
- Some questions might need examples. Feel free to give examples but not more than two or three.

Variation to the activities

If the session does not permit movement outside class, then

1. walk & stop could be replaced with 'sit' and 'stand' instead.
2. partners for sharing could be alternated between
    a. a student sitting on your right.
    b. a student sitting on your left.
    c. a student sitting in front of you.
    d. a student sitting behind your back.
    e. a student sitting across to you.

Parent engagement

Ask students to find similarities between themselves and their parents.

Session 6: My Identity

Time 40 – 60 minutes

Executive Summary

This session is an upgrade of the 'Who Am I?' Session. In this session, students are encouraged to think about themselves in adjectives and metaphors. Through activities and creative expression, they will develop associations and find similarities amongst each other.

Learning Objectives

By the end of this session learners will

- learn to identify self through metaphors.
- associate self through metaphors and adjectives.

Prior Preparation and Material

- Student workbook
- Instructor manual for this session
- Outline of the face in the student's workbook
- Ask students to carry colour pens, crayons and other stationery
- A list of adjectives that could be written on the blackboard as prompts: https://in.pinterest.com/pin/755971487438563325/?nic_v1=1aycdhE5L2R52RGIW9izGW1LGHCJT%2FCKpCirCdhGi6SZWUIbejoTbFFhYqaGOAi3mH
- You could write/take printouts/charts of adjectives to help students choose the right word to describe themselves or others.

Process

Step 1-Story on identities

1. Begin the session with a small example. You could read it aloud-

Anwar had never heard the word 'Identity'
'Simran, what does identity mean?'
Simran takes out a banana and an orange from her tiffin bag
Then she asks Anwar – 'I will give you some options and you have to categorize the options to describe banana or orange'

1. *No seeds*
2. *Sweet and sour*
3. *Yellow colour*
4. *Round*
5. *Long*
6. *Orange colour*

The words that are used to describe the fruit are their identity.

Our identity is 'who we are' 'It is made up of those small things that describe us and make us different from others'

2. Ask them to name some commonalities between bananas and oranges
3. Next, name some differences between bananas and oranges
4. Now, ask them if we have characteristics that are similar to others, some characteristics that are different from others and the unique characteristics that make us stand out or make us special
5. Sometimes, we can relate our characteristics with other objects or people or elements in nature or food etc.,

For example: -
Rani is always happy and energetic like the sun
Zeenat is a leader like a lion

- Ask students, can you think about words that describe you, think of words that represent your nature, your attitude, your personality? How do you feel most of the time? How do you respond to situations, people? Share with them about yourself- for example, I feel energetic during sunny days, I am a quiet person, sometimes introverted, I like to listen and observe and so on.
- Ask a few students to share and describe themselves.

Step 2: Are you more like?

- Ask them if they feel or recognise commonalities between them and some fruit, or animal or plant or objects or things. What are you like?
- Give a couple of examples of yourself and introduce the activity

1. Ask students to stand in a straight line in front of you.
2. You could call out - 'If you are more like 'a' come to my right, or come to my left if you are more like 'b'.
    a. Example: If you are more like the sun, come to my right. If you are more like the moon, come to my left.
1. If neither, stand in the centre
2. After you have shared a few prompts, ask students to make pairs.
3. Discuss in pairs as to why they think they are more like something.

A few prompts:

Sun or moon
Rock or feather
Roots or branches
Trees or butterflies
Chilli or Chocolate
Birds or Deer
Cats or Dogs
Water or Fire
Sea or river

Variation to the activity

If the session does not permit movement, then

- the student could choose any of the two options, 'a' or 'b'.
- instead of grouping to the right or left, the students who choose 'a' can sit and the students who choose 'b' can stand.
- they can find the nearest sitting or standing partner to share why they are like more of something?

Step 3- My portrait

The purpose of this activity is to

- increase their vocabulary to define themselves.
- help articulate their understanding of themselves better and also know how they are perceived by themselves, and others around them.

Students make a collage of word clouds or use face outline in their workbook.

- Ask them to reflect on the 'My Identity' story and the 'Are you more like?' activity.
- Ask them to think of words that they associate with themselves - adjectives.
- You could write few adjectives on the board or carry a chart of adjectives.
- Ask them to recollect all the reasons for making choices in the 'Are you more like?' activity.
- Next, recollect all the phrases, words, adjectives that their parents, friends, teachers, cousins, relatives call them or refer to them.

- Now, ask the students to open the face outline in their workbook
- Instruct them to write all the words that came to their mind during the reflection of the above questions in their portrait.
- Once they are done, they can form pairs and express their portraits to the person sitting next to/opposite to them.

Debrief

- Ask questions about their experience of doing the activity
- Did they discover something new about themselves/others? What was it?
- What was their learning from today's session?
- How is it going to change or affect how they see themselves from now on?

You could take a few responses from the students and ask them to think deeply about this. Ask the students to attempt a 'Special You' poem as a homework assignment.

Tips for the facilitator

For step 2

- After the instructions are given, encourage the students to choose a side that they relate to rather than going to the side their friends are choosing or standing.

- Include an instruction to not laugh, giggle or make fun of any student or group for sharing their thoughts.
- You can use prompts that are more relevant and familiar with your students' environments and culture.
- There is no right or wrong answer. Encourage students to think about why they chose their option. Reason it.
- It is not about why they like the sun or the moon but about - What is the similarity between them and the sun? Or the moon?
- Students might tend to say - I am like the Sun because '….' and I am not like the moon because of it '….' During these instances, reinforce that you only asked why you are like something.

For step 3

- At the beginning of the class, you could ask all of them to shuffle their seats to encourage different partners for sharing and reflection.
- You could give an outline of the cloud instead of a face.
- They could also represent the adjectives and descriptions of their character traits in the form of images and metaphors. E.g. Draw a flower for beauty/sensitivity. Draw a chilli for angry

Session 7: Common ground

Time 40 – 60 minutes

Executive Summary

This session adds another layer to self-awareness. As a group, students will identify similarities and differences amongst themselves and explore what binds them together as a group. Commonalities strengthen them as a community and help seek and provide support to each other.

Learning Objectives

By the end of this session learners will

- talk about similarities and differences.
- identify similarities and differences that exist in their group and between each other.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- Read group development theory- a word document attached as a resource for your preparation
- Research about how communities are formed, how they are nurtured, how communities contribute to the growth of individuals of the community and vice versa
- Collect some interesting stories on how commonalities and differences can bring people closer as a community.

Process

Step 1: Common ground

Start the session by asking them to think of a time when they met their best friend.

How did you meet him/her?
What did you like about them?
Why did he/she become your best friend?

Streamline the conversation around the commonalities and differences between two people or groups of people and what brings them together

- Ask students to form groups of 8-10.
- Each student lists 10 or more things about themselves - about their likes, interests, hobbies, dreams, movies, play, places they would like to visit, etc. in the workbook.
- In the small group, each student compares their likes, dislikes, interests etc.
- Now, they find what are the similarities between them and their group from the list they have made, individually.
- Make a separate list of commonalities for the group.

- Now, all the groups come together to make a common list of similarities between the groups.

One representative from each group could come together and read the statements to identify similarities. If the similarities are too few, you could ask one of the members from each group to read it out.

Tips for the facilitator

- In this activity, the class makes three lists
- First: A list of their self
- Second: A list of commonalities for their small group of 8-10.
  Please note: Only those commonalities can be chosen that are common among everyone in the group. If even one member does not have it, they cannot include it.
  E.g. 'I love Shahrukh Khan' has to be there in all the 8 members in the group.
- Third: A list of things that are common for the entire class.

Initially, you could give examples but keep it limited and make more space for them to reflect.

Variations to The Activities

If the groups cannot sit in a circle, then the students could be groups of 2 rows clubbed together. They can do the activity while facing each other.

Debrief

- Ask questions about their experience of doing the activity.
- What was your experience of writing about yourself?
- What was it like to find commonalities?
- How did you feel when you found commonalities between you and the group?
- Entire group?
- What does it mean to have commonalities amongst each other?
- What is your learning from this session?
- How will you apply this in your interactions with your friends?

You can also ask; how do they feel about having things in their list that does not match with the others? - the differences?

- Do you want to 'be different' from everyone or 'be like' everyone? And why?
- What is it like to be different?

And, relate this to our identities (previous session). How we have aspects of our identity that is common amongst friends and everyone in the class and some aspects of our identity which is unique.

Conclude the session with the importance of having commonalities and differences in ourselves and its relation to our identities, and how it can add value to our lives and our careers.

Encourage the students to find common interests and similarities/ differences among the family members.

Tips for the facilitator

The class commonalities sheet could be displayed in the class.

Parent engagement

Homework: Students could repeat the same activity with the family members and display the sheets in their homes.

Session 8: Interests and abilities

Time 40 – 60 minutes

Executive Summary

This session is an introduction to the interests and abilities of students. It helps students in the identification and exploration of one's interests and abilities through simple and relatable questions. It involves creative expression of 'Myself' and 'My interests' through a poem.

Learning Objectives

By the end of this session learners will

- become aware of their interests and abilities and talk about it.
- differentiate between interests and abilities.
- find out each other's interests and abilities.
- write a poem on their interests and abilities.

Prior Preparation and Material

- Student workbook
- Instructor manual for this session
- Read about interests and abilities. Do some research on it. What do interests and abilities mean? How are they both different from each other? How do you identify interests and abilities?
- Make a note of your interests and abilities.
- Write about your understanding of interests and abilities and how they play out in your life.
- Have some of your interests turned into abilities? How did that happen?
- What are some of the interests you would like to develop? What are some of the abilities you would like to develop? How will you work towards achieving it?
- What is the role of your interests, abilities in your profession, personal life, family, in your dream?
- Write a poem on yourself and your interests and abilities.

Process

Step 1: Introduction

- Introduce the terms Interest and Abilities and share your personal experiences on your interests and abilities and how they are both different from each other.

- Ask students to list out 5 things for each of the following questions in their workbook
    a. What do I enjoy doing?
    b. What do I like to do?
    c. What am I good at?

- You can introduce interests and abilities in the form of questions. Like - What am I good at? (Ability) and What do I like to do? What do I enjoy doing?

- You could share- I am good at something means that I get it done. I may enjoy doing it and I might not enjoy doing it, but I am good and effective at it.
  Example. I am good at cooking. I may not necessarily enjoy doing it but I am good at it. List 8-10 examples like this – first for oneself and then help the students list it.

- The second question, instead of using the word interest, we may use the question – What do I like to do or enjoy doing?

- Share with the students – 'What do I like to do?' means what is something that I enjoy doing. I may be good at it or I may not be good at it, but I enjoy doing it.
  Example. I like to play the guitar. I am not good at it, but I enjoy doing it.

Step 2:

Ask the students to list 8-10 examples of their interests and 10 examples of their abilities in their workbook.

- Ask them to write a 10-12-line poem about their interests and abilities
- You could share four or five lines from your poem as an example
- The poem must be composed using the words/things they have listed for each of the questions.

The students could be divided into groups of four and share the poems. Encourage the students to write in their mother tongue if they are comfortable expressing so.

Debrief

- Ask questions about their experience of doing the activity.
- Debrief on how knowing one's interests and abilities help us learn something new about ourselves.
- The outcome of the questions is for students to understand that for us to succeed in any task, interests and abilities need to be aligned. Ask students to give an example. You could also add or give a few examples- I like to dance and I am good at dancing, I enjoy singing films songs and I can remember the notes very well and I sing well, I like to play chess and I am good at strategizing, I enjoy cooking and my food is tasty.

Tips for the facilitator

Working on the prior preparation questions and practising how to compose a poem before the session for yourself will help you facilitate the session with more efficiency.

Parent engagement

Homework: The students can share this poem with their parents and ask them if they want to add more abilities to their daughter/son in the poem.

Session 9: My dreams

Time 40 – 60 minutes

Executive Summary

This session encourages students to articulate their dreams. They would also represent the same visually. This session is a starting point to think about their career and is a bridge between self and career.

Learning Objectives

By the end of this session learners will

- identify and think deeply about their dreams.
- express their dreams visually.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- Research about women champions, thought leaders, flag bearers, scientists, doctors, researchers, activists and achievers in the field of STEM.
  Women who have triumphed over their living conditions and have created a mark in human history. E.g. Kalpana Chawla, Sudha Murthy, E K Janaki Ammal, Shakuntala Devi**,** Sudha Bhattacharya etc. You could read up about women scientists from the following site:
  https://www.ias.ac.in/Initiatives/Women_in_Science/The_Women_Scientists_of_India

Process

Step 1: Introduction

- Start the session by sharing the story of a prominent personality who is well known in that region. E.g. Kalpana Chawla, Sudha Murthy, E K Janaki Ammal, Shakuntala Devi**,** Sudha Bhattacharya, Savitribai Phule etc. Share their life story, challenges, achievements and their contributions.
  Or
- You could share the story of 'Girls from UP opening a Barbershop' or 'Poorna, the youngest girl to climb Mt. Everest' with them. Set a context for dreaming, challenging the norm, and also working towards achieving your dream.
  Girls of UP story - https://thelogicalindian.com/story-feed/get-inspired/girls-run-barber-shop
  Poorna's story - https://www.firstpost.com/living/poorna-malavath-my-reason-for-climbing-mt-everest-was-to-prove-girls-can-achieve-anything-3363538.html
- This could be followed by questions on what they think of Poorna or the girls in UP? What does it take for one to dream? What does it take for one to challenge the norm? What is the most important quality to make your dream your reality?

Step 2: Visualization

1. Instruct all of them to close their eyes and relax their body. Tell them that you are going to take a trip to the future.
2. Slowly float up to the sky and move forward in time. They are entering their lives 15 years from now.
3. Ask them to dream without thinking about constraints. Even if there are challenges, tell them they have the strength to overcome them.
4. Then, visualize - Where would you be? What are you doing in your dream life? What do you see around you? What are you wearing? Who are the people around you? What are they doing? What are they wearing? What are they doing? What does your day look like? What are the skills and abilities you have? What kind of life are you living? How is your health? What is your profession or job in your ideal life? How much money or possessions do you have? How do you feel now? If you have to praise and appreciate yourself for your success and achievements what would you say to yourself?
5. Be aware of how you are feeling inside your body.
6. Now, slowly come back to the sky and back into your classroom. Open your eyes gently.

Now, ask them the same questions you asked about Poorna or the UP girls. Encourage a few of them to answer these questions and have a discussion in pairs about it.

- What do you have to do to make this dream your reality? What does it take for you to challenge yourself or your limitations or fears? What is the most important quality you need to make your dream your reality?

Step 3: Draw my Dream

1. Ask students to draw 'their dream' in the workbook.
2. Instruct them to capture from their visualization and draw the images they saw in their dream.
3. It need not be a perfect drawing but it should be similar to their dream.

Debrief

- A few of them could share their experience of visualization and drawing their dream.
- Get students into pairs and share their dreams.
- Ask students if they know someone who is living their dream life now?
- Who are they?
- What makes you wonder if they are living or lived your dream life? What are the similarities between your dream life and their life?
- What do you call these people? Would you like to take them as an inspiration? Or your role model?

Tips to The Facilitator

- Remind them from time to time that it is not about drawing perfectly but about capturing the image of their dream.
- Keep repeating the questions even while they are drawing their dream.
- You could play some soft music while students are visualising and drawing.
- It is advisable to do this activity before the session.
- The class could display their My dream sheet on the notice board

Variations to The Activities

1. You could cut short the visualization to suit the available time.
2. Instead of drawing the entire visual of their dream, they could write it or represent it in the form of metaphors.

Homework
Research on people or a person who is an inspiration to you. Their lives must be preferably similar to 'your' dream life so you can draw inspiration from their life. Think of reasons why you like them or admire them, why you aspire to be like them? You write this down in points and bring it to the next session.

Parent engagement
Ask the students to have a conversation with their parents about their childhood dream. Share a few questions and suggestions:

- Did they have dreams? Or what did they want to be when they grow up?
- Ask them, Why did you want to be that? Or do that?
- Share about your dream and what you would like to become when you grow up with your parents.

Growth chart – 1

The Growth Chart Activity should be done 3 times over the entire course, after module 1, 2 and 3. This helps the students to take a pause and see their progress on the different skills they are learning through the course. As a facilitator, it will help you understand the level at which the class is. You will be able to see patterns in the student's understanding - where most of the students are, what have been the easy and the difficult parts and how they are progressing.

Objective

The Growth Chart shall help students understand where they stand individually and as a class on:

1. the learning progress: remembering, understanding, applying, analysing, reflecting, creating.
2. the skills in learning: communicating, collaborating, enquiry and research.

This would look something like this:

		I Can…	My Growth Sticker		
			Seed (Image)	Plant (Image)	Tree (Image)
1	Remember	I can remember what I learnt in the sessions.			
2	Understand	I can explain what I have learnt in the sessions.			
3	Apply	I can use the information and understanding from the sessions in my everyday life.			
4	Analyse	I can recognize the meaning of the sessions for my life and why we are doing it.			
5	Reflect	I can examine my ideas, notions, perspectives on			

		self, gender and the world around.			
6	Create	I can create new ideas/artefacts and bring my point of view into it.			
7	Communication	I can share my point of view and understand others too in group work.			
8	Collaboration	I can work in teams and contribute actively.			
9	Enquiry/Research	I can confidently use observation and data to answer any of my questions.			

Material and Preparation

- Student workbook
- Instructor manual
- Growth Stickers – seed, plant, tree. Alternatively, children can tick in the rows.
- You can read these statements and think of ways you shall explain each if children ask for examples/explanation.

I Can…	My Growth Sticker		
	Seed (Image)	Plant (Image)	Tree (Image)
I can remember what I learnt in the sessions.			
I can explain what I have learnt in the sessions.			
I can use the information and understanding from the sessions in my everyday life.			

I can recognize the meaning of the sessions for my life and why we are doing it.			
I can examine my ideas, notions, perspectives on self, gender and the world around.			
I can create new ideas/artefacts and bring my point of view into it.			
I can share my point of view and understand others too in group work.			
I can work in teams and contribute actively.			
I can confidently use observation and data to answer any of my questions.			

Activity Details: 20 Min

Pre-Activity Preparation

- Help children look back/recap at what we have done so far.
- Help them understand the purpose of the Growth Chart activity which will give a sense of their progress collectively and as individual learners.
- Talk about how learning happens:
    - Learning is a process which involves interaction with the concepts/topics, new knowledge, knowing what others think, reflecting on one's ideas, learning at each step and not just towards the end of something.
    - Everyone learns at a different pace, so it is important to not compare themselves with others.
    - Different people are good at different things, so it is natural to do well in some things while understanding the need for improvement in something else.
- Show the Growth Chart and its statements. Tell them how each statement must be seen in terms of their journey through the course.
    - Do they remember things, have they understood, are they able to apply what they have learnt, could they analyse their learning? Are they able to evaluate the effectiveness of the learning, have they been able to create something new

using this learning, along with the experience of the process of learning – communicating with each other, working in a team and using data?

- Explain how the growth chart will be used especially the first time they see it after Module 1.
- Explain with examples how the 'growth sticker/tick' has to be put in.
- Explain how, like a tree grows from a seed to a plant to a tree, when we are learning, we also go through different stages.
- They have to mark the stage they are at - a seed (just beginning), plant (developing) or tree (grown and spreading the learning sphere) based on how confident they feel on different aspects.

The activity can be done in the following manner:

- Ask students to open the growth chart given in the workbook.
- Ask them to put the sticker or tick under seed, plant, or tree against each statement.
- They do not have to write their name on the chart.
- Be available to explain the statements as required.
- Once everyone's chart is collected, take the help of the students and count the number of seeds, plants and trees for each statement.

Write the result on the Growth Chart against the date. Assume there are 30 students in the class, here is an example of how the chart will look is given below.

I Can…	My Growth Sticker		
	Seed (Image)	Plant (Image)	Tree (Image)
I remember what I learnt in the sessions.		30	
I can explain what I have learnt in the sessions.		22	8
I can use the information and understanding from the sessions in my everyday life.	8	27	5
I recognize the meaning of the sessions for my life and why we are doing it.	20	10	

I can examine my ideas, notions, perspectives on self, gender and the world around.	28	2	
I can create new ideas/artefacts and bring my point of view into it.	8	21	1
I can share my point of view and understand others too in group work.	2	26	2
I can work in teams and contribute actively.			30
I can confidently use observation and data to answer any of my questions.	18	3	7

Share and Reflect:

Towards the end help children reflect on the completed chart through the following trigger questions:

- Did this help you know where you individually stand in relation to the class?
- Does the class seem to have a pattern? Are most students seeds at one part of the class? Or plant in another? What does this mean as we move ahead?
- Do you find that you are strong at one skill and not strong at another? What do you think you should do in that case?

Module 2 – Thinking beyond gender stereotypes

This module helps students recognise gender stereotypes in various life situations and examine their self-beliefs about gender. It encourages them to ask questions, think critically, and verify and challenge myths and stereotypes. In the last part of the module, students would explore safe and unsafe touch and connect the feelings and emotions to touch.

Session 10: Facts or myths

Time 60 – 90 minutes

Executive Summary

This session intends to discuss the difference between facts and opinions. In this session, students will do activities that will help them differentiate between facts, opinions and rights. This session will encourage students to ask questions about given statements. This session lays the background for the following sessions on gender stereotypes. It would help students to read a statement and differentiate whether it's a fact, an opinion or a myth and encourage them to ask questions.

Learning Objectives

By the end of this session learners will

- differentiate observations, facts and opinions.
- identify opinions, myths and stereotypes.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- Collected leaves of different sizes and shapes/ candles and matchsticks
- Why Why Girl by Mahashewta Devi
- भेड़िये को दुष्ट क्यों कहते हैं?'- This story would help you in preparation and understand how opinions and stereotypes get formed.
- Resources such as a list of fundamental rights, listing human rights, and documents explaining the differences between facts and opinions can be read beforehand to prepare for the class.
- A chart with Why? in the centre

Process

Step 1: Observation

- Ask the students to observe a leaf for 5 minutes. Two or three students could share a leaf. Ask them to make a few detailed observations of the leaf and make notes individually.

Variations to the activity

If possible, you could ask the students to go out of the class, choose anything (leaves/ tree/ clouds) and make observations or you could light a few candles near the teacher’s table and ask students to observe the candle.

Step 2: Observations or opinions

- Ask the students to share the observations in any order. You could take about 10 to 12 responses depending on the number of students. Note them on the board.

Some of the examples/ responses could be,

- I used to collect such leaves.
- The veins of the leaves are visible.
- They are soft to touch.
- I have an album of collected leaves.
- The leaf is in an oval shape.
- The tip of the leaf is pointed/ blunt.
- The blade of the leaf is 7 cm.
- Some leaves are beautiful.
- On my way to school, I also saw these leaves.
- The midvein looks like the main road.
- The smell of the leaves is good.

If students are not able to respond, you could prompt

- What is the size of the shape of the leaf?
- What is the colour of the leaf?
- How do you feel when you look at them or touch them?
- Do leaves remind you of something?

Step 3: Differentiating observations and opinions

- Now ask the students if all of these are observations, and which are the ones are not observations but are feelings or opinions.

Mark or underline those that are not observations.

- I used to collect such leaves
- The veins of the leaves are visible
- They are soft to touch
- I have an album of collected leaves
- The leaf is in an oval shape
- The tip of the leaf is pointed/ blunt
- The blade of the leaf is 7 cm
- Some leaves are beautiful
- On my way to school, I also saw these leaves
- The midvein looks like the main road
- The smell of the leaves is good

Similarly, if they observe a lit candle

- The height of the candle is 7 cm or so
- I was feeling nice when I observed the candle
- The height of the flame is 3 cm
- The colours of the flame are yellow, blue, orange etc
- It reminded me of my birthday celebration
- The tip of the wick is red
- I felt calm and meditative when I saw the lit candle

Discuss
If students are not able to answer or spot immediately- you could point to the statements and ask

- Is that an observation?
- Does this apply to all of us? For example - The smell of the leaves is good- Does everyone's smell the same way?
- It is soft to touch - does everyone feel the same way?
- Some students could say - the blade of the leaf was not 7 cm but 6 cm- is that an observation still? It is an observation and we could verify or check the size and the length - or if we get different answers, we could take the average length.
- However, statements, like I use to collect leaves, are feelings/ opinions/ some statements about yourself/ or what you like to do. It is not an observation about the leaf.

Step 4: Statements on facts, opinions and rights

- You could check by show of hands if most (80 %) of the class have got this difference. If not, you could take another example of an observation and a feeling.
- If yes, share that we will take more examples and dwell on it further and that would help to clarify everyone's doubts. To do that, the students could solve the worksheet (Task 1 - Student worksheet with statements to differentiate facts, opinions and rights) in the class individually. They could take about 10 minutes to do that. Tell them some statements could be opinions and some statements could be observations and some statements are neither of these.
- For example - You should reach school by 9 am/ We should drive on the right side of the road.
- What are these? - These could be rules/ laws or rights. There are more such statements in the worksheet and you will be able to identify them and we will discuss once you finish the worksheet.

Task - 1

Classify the following statements as facts/ observations, opinions and rules/ rights

- I study in a government school.
  Ans- fact
- Boys like playing cricket.
  Ans- opinion
- Our skin is the largest organ in our body.
  Ans- Fact

- Girls are good at playing kho-kho.
  Ans- Opinion
- Girls and boys have the right to education.
  Ans-Right
- Learning and school is exciting.
  Ans- Opinion
- We need to be 18 to get a driving license.
  Ans- Rule/law/right
- I like all my friends.
  Ans- Opinion
- Science is a very interesting subject.
  Ans- Opinion
- Women's hearts beat faster than men's.
  Ans- Fact
- Human beings have 206 bones.
  Ans- Fact
- Women enjoy cooking.
  Ans- Opinion
- All of us are equal.
  Ans- Right
- I am studying in class 8.
  Ans- Fact
- Men have short hair.
  Ans- Opinion/ belief

After answering they could turn to their neighbour and discuss the answers. (Pair- share)

Step 5: Discuss the statements

- As a large group/whole class activity - you could ask the pairs to share a statement and give the answer. Move on to the next statement if most of the students have got a similar answer. If not, then one of the pair could explain to the class why they think the statement is an opinion or an observation or a right.
- You could take 10 minutes to discuss all the statements.
- As a closure of this activity - Share that the students will do a small homework (HW-1) where they will write 5 observations about themselves and 5 opinions about themselves and two or three rules that they follow (Explain the homework by giving an example or two). Some examples could be: observation - I am wearing a red colour skirt, opinion/ feeling- I like the red colour skirt.
- Also, share that they will read or listen to an interesting story about a girl who asks questions in the next class and discusses opinions in detail.

(You could continue the following sections if you get more than an hour continuously)

Process

Step 1: Sharing the story

- Share the story Why Why girl to the class with appropriate tone and voice modulation
- After sharing the story, ask, What are some of the questions asked by the girl?
- Note the questions on the board

Step 2: WHY?

Try and remind the students about questions like

- Why should I eat leftovers?
- Why do I have to walk so far to the river to fetch water?
- Why do stars look so small if many of them are bigger than the sun?
- Why can't fishes speak?

You can then point to the questions and ask

- What does Moyna ask questions about?
  (She asks about everything, what she observes, about herself, other's ideas and views and other's opinions)
- Why do you think Moyna asked, 'why should I eat leftovers?'
- Do you ask questions? What kind of questions?
- Do you ask questions like Moyna's?
- Why do we need to ask questions?
- Can you relate this to the activity on opinions and observations?
- Task 2- Can you write in the worksheet two or three questions that you might have at this moment? It could be about yourself, other's opinions or things that you wonder about.

Step 3: Asking whys

- Give five minutes for students to note this down and ask students to read aloud a few questions. Encourage students to ask questions that start with Why and What if?
- You can then display the chart (Why) in the classroom and ask the students to keep adding more questions over a week and number of whys on the chart. As a guideline, you could share that students need to come with some interesting and challenging questions. If there are questions for which answers are already known, then they need not put those questions on the chart. For example, questions like 'Who is the President of India?', 'What is the capital of India?', etc. should be avoided. Ask questions that start with Why? and What if?

Step 4: Discuss

- You could then explain how opinions could lead to myths and stereotypes. (Read भेड़िये को दुष्ट क्यों कहते हैं?' for your preparation to discuss how opinions lead to some beliefs over time). It is some people's opinions that happen to become myths and stereotypes over some time. These opinions/ myths are followed by people without verifying. E.g.-

If cats cross the road, it's a bad sign, if crows caw, guests are visiting us, we cannot eat during an eclipse, girls can't go out when it is dark.

- Ask students to give one or two such examples.

Debrief

- You could ask what the three things they remember in this session are. You could take a few responses from the students and summarise the session.
- This session highlighted the differences between facts/ observations, opinions and rights. Opinions could lead to myths and stereotypes. The students need to ask questions and continue asking questions to challenge some of these opinions. In the following sessions, they will dwell in detail about the stereotypes that exist about boys and girls.

Parent engagement

As homework (H.W- 2), can they think of more such myths and stereotypes that exist in their culture or society? They can discuss with their parents to find out more.

Glossary of words

Facts- A thing that is known or can be proved
Myths- A belief that is commonly held
Stereotypes- A commonly held fixed idea which is oversimplified or generalised
Rights- A morally or ethically justified or accepted
Opinion- A view on something which may not be based on facts

Session 11: Gender stereotypes

Time 60 – 90 minutes

Executive Summary

In the previous session, students explored facts, opinions, rights, myths and stereotypes in general. In this session, they will discuss and understand gender stereotypes. This session would help students examine their myths and stereotypes concerning gender as an identity. They will recognise how gender stereotypes are constructed and play out in their life situations and context.

Learning Objectives

By the end of this session learners will

- examine their notions about gender.
- recognise gender stereotypes in their day to day life situations.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- Video of *The Impossible Dream* / If the video cannot be played then gender roles at home task can be done as an alternative
- The link to the video is **https://www.youtube.com/watch?v=t2JBPBIFR2Y**
- You could attempt all the worksheets and tasks as it would help you to examine your notions, reflect and conduct the sessions and discussions in an engaging manner

Read the following about gender stereotypes for your preparation:

What does the word 'Stereotype' mean?

- A set idea that people have about what someone or something is like, especially an idea that may be baseless or without sufficient evidence
- There have been several traditional gender-based stereotypes. For example, one of the stereotypes is that males are stronger than females. While there are biological differences between the male and the female, the stereotype emerges more from sociological and cultural reasons.
- Another stereotype is that nature created the male to be performing the role of a breadwinner of the family, while the female is to perform the role of child-rearing and homemaking.
- Many traditions and communities believe that the female is less intelligent than the male. Many people feel that females were created to serve males. These are examples of stereotypes.
- Females are often discriminated against in several areas. For example, many girls discontinue their education midway due to some of the gender stereotypes that many people believe in. Women and men are often constrained to serve traditionally determined roles based on gender.

- The existence and belief in some gender-based stereotypes often put women and men at a disadvantage.

Process

Step 1: Drawing a surgeon

- Ask students to complete Task 1 in their worksheet and tell them that it is an individual task
- Explain this or read it aloud: Think of a hospital in your city. Now imagine a surgeon working in the hospital. Draw an image of the surgeon working at the hospital. Try to make it as realistic as possible by drawing the surgeon's clothes, equipment, medicines and books. Once you complete your drawing, write the name of the surgeon and hospital on top of the sheet.
- Tell them that they have about 5 minutes to draw this and it need not be artistic as it is only a representation of what they think.

Facilitator's tip: The instructions must refer to the person to be drawn only as 'the surgeon.' Never should the surgeon be referred to as he or she or by any other pronoun or word that might imply the sex of the surgeon.

- Once the learners complete their drawings, ask them to share the same in the desk or the group.
- Calculate the percentage of drawings in which the surgeon is depicted as a woman as opposed to the percentage that shows the surgeon as a man by show of hands and shares this information with the group.

Ask students:

1. What gender do we associate a surgeon as? Have you heard of male and female surgeons?
2. You can also ask a few students to share why they chose a man or a woman?

Conclude by saying that the drawings represent their subconscious views about the profession of a surgeon and we will explore such deeply embedded notions further in the following activity.

Step 2: Marking qualities

- Ask students to complete Task 2.
- Below are given a list of qualities. Take one quality at a time.
- If you think the quality is shown by a boy or a man, then write it in the column called Man/ Boy
- If you think the quality is shown by a girl or a woman, then write it in the column called Girl/ Woman
- If you think the qualities are shown by both a man and a woman write the quality under the column called 'Both'

 Strong	 Caring	 Brave	 Heroic
 Determined	 Kind	 Loving	 Dominating

 Beautiful	 Nice	 Jealous	 Stylish
 Polite	 Intelligence	 Risk Taking	 Good at Math
 Fights	 Leader	 Helpful	 Hardworking

List of Qualities	Girl	Boy	Both
Strong			
Caring			
Brave			
Heroic			
Jealous			
Stylish			
Polite			
Intelligent			
Risk-Taking			
Good at Maths			
Fighter			
Leader			
Helpful			
Hardworking			
Determined			
Kind			
Loving			
Dominating			
Beautiful			

Ask

- How many of the qualities were only girl/woman, how many were only boy/man, and how many were both?
- Count and write the number in the table given below.

Person	Number
Only boys	
Only Girls	
Both	

Debrief

Why do you think this happens? Let's understand our brain to get some answers!

- Our brain has two parts: the conscious side and the unconscious side. The brain is a super organ. It has to be able to do a lot of things at the same time. It is faster than the fastest computer. To be able to act fast, it creates these divisions.
- Things like being able to do mathematical calculations or cooking a new dish from Scratch are things where we use the conscious side of our brain. Things like breathing or blinking our eyes are taken care of by the unconscious side. This helps the brain to maintain its superpower speed because imagine having to think every time you breathe or blink. You will not get time to do anything else in the day!
- Guess which side is responsible for the assumptions we have about men's and women's qualities and roles?
- You're correct it is the unconscious side. But how does it do this?
- When your unconscious brain sees some new information, it tries to match it to some existing information. For example, if it sees bread, it will remember that bread is white. The greater number of times you see this, the stronger that connection becomes. Eventually, next time, if you see any object that is rectangular, white and u y, your unconscious side will tell you that it is likely to be bread.
- The same happens with how the brain processes the roles and qualities of men and women. Because it keeps seeing some roles/qualities displayed over and over again by either a man or a woman, it starts making it a 'man quality' or a 'woman quality'. And because it has to do so many things, it does not use its conscious side and uses the unconscious side and makes these mistakes!
- These stereotypes, created as mechanisms for us to simplify information in our brain, end up limiting what is possible for all in society today. It's important to think deeply about the stereotypes we subscribe to.

(You could continue the following sections if you get more than an hour continuously)

Process:

Step 1: Watching the video

Inform students that we will be watching a short video.

- Tell them that the name of the video is *The Impossible Dream*.
- Play the video and ensure that all students can watch the video and listen to the music. If required, you could play the video more than once.
- Once they are done watching the video, initiate a discussion with the students. You could use the below questions as triggers for the discussion.

Some of the debrief questions that you could use are:

- What happened in the video?
- Describe the woman's day. Evaluate it.
- Describe the man's day. Evaluate it.
- Who does more work?
- Compare the woman's job with that of the man in terms of:
  - Physical requirements
  - The attractiveness of the job
  - Relationship with superiors
  - Pay
- Do you think the above differences are due to biological characteristics?
- Or are the differences due to how society perceives women?
- How do children learn to behave in the family?
- Why do you think the woman had a dream?
- What did her dream say would happen? Why?
- Why is the film titled *The Impossible Dream*? Explain your answer.
- What are some of the things that we as individuals can do to make the dream come true?
- How did you feel while watching the video?
- How can the roles be altered? What do you think?

Summarise the discussion:

- There is a huge possibility that there is one person in your house, someone who is from the female gender, who takes the maximum load of taking care of the house.
- A huge reason why this exists is that they are expected to do so. Most girls grow up with an understanding that they will have to be responsible for looking after their family's needs irrespective of them having a career.
- This means an unfair load is taken by one person BECAUSE of their gender.
- Household chores do not require any special skill, other than repeated practice. Speak with your mother and ask her about her first experience of making food. She will tell you that she had probably burned some item or might not have been able to cut the items properly. But today, you think she's the best cook and love her food! Your mother learnt her amazing cooking skills through nothing but repeated practice! So, if she can do it, you or anyone else can do it too! Can the roles be altered?

There is a small Homework 1 which is to be done in the worksheet. It is a simple worksheet on gender roles. Share the homework.

It is better if the video is played and the role of women and gender are discussed. If there is no provision in the school, as an alternative activity, the following could be done.

Variations to the activity

Step 1: Gender roles at my home and in my family

1. Think about the people in your family. How many people live at home?
2. Now, in the box given below are a list of activities or chores that are done at home.
3. Next to the activity, write the name of the person who is responsible for it or does it the greatest number of times.

Chore/Activity	**Person responsible**
1.Cooks for family	
2. Cleans utensils	
3. Goes to work	
4. Washes clothes	
5. Shops for groceries	
6. Sweeps the floor	
7. Changes bedsheets	
8. Attends parent-teacher meetings	
9. Looks after homework	
10. Drops off at school	
11. Picks up from school	
12. Fixes things	
13. Serves food to family	
14. Takes care when someone is ill	
15. Packs tiffin	

Step 2: Consolidate
Now count the number of chores each person is responsible for and write it down in the box given below. You can add extra boxes if you need to. Circle the person who does the most work in the house.

People in the family	Number of Chores

Step 3: Let's think:

1. Does one person do more work in your house than the other? Who is this person? Write their name _____
2. Why does this person do the most amount of work? Here are some helpful ways to think about it. Tick the one which is closest to your thoughts or write your answer.
    a. Because they are expected to do it.
    b. Because they are more skilled to do it.
    c. Other _____

In the above section, did you tick the answer a- 'Because they are expected to do it?'

Debrief:

- Another example of gender stereotype is expectations of what men and women need to do with regard to chores.
- There is a huge possibility that there is one person in your house, someone who is a woman, who takes the maximum load of taking care of the house.
- A huge reason why this exists is that they are expected to do so. Most girls grow up with an understanding that they will have to be responsible for looking after their family's needs irrespective of them having a career.
- This means an unfair load is taken by one person BECAUSE of their gender.
- Household chores do not require any special skill, other than repeated practice. Speak with your mother and ask her about her first experience of making food. She will tell you that she had probably burned some item or might not have been able to cut the items properly. But today, you think she's the best cook and love her food! Your mother learned her amazing cooking skills through nothing but repeated practice! So, if she can do it, you or anyone else can do it too! Can the roles be altered?

There is a small Homework 1 which is to be done in the worksheet. It is a simple worksheet on gender roles.

Session 12: Men and women are equal

Time 45- 60 minutes

Executive Summary

In the previous session, students discussed gender stereotypes. Many students might wonder why and whether gender stereotypes need to be challenged. In this session, they will do an interesting activity to understand that men and women are equal and deserve equal opportunities. This view might help them to start asking questions and challenge myths and gender stereotypes.

Learning Objectives

By the end of this session learners will

- understand that men and women deserve equal opportunities.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- Throwball - One for a class size of 30
  (alternatively, you could play touch the numbers if the class cannot be taken out)
- Touch the numbers with the legs
- Reading material:
  https://www.facinghistory.org/resource-library/image/udhr-infographic?backlink=https://www.facinghistory.org/holocaust-and-human-behavior/chapter-11/universal-declaration-human-rights



(note to the designer- chart need to be recreated)

Process

Step 1- Throwball game

- Take the students out to the playground. Divide the class into a team of 10 members each. Decide on simple rules for the game, like what would be out of the boundary and number of points to be won. Allow the teams to play for not more than 5 min if there are more than 2 teams.

- Suddenly, as an arbitrary decision, announce a few fouls and tell them that the team that has scored poorly has won the game.

- The students may start fighting with you or tell you that it was not fair or claim to be the winner. Tell them that they will discuss in the class and ask them to settle down in their seats/places.

Step 2 - Discuss

Ask the students the following questions to initiate a discussion-

- Who do they think won?
- What happened and why are they upset with you?
- Do they think the game was fair? Why was it unfair?
- What could be done to make it fair?
- Apologise to them and tell them that you were trying to be devil's advocate and ask them the following question.
- Similarly, in the previous session on *The Impossible Dream* / gender role at home - is it unfair for the person who does most of the jobs?
- Why is it unfair?
- What can be done to make it fair and equal?
- What do they think about gender roles?
- Aren't men and women equal and deserve equal opportunities?

Debrief

Explain that equality is a human right and men and women are equal. Similarly, not just gender, there could be stereotypes based on caste, religion, being differently abled or third gender, etc. and every human being deserves an equal opportunity and is to be treated equally.

Ask them to look at the chart of the declaration of human rights in their worksheet when they find the time.

Tell them that they will do some homework: Identify four or five gendered myths and stereotypes in their everyday lives and from media/ advertisement/ newspaper (H.W)

Remind them about the Why chart and ask them to fill questions and start thinking about questions on gender stereotypes

Variations to The Activities

If the students cannot be taken out to play throwball then,

- Draw a square with numbers from 1-25 written randomly using a chalk piece. The sides of the square could be 2 m each or big enough so that students can place at least a foot inside a square.

1	8	16	4	23
5	15	9	17	25
7	24	21	19	10
12	3	11	2	20
18	13	14	6	22

- Make a group of 5 or 6 and ask them to stand on each side of the square. Tell them that in 2 minutes they will have to stomp/touch all the numbers in the square in the order.
- At one time, there cannot be two people touching the same number. They cannot touch the number simultaneously. The number 1 has to be stomped and only then can 2 be touched, and then 3 etc.
- Ask the students to step out and give 2 minutes to the group to make a strategy after explaining the game. You could write the number when the students are outside the class.
- Ask each group to stomp, give them 2 minutes, and if even one rule is not followed the group will stop the game. Ask the groups to take turns and play.
- You might have to redraw/ reshuffle the numbers each time a group starts playing (as students might memorise the order of nos.)
- After all the groups have finished playing, loudly announce the group which scored the least or tried to cheat as a winner.
- Ask the class to come back to their seats.
- Follow step 2 to ask questions and debrief

If the students cannot play both throwball or the number game mentioned above due to lack of space, a memory game could be played using pack of cards or flash cards

- The cards are kept such that images or figures face downwards.
- The students lift a card at a time and look at the image.
- The students are to collect as much pairs of cards possible with similar images.
- The facilitator can disrupt the game by shuffling the cards and confusing the participants or giving less points to the winner.

Tips for the facilitator

You might have to take charge and suddenly act as if you are angry and announce the winner loudly. The winners could be cheering or shaking hands but you might have to be loud enough to announce the winner and disrupt the groups.

Plan to complete this entire session in one period as it is better to do the debrief and ask questions on what is fair and unfair immediately after the game.

Session 13: Analysing the gender stereotypes

Time 2 hours and 30 minutes to 3 hours

Executive Summary

In this session, students will identify a gender stereotype and work in groups to ask and frame relevant questions for a short research project. To find the answers, they will collect data by making observations or conducting a survey, record the data, present the data as a graph, table or percentage, find patterns, infer, analyse the data and share/ present the findings. They will apply the STEM mindset to critically analyse the gender stereotypes or gender roles that exist in their life situations.

Learning Objectives

By the end of this session learners will

- ask pertinent questions concerning images/ data/ life experience and/ or a situation.
- formulate a question for inquiry.
- enquire a myth or stereotype concerning gender.
- follow the process/ steps of inquiry applying the STEM mindset.

Prior Preparation and Material:

- Student Workbook
- Instructor manual for this session
- As preparation, please read *https://www.edutopia.org/article/teaching-students-how-ask-productive-questions*. This would prepare you and encourage students to ask questions.
- Images, data/ table (for group work, a group of 4/5 students to have one copy of the image/data table)
- Graph sheets
- Preparation on the STEM mindset: Refer to facilitator resource Science process skills and chart.
- Stories and clippings from the newspaper for the last section (Sharing/ presentation)

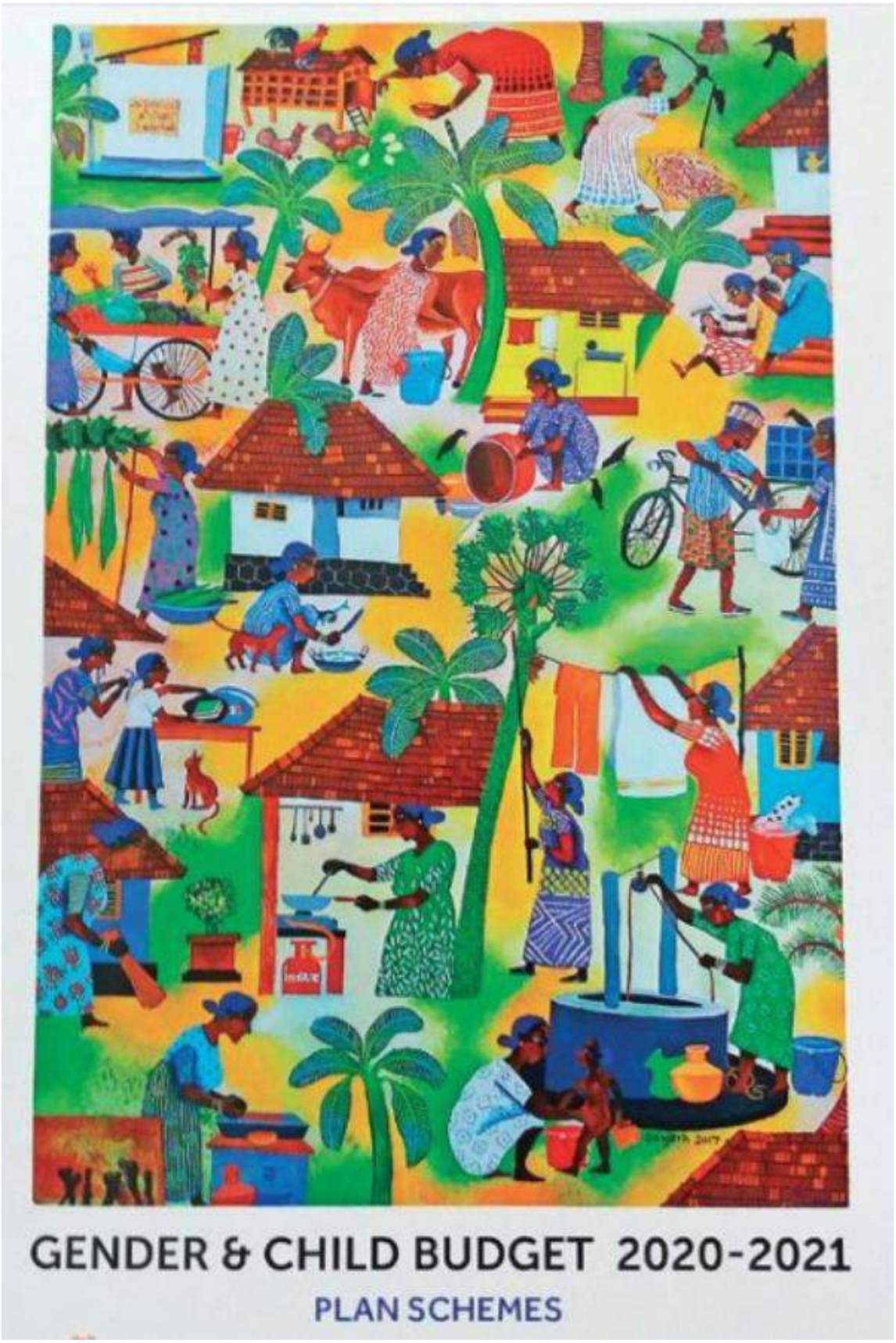
Process

Step 1: Asking and framing questions (30 minutes)

- Ask the students if they have been asking Why questions and adding them in the chart and specifically on gender stereotypes and tell them that they will try and find answers for some of them in this session.

- Present the following image using a projector

- The information about the painting-
https://www.indiatimes.com/trending/human-interest/kerala-class-9-students-painting-selected-as-cover-page-of-2020-21-gender-budget-document-506077.html
you could share this information later once the students have asked a few questions.



- Ask the students to observe the image closely for two minutes

- Ask them to think and write a few questions that come in their mind while observing the image. Give two minutes to note it down. Some examples for them to frame questions.
    - What comes to your mind when you see this image?
    - Ask What If: What if women are replaced with men in this image?
    - What if women are paid for these chores?
    - I wonder why only women are engaged.

Ask a few students to share the questions. Look for questions such as-

- What are the different household chores that are done by women?
- How much time do women spend on household chores?
- Where are the men? Why aren't they represented?
- Do women get paid for this work?
- If students respond that women are cleaning, cooking, cutting the vegetable, helping a child, tell them these are observations and ask them to ask a few questions.
- Ask students if they like to find out more about the questions that they have asked.
- If students struggle to ask questions, you could share the above questions as examples and then ask them to add one or two similar kinds of questions. You could give the beginners such as What if? And I wonder why….
- You could model this in the large group on asking questions and tell them that they will work in small groups and frame questions.

Divide the class into groups of 4/ 5 and distribute the images/ table to the groups.



(note for a designer- If possible, the word clouds can be removed from this image and redrawn)



Note for a designer- Can this image be redrawn in the Indian context- with roti, sabji, katoris, salad, lassi and chawal and a full plate for the man, the lady eating a burnt and half roti without sabji and the child (boy) eating a sumptuous meal with milk/ lassi / salad/ fruit etc?

Table 2.B: Percentage of Female Enrollment in Select Disciplines as compared to Total Enrollment											
		2011-12		2012-13		2013-14		2014-15		2015-16	
UG		Female	Total	Female	Total	Female	Total	Female	Total	Female	Total
	Science	13.2	11.9	13.2	12.6	14.1	15.8	15.4	15.4	16.2	16.0
	Engineering & Technology	12.0	18.9	10.8	17.3	10.7	17.4	9.6	15.9	9.3	15.6
	Medical Science	3.7	2.8	3.9	3.0	4.0	3.0	4.0	3.1	4.3	3.3
	IT & Computer	4.7	5.1	2.7	3.0	2.6	2.7	2.4	2.6	2.3	2.5
	Agriculture	0.3	0.4	0.3	0.6	0.3	0.6	0.3	0.6	0.4	0.7
	Arts	38.0	33.8	46.2	40.8	46.1	40.4	45.9	40.2	41.1	36.2
	Commerce	14.3	14.5	13.9	14.4	13.5	13.9	13.7	14.0	14.0	14.1
PG		Female	Total	Female	Total	Female	Total	Female	Total	Female	Total
	Science	9.62	8.9	14.26	12.78	13.84	12.45	14.09	12.51	14.49	12.3
	Engineering & Technology	4.74	6.18	4.69	6.24	5.43	7.12	5.75	7.6	4.88	6.69
	Medical Science	4.86	4.39	2.77	2.92	2.86	2.97	3.02	3.06	3.22	3.33
	IT & Computer	9.13	10.3	8.76	9.93	7.61	8.32	6.99	7.48	5.74	6.22
	Agriculture	0.32	0.42	0.31	0.48	0.38	0.56	0.34	0.58	0.34	0.57
	Arts	...	...	18.13	17.11	18.08	16.83	18.41	17.35	...	...
	Commerce	8.11	7.27	8.8	7.75	10.3	9.22	10.68	9.61	11.79	10.75

Data source- MHRD reports
Status of women in science among select institutions in India- NITI aayog 17-18

- Ask the groups to spend about 5 to 10 minutes and write questions that can be researched. As the group works, move around and help them frame one or two clear questions that can be researched.
- As students work in their smaller groups, help them by asking, 'Can it be researched?', 'Can data be collected or some people surveyed or interviewed?'

- Ask the groups to share their questions with the whole class and finalise a question in each group. Also, look at the Why chart that the students have filled to see if any questions can be researched by students.

For example-

Is there any difference in the food/ meal consumed by the family members?
Do women/ girls eat nutritious meals?
What are the household chores are done by the mother in the house and the number of hours spent? Is it paid/unpaid work?
What is the time spent by girls and boys in household/ farming/ any labour work after school hours?
Why do women choose arts subjects compared to engineering and science?
Why are there fewer women in engineering?
Who plays and occupies the playground at school? What is the time spent by boys compared to girls in the school playground?
What spaces do girls occupy in school?

Tell them to frame the question clearly and note it in the worksheet (Task 1). This can be researched further in the next class and data collection can be planned in the following class. Step 2 could be done in the following session if the facilitator gets only a 30-40 min class.

Step 2: Planning data collection and then collecting data (30 min)

- Ask if all the students/ all groups have a framed question to continue the research. Ask them to work in groups and plan for data collection.
- Tell them if the group is doing a survey/ interview then they will frame a few questions, and identify people for the survey
- If they are making observations, then they should indicate what kind of observations, when the observations would be made, time spent etc.

Example 1:
Is there any difference in the food/ meal consumed by the family members?

- Then students need to come up with a similar table to collect data.

- Food consumed by the family members for two to three days (preferably a weekday and Sunday) at least two meals per day

Name of the observer:
A family member observed: Father/ man in the house

Day	Type of food	Amount
Sunday	Roti Salad Fruits Sabji Dal	3 2 Katori
Monday	Roti Dal	
….		

A log could be maintained for each member of the family

Example 2:
Who plays and occupies the playground at school? What is the time spent by boys compared to girls in the school playground?

This observation could be made for a week

Game played	Boys/Girls/both	Time spent in the playground	Time of the day
Football	Boys	15 minutes	During recess
Run and catch	Girls	15 minutes	During lunch break
…			Before morning bell
….			After school in the evening

Example 3:
Why do women choose arts subjects compared to engineering and science?

To find this out, each student in the group could talk to five adults in the neighbourhood/ school and frame questions for the interview.

- What is their opinion about girls choosing science after class 12?
- Why are there fewer girls in science?
- What could be some reasons for girls choosing arts subjects?
- Do they think girls are good at science?
- Can they give names of few women scientists?

Example 4:
What are the household chores done by their mother in the house and the number of hours spent? Is it paid/unpaid work?

This observation could be made for a few days. The observations need to be made for each member of the family for a few days (two to three days- a weekday and Sunday)

Family member: Mother/ Father/ Brother/ Sister

Chores	Time spent in each activity	Approximate amount that can be paid per day
Cooking	1 hour	100 Rs
Cleaning the vessels		

The students have to maintain a neat log. They could draw this table in the workbook (task 2) and use additional sheets. Those sheets could be later attached to the workbook.
There could be a break here and Step 3 could be done in the following session

Step 3- Finding patterns, inferring and analysing the data (30 min)
The students would have collected data for a few days or interviewed a few people. Now instruct them to collate the data individually

For example:
Who plays and occupies the playground in school? What is the time spent by boys compared to girls in the school playground?

Students	Total time spent in the playground
Boys	4 hours
Girls	2 hours

Students	Types of game played
Boys	
Girls	

Ask students to collate the data (Task 3), total hours and if possible, calculate the percentage and share the data with the group
Step 3 alone could be done in 30 minutes and step 4 can be taken up in the next session

Step- 4 – Presenting the data as a graph, table, percentage and plan for sharing the data (30 min)

- Now, as a group, ask students to compare the data and analyse the patterns. Is the trend similar? For example, Student A shares that the time spent by her mother in doing household chores is 4 hours per day and by her father is 30 minutes per day. Similarly student B shares that the time spent by their mother is 5 hours and so on.

- Ask them to present the data in a graph sheet as a bar graph or a pie chart and draw a conclusion.

- Ask the student in the group to highlight their findings and draw a conclusion. Share with them that they will present/ share the findings in the next class. They will share the findings as a graph/ chart and make a collage.

- While sharing, students could present a collage of images where this myth or stereotype has been challenged. They could look for examples in the neighbourhood/ media/ advertisement/ newspaper clips.
- To make a collage, ask them to get newspaper clips/ stories of one or two people who have challenged this.
  For example-

    - An athlete from the school who has won medals/ playing football and tried to break the stereotype
    - An advertisement clipping that shows fathers/ a man cooking
    - A story of a girl who has won a bravery award
    - A story of a girl who has tried to climb a mountain
    - A story of a woman scientist
    - A story/ clipping of a girl who has won a medal in cycling/ marathon
    - A representation of healthy and nutritious meal eaten by women
- There are stories presented in the student workbook for them to refer to. Ask students to read them for reference.
- You may have to collect stories and newspaper clippings (local stories) on women/ girls who have achieved and attempted to challenge the stereotype to help the students in the presentation.

Step 5 can be planned for the following session if time does not permit

Step- 5- Short presentation of each group and highlighting the STEM mindset (30 min)

Give three to four minutes each to a group for the presentation. In the presentation ask them to share

- the graph/ chart,
- one or two key findings,
- give reasons for the findings (stereotypes/ myths/ women are expected to be so), and
- the story/ example/ clipping about a person who has challenged the stereotype

Ask and let other groups ask questions and seek clarification from the group making the presentation.

Debrief

Highlight the STEM mindset that students employed in this short project.

Can the students recollect the various processes and steps involved?

Ask them what steps were followed. You could give clues/ ask students to think for 2 minutes and recollect the steps individually

Note the steps followed on the board

-asked questions (think critically)
- observed/ interviewed and collected data
- recorded the data
- collated the data
- found patterns
- analysed the data
- inferred the data (reasoning)
-shared the findings

Share that this is the STEM mindset. We often tend to form opinions and make judgements or quickly believe things without verifying. This happens unconsciously; however, we need to continue asking questions, challenge, think critically and try to verify the information.

Reflect

(This is a special note on reflection for students. This is to be done at the end of this unit after the sharing)

What are the myths or gender stereotypes that they have examined? Were they able to break any myths for themselves?

Reflect on one or two myths that they have been able to examine for themselves. They could make a note of this in the worksheet (H.W 1). Relook at the activities on self that they have done. Now after this module on gender and gender stereotypes reflect on

- Have you been able to identify a gender stereotype/myth that they carried?

- Has this myth/ stereotype been challenged or examined?

- Has the idea changed?

- Have you identified any strength or ability through this exercise?

- Have you found any new interest?

Variation to the activity

If the class size is too big and groups cannot be divided and managed, then you could project two images as a whole class activity. Ask all the students to write one or two questions and ask them to pair-share and discuss the questions. Each person in the class would have a question to research and collect data. After data collection, the students can work in groups (i.e. from step 4) to look at the patterns, analyse and infer the data.

Tips for the facilitator

Each step is imminent and the sharing or presentation by the students depends on the research question, data collection and the log that students maintain.

Since the students would be working in groups, you could ask for one person to volunteer as a group leader to monitor the tasks. The task of the group leader is to remind everyone of data collection and data logging for 2 or 3 days. The group leader could maintain a chart and put a tick mark against each member to self-monitor.

You could also remind the students about data collection whenever you get an opportunity to meet them.

If you get 30 minutes in each class, then you to need to recap the previous session, you could ask a few students on the previous session

- We wrote research questions in the previous session.
- We made a data table to collect data.
- We collated the data, and so on.

This session is relatively a longer one and it is better to plan and complete these sessions before a break. The sessions could be planned for two or three continuous weeks so that students get enough time to collect data and then come back in the next class to collate and

analyse the data. Depending on the time available, each step could be done as one 30 min session each. If the facilitators get more time with students, two or three steps could be combined.

Session 14: Safe and unsafe touch

Time 45- 60 minutes

Executive Summary
In this session, students will recognise the difference between safe and unsafe touch and understand what privacy is. They will start to think about touch, their body and their emotions. This is an introduction to this topic and in level 2, students would dwell more on consent and child rights.

Learning Objectives
By the end of this session learners will

- recognise safe and unsafe touch.
- understand the concept of consent and discuss the importance of establishing consent in relationships.

Prior Preparation and Material:

- Student Workbook
- Instructor manual for this session

Preparation for the facilitator. It would be useful for you to read and watch the materials suggested.

- https://www.youtube.com/watch?v=CwzoUnj0Cxc- Komal - A film on child sexual abuse
- Kamala Bhasin- Excerpts from *I wish Someone Had Told Me*
- *My Body My Life*- Eklavya publication- This is a helpful resource to read more on this topic and understand the body
- Body outlines- photocopies
- Shoebox/ or a small cardboard box- sealed and taped with a small hole to drop chits

Read the following on the touchability index.

The activity is based on the 'touchability Index' developed by the Oxford University, London, United Kingdom. The touchability index is developed based on our understanding of our bodies in the sense of which body part is open for a 'stranger touch' in all circumstances or selective circumstances. The touchability index differs along the line of gender, and cultures. This is a more nuanced way to take a relook at the concept of 'touch', 'safe touch', 'unsafe touch' and 'ugly touch'. Some, also term unsafe touch as 'hidden touch i.e. to simply put, it is a covert or concealed unsafe touch.
The concept of body privacy is somewhat similar in the sense that there are certain private body parts and body privacy represents body parts not to be touched.
The untouchability index classifies body parts into three zones:

1. Body parts, which are ‘allowed to touch’;
2. Body parts, which are ‘not allowed to touch; AND
3. Body parts which are ‘taboo zone’ or ‘private parts’.

As we see, the ‘touchability’ of male as well as female body parts is a very sensitive topic. Some also believe that it depends on the relationship, age, consent and other special conditions like medical conditions such as sickness etc.

Process

Step 1- Discuss

- Before starting the session, you could brief that you are going to discuss a very important but personal topic. Some students may not feel comfortable or some students may feel like sharing something personal. In such a case, a student could come to you separately and share or write a small note and drop it in the secret box kept. The secret box would be opened only by you.

- The boys and the girls may be separated for this session and conducted separately if you feel that students are not ready for a session together. This could depend on your level of comfort as well.

Step 2- Marking safe and unsafe touch

Make 4 Groups

- Give two copies each of a portrait image of a female teenager/adolescent [image 1 (front) and Image 1 (back)] to Group 1.
- Give two copies each of portrait image of a female teenager/adolescent [image 1 (front) and Image 1 (back)] to Group 2
- Give two copies each of portrait image of a male teenager/ adolescent [image 2 (front) and Image 2 (back)] to Group 3
- Give two copies each of portrait image of a male teenager/ adolescent [image 2 (front) and Image 2 (back)] to Group 4

In the next step,

- Group 1 to discuss and decide which part of the body can be touched by another known female and an unknown male
- Group 2 to discuss and decide which part of the body can be touched by another unknown female and known male
- Group 3 to discuss and decide which part of the body can be touched by another known male and an unknown female
- Group 4 to discuss and decide which part of the body can be touched by another unknown male and known female

They need to mark,

- Green, when it is allowed to touch;
- Red, when it is not allowed to touch; AND
- Black, for Taboo Zone or Private Parts

Once completed,

- Ask the groups to make the presentation.

- Ask and let other groups ask questions and seek clarification from the group making the presentation.

Step 3- Establishing consent

- Inform students that a key part of the definition of sexual assault is the word UNWANTED. People have the right to say NO to touch. When someone says no, it is the responsibility of the other person to respect the NO and STOP the activity. In other words, if there is no consent for the activity, it should not happen. (Note: You may or may not want to add the point about consent being a little tricky for young people. For anyone under the age of 18, the laws are different regarding whether they CAN give consent).

- Ask to borrow someone's pencil or pen. Someone will usually give you their pencil without thinking. Ask all the participants:
  - Did I have permission to take the pencil?
  - How did I establish or get permission?
  - Return the pencil to the owner.

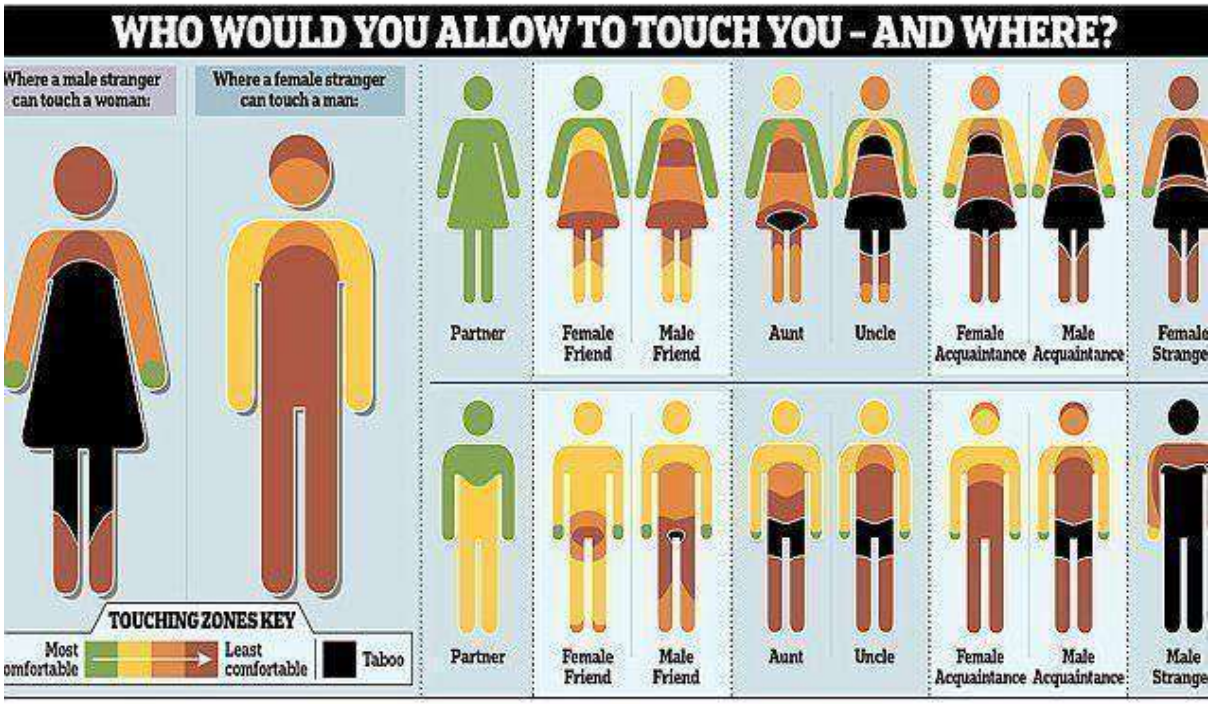
- Then ask the class to pretend it is the next day and you are back in their classroom. Walk up to the same students and take the pencil. Be certain to get the pencil, but don't use any force. If the student will not let you 'take' the pencil, either tell them to play along or pretend you took the pencil (As a presenter, it's counterproductive to be seriously forceful taking something against their will to prove a point about consent). Ask,
  - Did I have permission to take the pencil?
  - Can't I just assume that he/she will let me have the pencil because they let me borrow it yesterday?
  - They more or less 'deserve' to have their pencil taken, just leaving it out for anyone to take.

- After the demonstrations, ask the students how consent or lack of consent with the pencil is similar to consent with regard to touch or sexual activity.
    - How do you know when it's okay to move forward?
    - How do you know when you have consent?
    - What is boundary testing?
    - Does consent for touch or sexual activity on one occasion mean there is always consent?
    - Does consent for one type of activity (e.g. holding hands) mean you have consent for all other activity (e.g. kissing)?
- So, of course we don't blame 'Rahul' (student) for someone taking his pencil, nor do we think I had the right to take his pencil. I didn't ask.
- There is obviously a difference between the pencil and a physical action. When I take Rahul's pencil, I can give it back to him without any harm to his body or self. If I touch, hug or kiss someone without consent, I can't take that back. Forcing someone to do something they do not want is the definition of abuse! It is not possible to take it back.

Debrief

Consolidate and close the session by bringing common and unique features of all the presentations and consent.
- Common Taboo Zone across both the gender
- Body parts not allowed to be touched
- Body allowed to be touched

You could refer to the following chart to conclude the session



Source- Pinterest

Note that this index might vary with cultures and places.
E.g.- A known female friend could touch the cheeks/chin of another female but not the lips. In this chart, it is marked green.

Share with the students that knowing about the touchability index is very important and students could use this information to inform/ warn or take action against people if privacy is breached. The students need to assert when they feel that they are touched inappropriately. This could happen in public, at school or even at home. They could talk and reach out to adults for help (adults whom they trust, like their parents, their mother, siblings, teachers and so on). Consent is an important aspect, So, what is the one way we can make sure what we are doing is consensual? **Ask**! Just like with the pencil, you need to be asked and you can say NO.

Inform about the box kept in the class. If students feel like sharing and talk about touch, they could write a note and drop the chit. Tell them that they can trust you and you will not share this information with anyone. Students could approach you if they feel the need to talk or discuss anything.

Ask the students to complete Homework 1 (Choose your body outline and note how you felt when you were touched by using colours and symbols). This will help them think about their feelings and touch. This is more personal, once they complete, they could use a stapler and pin it.

Tips for the facilitator

You could prepare and read level 2 of the manual so that you are informed about child rights and take necessary steps if need be.

Growth chart – 2

The Growth Chart Activity should be done 3 times over the entire course, after module 1, 2 and 3. This helps the students to take a pause and see their progress on the different skills they are learning through the course. As a facilitator, it will help you understand the level at which the class is. You will be able to see patterns in the student's understanding - where most of the students are, what have been the easy and the difficult parts and how they are progressing.

Objective

The Growth Chart shall help students understand where they stand individually and as a class on:

1. the learning progress: remembering, understanding, applying, analysing, reflecting, creating.
2. the skills in learning: communicating, collaborating, enquiry and research.

This would look something like this:

		I Can…	My Growth Sticker		
			Seed (Image)	Plant (Image)	Tree (Image)
1	Remember	I can remember what I learnt in the sessions.			
2	Understand	I can explain what I have learnt in the sessions.			
3	Apply	I can use the information and understanding from the sessions in my everyday life.			
4	Analyse	I can recognize the meaning of the sessions for my life and why we are doing it.			
5	Reflect	I can examine my ideas, notions, perspectives on			

		self, gender and the world around.			
6	Create	I can create new ideas/artefacts and bring my point of view into it.			
7	Communication	I can share my point of view and understand others too in group work.			
8	Collaboration	I can work in teams and contribute actively.			
9	Enquiry/Research	I can confidently use observation and data to answer any of my questions.			

Material and Preparation

- Student workbook
- Instructor manual
- Growth Stickers – seed, plant, tree. Alternatively, children can tick in the rows.
- You can read these statements and think of ways you shall explain each if children ask for examples/explanation.

I Can…	My Growth Sticker		
	Seed (Image)	Plant (Image)	Tree (Image)
I can remember what I learnt in the sessions.			
I can explain what I have learnt in the sessions.			
I can use the information and understanding from the sessions in my everyday life.			

I can recognize the meaning of the sessions for my life and why we are doing it.			
I can examine my ideas, notions, perspectives on self, gender and the world around.			
I can create new ideas/artefacts and bring my point of view into it.			
I can share my point of view and understand others too in group work.			
I can work in teams and contribute actively.			
I can confidently use observation and data to answer any of my questions.			

Activity Details: 20 Min

Pre-Activity Preparation

- Help children look back/recap at what we have done so far.
- Help them understand the purpose of the Growth Chart activity which will give them a sense of their progress collectively and as individual learners.
- Talk about how learning happens:
    - Learning is a process which involves interaction with the concepts/topics, new knowledge, knowing what others think, reflecting on one's ideas, learning at each step and not just towards the end of something.
    - Everyone learns at a different pace, so it is important to not compare themselves with others.
    - Different people are good at different things, so it is natural to do well in some things while understanding the need for improvement in something else.
- Show the Growth Chart and its statements. Tell them how each statement must be seen in terms of their journey through the course.
    - Do they remember things, have they understood, are they able to apply what they have learnt, could they analyse their learning? Are they able to evaluate the effectiveness of the learning, have they been able to create something new

using this learning, along with the experience of the process of learning – communicating with each other, working in a team and using data?

- Explain how the growth chart will be used especially the first time they see it after Module 1.
- Explain with examples how the 'growth sticker/tick' has to be put in.
- Explain how, like a tree grows from a seed to a plant to a tree, when we are learning, we also go through different stages.
- They have to mark the stage they are at - a seed (just beginning), plant (developing) or tree (grown and spreading the learning sphere) based on how confident they feel on different aspects.

The activity can be done in the following manner:

- Ask students to open the growth chart given in the workbook.
- Ask them to put a sticker or tick under seed, plant, or tree against each statement.
- They do not have to write their name on the chart.
- Be available to explain the statements as required.
- Once everyone's chart is collected take help of students & count the number of seeds, plants and trees for each statement.

Write the result on the Growth Chart against the date. Assume there are 30 students in the class, here is an example of how the chart will look is given below.

I Can…	My Growth Sticker		
	Seed (Image)	Plant (Image)	Tree (Image)
I can remember what I learnt in the sessions.		30	
I can explain what I have learnt in the sessions.		22	8
I can use the information and understanding from the sessions in my everyday life.	8	27	5
I can recognize the meaning of the sessions for my life and why we are doing it.	20	10	

I can examine my ideas, notions, perspectives on self, gender and the world around.	28	2	
I can create new ideas/artefacts and bring my point of view into it.	8	21	1
I can share my point of view and understand others too in group work.	2	26	2
I can work in teams and contribute actively.			30
I can confidently use observation and data to answer any of my questions.	18	3	7

Share and Reflect:

Towards the end, help children reflect on the completed chart through the following trigger questions:

- Did this help you to know where you stand individually in relation to the class?
- Does the class seem to have a pattern? Are most students seeds at one part of the class? Or plant in another? What does this mean as we move ahead?
- Do you find that you are strong at one skill & not strong at another? What do you think you should do in that case?

Module 3 – Creating solutions

This module takes the students through the process of computational thinking. Students identify a change that they would like to bring about, brainstorm solutions, plan, share and present their learning. Creating solutions and simultaneously developing communication skills in creative collaborations are encouraged in this module. They are introduced to the basics of computing and how the internet can be used for personal and professional goals.

Session 15: Let's learn computers!

Time 30-40 minutes

Executive Summary

This is the introductory session on computers. Basic information about computers, their parts, and input and output devices are discussed in this session. This lays the foundation for the following sessions on computation thinking and finding solutions.

Learning Objectives

By the end of this session learners will

- define a computer and its parts.
- list out the uses of computers.
- understand input and output devices.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- Model or picture of a computer with all parts

Process

Step 1

- Ask students different questions and ask them to respond to that using different actions
    a. Those who have seen computers, clap your hands once.
    b. Those who have heard songs on a computer, clap twice.
    c. Those who have played games on a computer, shake hands with each other.
    d. Those who have studied Scratch, stand up .
- Tell them a computer is an electronic device or machine which works through step-by-step instructions given by the user.

    Desktops, laptops, tablets and smartphones are commonly used computers.

    Computers are useful in
    - sending and receiving messages.
    - making presentations, videos.
    - maintaining records.
    - education and research.

Step 2 -Parts of a computer

- Ask four volunteers from the class to come in front of the class
- Give each of them an image of a part of the computer
- Each student gets an image and they have to act (like dumb charades) in front of the class and others have to guess the part

Ask students what the various important parts of a computer are. Describe each of them. You could take them to the computer lab to describe the parts (if available).

- CPU (Central Processing Unit)
  (picture of a CPU)
  The CPU (Central Processing Unit) is the most important part of a computer. It controls all the other parts, such as the monitor, keyboard and mouse. These parts have to be connected to the CPU, for them to work.

b) Monitor
(picture of a monitor)
A monitor looks like a television screen. The CPU uses the monitor to show us photos, movies, games, and other visuals. The mouse pointer (picture needed) can be seen on the monitor. Often, whatever we type using the keyboard can be seen on the monitor.

c) Keyboard
(picture of a keyboard)
A keyboard is used to write/type on the computer. We can also use a keyboard to give instructions to the computer. The buttons on the keyboard are called 'keys'.

d) Mouse
(picture of a mouse with left and right key)
A mouse is used to select an item shown on the monitor. The mouse usually has two buttons and a small wheel between the buttons. To select an item, we first point to the item and then click the left button. To start an activity, we double click the left button. To control an activity, we click the right button. To move up and down a page, we use the wheel or scroll button.

Step 3- Uses of computer

- Images of different activities are presented in the workbook and students should tick mark on the image whether the activity can be done by a computer or not.
  (note for the designer to create the images)

  a) A boy drawing a picture
  b) A girl reading and writing.
  c) A father cooking
  d) A woman booking train/bus ticket
  e) A boy using a calculator
  f) A woman eating
  g) A girl making a card

  Explain to the students the uses of computers.

Step 4 -Input and output devices

- Ask the students whether they have heard the words ‘input’ and ‘output’.
- Ask how many of them have plants at their home. Give them the example of a plant
- Sunlight, water and manure are the input that we give to the plant and as output, we get flowers and fruits.
- Share the following conversation between Rani and Rekha
  Rani: Hi Rekha! How are you?
  Rekha: Hello Rani. I am good.
  Ask them, in the above conversation, what the input is and what the output is.
- Even in computers, the user needs to give input to get an output. There are certain devices to give input and certain devices to give outputs. They are called ‘Input devices’ and ‘Output devices’
    - Input devices allow us to send information to the computer. Input to the computer is usually given by clicking the mouse, typing on the keyboard, taking pictures and videos through a webcam and voices recorded through the microphone. So, these are input devices.
    - Output devices allow us to receive information from the computer. The output from the computer may be printouts from the printer, sounds on the speaker, or images on the monitor. So, these are called output devices.

Debrief

- Ask them what the new things are that they learned today.
- How do you define a computer?
- What are the different uses of computers?
- What are input and output devices and which are they?
- Ask them to finish a simple homework given in the workbook

Tips for the facilitator

- Activity 1 can continue according to the time. You can ask more questions to get an understanding of students’ knowledge about computers.
- In Activity 2, to avoid the constant noise, you can tell students to raise their hands to tell answers. The first group to raise their hands can tell the answer.
- You can ask students to come up with different input and output that we see in our daily life.

Variations of the activities

- We can also ask the students to list the uses of computers in their experience.
- Give multiple examples of inputs and outputs. E.g. touch is the input for a smartphone, music is the output.
- The Scratch toolkit reference – embedded simulator can be used where the students can see different parts of a computer. This can be done in schools where computers are available and Scratch is installed

Session 16: Search engines

Time 60 minutes

Executive Summary

Students will explore various functions and understand the basic operating principle of search engines.

Learning Objectives

By the end of this session learners will

- understand search engines.
- identify search techniques and strategies.
- explore the features and operations.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session

Process

Step 1

- Invite students to share anecdotes about times when they used an Internet search engine to look for information and found something they were not expecting, or when they could not find what they were looking for. If students are not able to share, then you can give an example. E.g. I was looking for an image of a mouse on a computer and there were images of real mice that popped up. You could give one or two more such examples of places. E.g. I was searching for a town Salem in Tamil Nadu, and images of a city in the United States popped up. Similarly, Google Maps shows different cities and distance varies. Then you could ask for similar examples.

  After a few students have shared, ask for a show of hands of students who have experienced frustration using an Internet search engine. Then ask:
  - How often do students use search engines?
  - Which ones do students use most? Why?
  - What are the most common problems students face when searching?
  - Do students have any search strategies?
  - Do students search the Internet more for personal reasons and entertainment, or more for school?
  - Do students believe that improving internet searching skills will benefit them academically? Socially? Personally?

Step 2-Some terms

Ask - How do students think search engines, like Google, work?
Discuss the following terms with an example:

- The Internet: a global system of interconnected computer networks or computers around the world that are connected
- The (World Wide) Web: the set of documents residing on the internet that are formatted in hypertext
- Browser: a program used to view HTML documents, or the World Wide Web (e.g., Firefox, Safari, Chrome)
- Website: a collection of web pages, a collection of links between pages, programs that do services (such as lookup things)
- Web Address: The address of a web page on the world wide web. Also called a URL
- Search Engine**:** a computer program that retrieves documents or files or data from a database or a computer network. Its function is to scan the Internet, gathering information about millions of websites.

One can look for information using the search engine with the help of 'Keywords'.
Here, it is important to choose accurate and precise words. Let students know that adding more of these keywords can help narrow a search.

Step 3: SEARCH - 5 simple steps

SELECT your research topic

Ask students to generate a list of occupations that are a good fit based on their interests so far. These may be careers they know a bit about and want to explore further. Also include professions about which they don't know much. They could learn something unexpected. Next, ask them to narrow down to three occupations that appeal to them.

EXTRACT information

- Along with using appropriate keywords, there are some more strategies that will help find the information needed. Some are listed below:

  To include complete phrases in the search use double quotes (' ')around the phrase. Example: Trees and soil erosion -'Trees and soil erosion' gives websites which contain the phrase trees and soil erosion. Use specific words.
  If students want a word to be included in the search, then add + before the word. Example: Try Spiderman + comics and Spiderman comics.
  If students want a word to be excluded from the search, then add – before the word. Example: Try Solar system - Pluto, Indian animals - Lion

- Encourage them to come up with their examples for each of the strategies.
- Demonstrate some of the examples. If possible, project the computer screen so that students can see the search results. If time and resources permit, you may also choose to have students conduct the searches, working in small groups on their computers.

- Students, in groups of three, identify three different career options and find out basic information about each of the occupations. The keywords can be broad or specific, depending on the goals.

- Job descriptions
- Educational training

- Required entrance examinations or applying for admission.
- Costs associated with education and training, available government aid and scholarships.
- Advancement opportunities.
- Labour market information including gender ratio, median salaries and job outlooks. (Ask students to use government-produced labour market information to get data about earnings and job outlook in their region.)

APPLY safety measures for browsing the internet and searching

1. Seek permission from teachers/parents before using the Internet.
2. Do not give personal information while browsing. (address, mobile number, Aadhaar card number and so on).
3. Close popups. Do not perform any action requested by popups. This may cause applications to stop working.
4. When students come across information that they do not like or is upsetting students, inform and discuss with students' teachers-parents about the same.

RUN the search!

- Students can use various online search engines such as DuckDuckGo, Google, Yahoo!, or Bing.
- Searches enable students to access the huge store of information on the Web, so take some time to see what's out there! Don't just look at the first results.
- Don't rely only on only one website to give students all the information.
- Students can often specify dates or even languages students want their results in.

CHART note down

Different types of information will help students in different ways. If students search for forest services, the following information will tell students different things:
Blogs: People's opinions about the forest services.
Images: Photos related to forest services.
Video: Videos related to the forest service. Some might be made by anyone, while others might be created by news outlets, organizations, or the government.
News: The latest news articles and stories related to forest services.

- Keep track of what students searched for and where. Many search engines will allow students to search exclusively for images, videos, news, blogs, or even scholarly articles. Students should also note how many searches they had to do to find the answers, and how many keywords they used. Finally, they should write down the names of two sites from which they got answers.

Step 4 - Share your findings
Each group gives a 5-minute presentation of their work in the class.

Debrief

Ask the students

- Reason and purpose of the exercise and their ideas about it.

- List down strategies that worked.
- What were the challenges and how did they overcome them?

Tips to The Facilitator

In places where there is no internet or computers in schools, you could share the information and four steps except for running the search. Step 4 can also be ignored. Discuss searching using mobile phones, safety measures and the content that they access.

Session 17: Algorithms

Time 60 to 75 minutes

Executive Summary

Students will learn to sequence, to write algorithms and to give instructions in a step by step manner. They will be able to develop algorithms that can be applied to everyday processes.

Learning Objectives

By the end of this session learners will

- recognise step by step planning of any activity.
- identify the main and detailed sequence of steps of any activity.
- follow stepwise instructions for any activity.
- articulate their understanding of algorithm and apply it in a context.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- Worksheets for graph paper programming
- Origami paper cap
- One-sided paper

Process

Step 1- Making a cap

- Make and wear a paper cap while entering the class.
- Ask students about the cap, generate interest. The cap can be made by folding the paper. Paper folding is called origami.
- Let's see the step to build this paper cap:
    - Distribute one-sided paper to each student.
    - Show the students the steps to make a cap, the stepwise fashion is shown as below:
        - <Note to the designer- Pictorial representation of making a cap>
    - Ask them to follow the steps as you make the cap.
    - Ask them 'Do you know that we often use such step-wise activities in our daily activities?'
    - Let's see how.

Step 2- Steps in everyday situations

Ask students if they brush their teeth every day and then to write down all the possible steps, they follow to do the same. The possible response that can be discussed is:

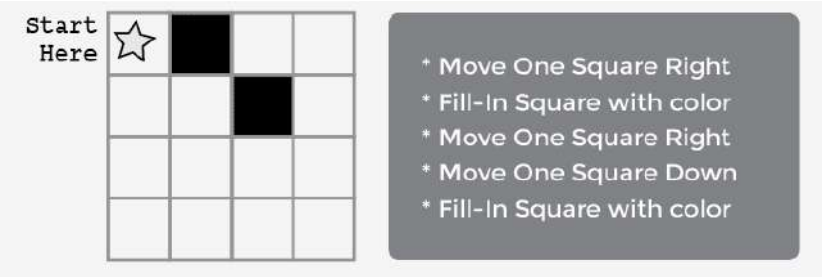
- STEP 1 - Take a toothbrush and toothpaste.

- STEP 2 - Open the cap of the toothpaste and put the paste on the brush.
- STEP 3 - Close the cap of the toothpaste and keep it down.
- STEP 4 - Brush your teeth.
- STEP 5 - Take water in the mouth, gargle and spit water.
- STEP 6 - Keep the toothbrush and toothpaste back.

Step 3- Instructions can be simpler

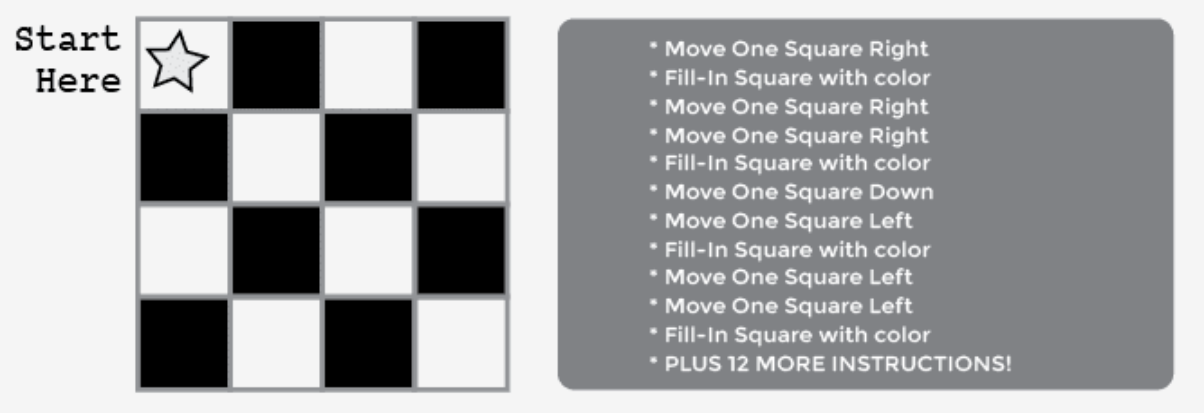
- Students would pair up. One person would give instructions and the other person would colour the graph sheet following the instruction. In this activity, you are going to guide each other toward making drawings.
- For this exercise, we will use sheets of 4x4 graph paper. Starting at the upper left-hand corner, we'll guide our teammates with simple instructions. Those instructions include:

- Move One Square Right
- Move One Square Left
- Move One Square Up
- Move One Square Down
- Fill-In Square with colour



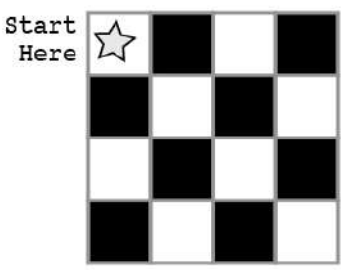
For example, here's how we would write an algorithm to instruct a friend (who is pretending to be a drawing machine) to colour their blank grid so that it looks like the image.

That's simple enough, but it would take a lot of writing to provide instructions for a square like this:

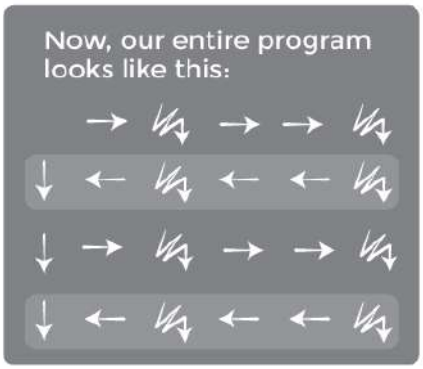


With one little substitution, we can do this much more easily! Instead of having to write out an entire phrase for each instruction, we can use arrows.





Follow along with your finger and see if you can figure out how to get this image from the program to the right.



Using arrows, we can redo the code from the previous image much more easily!

Step 4: Four-by-Fours Activity

1. Divide students into pairs and have each pair choose an image from the worksheet.
2. Discuss steps to draw that image with your partner.
3. Convert steps into a program using symbols.
4. Trade programs with another pair and draw one another's image.
5. Choose another image and go again!

Variations to The Activities

Ask the students if they can break down the following activities into steps as a homework assignment:

- Activities that are done in the morning before reaching school
- Steps to prepare tea
- Steps to make a roti
- Washing your eating utensils
- How to boil water

Rearrange the steps in the correct order/sequence for cooking rice:

- Take a vessel.
- Cook for 20 minutes.
- Wash rice with water.
- Add fresh water, double the quantity of the rice, to the vessel.
- Drain out the water after washing rice.
- Measure rice and put in the vessel.

- Put it on the fire.
- Remove it from the fire.

Correct answer:

- Take a vessel.
- Measure rice and put in the vessel.
- Wash rice with water.
- Drain out the water after washing rice.
- Add fresh water, double the quantity of rice, to the vessel.
- Put it on fire.
- Cook for 20 minutes.
- Remove from fire.

Debrief

- Ask them what the new things are that they learned today.
- What are the different places where they have observed symbols being used to communicate a particular message?
- Have we used symbols in any of our earlier sessions? Did it help us express difficult situations more easily? (safe - unsafe touch session)
- How does it help to break down a given task into smaller steps?
- Discuss how these steps can be coded for a computer to follow.

Session 18: Emoji

Time 30-40 minutes

Executive Summary

This is an extension of the previous session on giving or writing instructions using symbols. This would help students to be able to reflect and identify their emotions and practice giving specific instructions.

Learning Objectives

By the end of this session learners will

- give clear and specific instructions.
- express using symbol, signs and emojis.
- identify and express their emotions using symbols.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- Additional Resource for your preparation https://www.educationworld.com/sites/default/files/Responsible-Action-handout.pdf

Process

Step 1- Basic emotions

- Start the session by asking students to think about where emotions come from and think of basic emotions that all humans share, no matter what culture. Various emotions can be discussed - happy, sad, hungry, angry, scared, sleepy, confused, weary, surprised, nervous and so on.
- You can refer to or project this in the class pixabay.com/illustrations/emoji-smilie-whatsapp-emotion-2762568/

Step 2- Responsible Actions

- Name it: Students are given a worksheet with different emojis. The task is to give a name to the feeling behind each of these emojis and explain to your partner. Did you come up with different answers?
- Positive or negative: Though not the same, many emotions are quite similar. Make a 'positive emotions' and a 'negative emotions' mind map on the board. Have your students tell you the names of emotions from their list. Add them to the correct mind map. Act out the emotions and have your students do the same.

- Thumbs Up/Thumbs Down: Read the following sentences and ask the students to show their approval to the action with their thumbs and play the game
    - When I get angry, it helps me feel better if I slap my brother.
    - When I am sad, it helps me feel better if I bounce a ball.
    - When I am bored, it helps me feel better if I scream very loudly.
    - When I am tired, it helps me feel better to close my eyes and listen to music.
    - When I am mad, it helps if I make fun of someone and call them names.
    - When I feel jealous, it helps me feel better to put someone else down.
    - When I feel lonely, it helps me feel better to go play with my cat/dog.
- Select 4: Students select 2 emojis from each of the above sets that they like, draw them in their style and write two sentences under the face: (1) I feel _____(emotion) when _____(situation). (2) When I feel this way, I _____(action).
- Share: Students share their writing with their partner

Boundary Note

If someone offers inappropriate behaviour as an example ('When I feel angry, I kick my dog'), simply do 'Thumbs Up/Thumbs down.' Seeing the group response is sufficient to let both that person and the class know that such behaviour is not acceptable. Remember, it is your responsibility to report abuse and to be an advocate for a child disclosing harmful actions.

Step 3 - Draw like a robot

- Draw: Students will have 30 seconds to draw an emoji completely on their own.
- Write down steps: In the workbook, students write down the step by step instructions for a robot to draw their emoji in a very clear and precise manner. For example - Draw a circle. Draw two round eyes looking up and so on.
- Find a new partner: Students will have 5 minutes to give instructions to the partner verbally while she tries to draw it. Make sure partners cannot see the original emoji during this period. The person who is drawing acts like a 'Robot' and is not allowed to talk or ask questions. After five minutes are up, tell students to switch roles.
- Compare: Partners should show each other their original drawing and discuss differences between the two pictures and why they occurred.

Step 4- Discuss

- What was hard to get across to your partner?
- What worked well?
- How is this like talking to a robot?

Step 5- Emoji exit ticket

An exit ticket is a written response by students at the end of a lesson. Students are asked:

How do you feel about your day so far? Circle the emoji(s) and briefly explain why.



I chose this Emoji because - _____

Debrief

- Ask students to summarise their learning on the use of symbols, signs and especially emojis
- Can they share some examples of where they can communicate using symbols and signs?
- How do signs and symbols simplify giving instructions?
- Encourage students to discuss situations where various emotions arise.
- Encourage students to think of questions they can ask their family and friends to find out how they are feeling and represent using emojis.

Tips for the facilitator

- During the discussions, if you feel a student is too anxious to share, even after some support and encouragement, let her/him observe with the option of participating when they choose.
- The best part about teaching emotions is that, a lot of times, you can just demonstrate the meaning of the word for your students. This avoids the need for direct translations.
- Expressing one's emotions is an important aspect of communication. That is why students need to be able to recognize and identify emotions. A realistic understanding of their emotions will allow students to better manage their behaviour.
- Remind children not to judge our own emotions or other people's because they aren't right or wrong.

Parent Engagement

Ask the students to use the emoji exit ticket sheet to talk with their parents on how their day was. Ask them to use the questions that they created during the emoji exit ticket activity to converse with their parents.

Session 19: Imagine the change you would like to see

Time 1 hour

Executive Summary

The previous sessions discussed breaking down an issue/ task into smaller steps and giving instructions. The students would be encouraged to apply the learning in this and the following sessions.

This session plan is an introduction to brainstorming. It helps set up a safe culture for brainstorming about the actions that students want to take in the community. Students identify changes that they want to make and brainstorm on the issues that need action.

Learning Objectives

By the end of this session learners will

- get the opportunity to apply learning to real-world issues.
- identify a challenge or problem in their surroundings.
- have an understanding of multiple perspectives about an issue.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- Chart paper
- Markers

Process

Step 1 – Yes, And!

You can choose to have your students just work with a partner or you can divide the class into two lines down the centre of the room. The two partners at the front of the line will come to the centre.

- Discuss the ground rules of improv with the students:
    - The first person in improv makes an offer (for example if the topic is Space the offer of the first person may be 'I can't believe this rocket we're on is about to go to Mars!')
    - The number one rule of improv is that you have to go along with the suggestion of the first person.
    - We use 'Yes, And' to build on an idea. 'Yes, And' lets your partner know that you are going to build on their idea and work together to make the scene great.
    - You may also choose to discuss specific rules around appropriate content and supporting each other.

- Explain the game to students
    - The teacher or leader suggests a topic (space, food, going on a field trip etc.)
    - The first partner makes the offer. (E.g.: 'I can't believe we are going on a trip tomorrow!')
    - The other partner MUST start with 'Yes, And...' then build on the offer of the first person (e.g.: 'let me pack snacks for us!')
    - The first person responds with 'Yes, And…' (e.g.: I will get a binocular')
    - The second person responds, 'That's a great idea!' and the two partners high five
    - They then return to the back of their respective line
    - Each team should go through the activity at least twice.

Step 2- Discuss

When students are finished, ask them:

1. What was it like to trust your partner's idea?
2. How do you think we can use the idea of 'Yes, And' when we are brainstorming the best way to solve problems in our community?

Step 3 - Change you want to see

- Begin your discussion by asking students what in their school/community bothers them. What is it that they would like to see change? Ask them to reflect on their surroundings closely and ask what they see (bullying, oppression etc), what do they hear (discrimination, gender inequality, etc). Give them time to think about their personal life, their school, their community. Ask them to recollect the projects they did in the gender module. What were some of the issues or some of the gender stereotypes that exist? Ask them to list one thing each that they would like to see change.
- Have all your students sit together, make sure everyone is included. You may want to designate a student or a few students to be the recorders. Have them record all the ideas on a chart paper. You could also record this conversation and write down the ideas after.

- Let the students know that you are going to be brainstorming different things you can do to create the change you want to see in the activity. We are going to use the 'Yes, And' to build on each other's ideas. Let them know that the sky's the limit. With brainstorming, much like improving, often building on an idea that you may not initially like can lead to some really interesting ideas.

- Tell students the brainstorming rules:
    - The first person gets to suggest by raising their hand.
    - At least the following two comments must be a 'Yes, And' comment, building on the other person's ideas. If you have a 'Yes, And' comment put your hand on your head.
    - Until each 'Yes, And' comment has been heard don't move on to a new idea.
- You may choose to call on the students, or you can have them call on each other by saying 'What do you think (student's name)?

At the end of the brainstorm, allow each student to circle three action ideas that they feel would benefit the community that they are trying to serve. Some examples of topics are: gender stereotypes in the school, discrimination based on caste, facilities available for students living with disabilities, plastic pollution, health and nutrition, hygiene and personal safety, bullying in campus, school resource utilization, and so on. While students narrow down the topic, redirect them to these issues. If these topics do not come up, ask if they want to change anything about gender discrimination in school, or if they are bullied/ teased by friends. The topics could be food wastage in school or the availability of drinking water or the availability of clean toilets with running water.

Debrief

With the issues all chalked out in front of them, ask students to voluntarily come together in groups of 3-5 and decide on one issue they would like to work together. Give students ample time to think, reflect and come together on a topic. Make sure you decide on a specific date where they will submit their names as a group along with a topic they relate to and would like to work together on. Share with them that they will continue to work in the groups and the topics they have chosen. This will be presented in the larger share-out event.

Variations to The Activities

Children may mention really big challenges they hear of like cutting of trees, garbage etc. Ask students to think of issues that bother them personally. Ask students to share the issues and ask WHY these issues bother them. What are the main areas of concern? Who are the people directly affected by the issue?

You could give these topics before 'Yes, And'. Some examples of topics are: gender stereotypes in the school, discrimination based on caste, facilities available for students living with disabilities, health and nutrition, hygiene and personal safety, bullying in campus and school resource utilization. Ask students to ask 'Yes, And' questions/ issues in these topics though students might have or bother about many questions.

Tips for the facilitator

Do not rush the activity as students will need time to form groups and decide their topic. In case some students seem not interested in the activity, do not force or put pressure on them to participate. Ask them to be an active audience and join a group before the given deadline. This step is very imminent to the share out event and hence remind students to decide a topic and the group.

It is suggested to brainstorm in a larger group. Plan the session so that students can do group work.

Session 20: Project planning

Time 60 minutes

Executive Summary

In this session, students will make a list of various stakeholders for the issue they have selected and dig deeper to understand the reasons as to why the issue continues to exist. They will chalk down ideas for possible solutions.

Learning Objectives

By the end of this session learners will

- create possible solutions to the identified issue/problem.
- organize information and design a project plan.
- own their given tasks and responsibilities and stay persistent with the effort.
- brainstorm the possible solutions.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session

Process

Step 1 - The 5 Ws and H

- As students have identified the issue they want to address, they get together in their respective groups and imagine the best solution to this challenge by coming up with new and innovative ideas. Planning starts when the students analyse the project with a thorough investigation.
- The 5 Ws and H provide a handy tool for analysing any situation. These journalistic questions capture all the key information. Ask students to sit in their decided groups and discuss each of the following questions in detail and note down their responses.

- What? – Students work out possible solutions to the issue the group wants to work
- Why? – The reason for the selection of the particular topic
- Who? – Team members and resource person needed as mentors/guides
- Where? – The location (Classroom / hall / school ground)
- When? – The final day of presentation
- How? – The solution they have imagined could be presented in the form of a play/collage / verbal presentation/games or activities

Step 2 - Project Planning

After setting up a goal and objectives, the students need to think about the tasks in detail. Here, depending on the type of presentation, you can help the students by giving them a reference frame for the step-by-step process of detailing the project.

- Students use the worksheet to list the specific tasks they need to perform.
- For each task, the group needs to assign a team member who will take the responsibility to make sure the task is completed in the decided time.
- The group will also work on making an extensive list of materials and information they would need to validate their presentation and look for resources for the same.

Planning Sheet

Team:			
<u>Objectives</u>			
What?			
Where?			
When?			
Why?			
How?			
<u>Task Break-up</u>			
Tasks	**Lead**	**Start Date**	**Finish Date**

Resources	
Materials:	
Information:	
Resources:	

Debrief:

Ask the following questions

- Why is it important to plan activities in detail?
- Is everyone clear about what their roles and responsibilities are going to be for the final project?

Each group needs to present their worksheets to you individually and make iterations based on the feedback.

Tips to The Facilitator

You could move among the groups, help them brainstorm, offer suggestions, clarify and guide them through the planning.

Make sure students are clear on the topic and get enough time to brainstorm on possible solutions. For example, if the problem identified is that all the space in the playground is occupied by boys and girls do not get to play, the solution could be to allot specific time fairly for boys and girls and follow the same. This could be communicated to the teachers or planned in the timetable. Or the solution could be to share the resources or play together. The solution could be a simple process plan or suggestions to the school authorities.

Session 21: Project preparation and practising

Time 30 - 40 minutes

Executive Summary

Students will work in groups to plan, prepare and practice for their final project.

Learning Objectives

By the end of this session learners will

- prepare for the project presentation.
- practice for the presentation.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session

Process

Step 1

- The students would have decided on the final form of their presentation. This session is to refine their plan, identify resources and practice or work on the form of their presentation. They will continue to work in small groups. You could suggest the following steps to different groups.

  Some examples

  <u>Steps for preparing a play:</u>

  Step 1: Brainstorm all possible solutions to the issue and make a draft script/narration of the play.

  Step 2: Prepare a list of necessary props and assign roles.

  Step 3: Start working on props and practice the play

  Step 4: Practise the play with the help of the facilitator regularly.

  Step 5: Check the props, a few days before the performance of the play.

  Step 6: Rehearse in front of your class, receive feedback and practice for better performance.

  Step 7: Perform the play on stage, before parents, teachers and friends.

Steps for preparing a collage

Step 1: Brainstorm all possible solutions to the issue and make a list of information and ideas the group would like to present and assign roles

Step 2: Make a list of resources available for cut-outs: newspaper articles; magazines; quotes from teachers, community leaders, mentors; drawing material

Step 3: Collect the cut-outs and make a rough sketch of the collage

Step 4: Prepare a narrative to present the work

Step 6: Rehearse in front of your class, receive feedback and practice for better performance.

Step 7: Perform the play on stage, before parents, teachers and friends.

Steps for verbal presentation

Step 1: Brainstorm all possible solutions to the issue and make a list of information and ideas the group would like to present and assign roles

Step 2: Make a draft speech and practice your presentation

Step 3: Rehearse in front of your class, receive feedback and practice for better performance.

Step 4: Present on stage, before parents, teachers and friends.

Students could come up with alternative forms of presentation. Also, they need to identify resources and collect resources for their presentation.

Session 22: Giving and receiving feedback

Time 30 to 40 minutes

Executive Summary

This session will help them give and receive feedback as they plan for the presentation. This is a necessary step to improve and work on the suggestions.

Learning Objectives

By the end of this session learners will

- discuss experiences in giving and receiving constructive critical feedback.
- reflect on their project and make necessary iterations for the final presentation.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session

Process

Step 1- Sandwich model

Introduce the feedback technique to the students. Ask students to give feedback strictly based on their observation during the presentation.

- Begin your feedback with a compliment that will break the ice. Be sure not to exaggerate, but genuinely compliment someone on something they're good at or got right. For example, 'I noticed you did quite a good job with your research. I must say I'm impressed and glad you are taking this topic as it is a very challenging issue.'
- Second, offer constructive criticism about what could have been differently done for the presentation to be more effective. It has to be short, and clear. You don't want them to leave the class confused or exhausted. Try to limit the number of aspects you're criticizing. Make sure you are respectful and setting realistic expectations. It has to be aimed at a specific outcome and expressed as a point of view and not as absolute truth.
- End it with a positive statement sharing your thoughts about what worked well and appreciate the efforts of the participants.

Step 2: Rehearse presentations and collect feedback

- Here, each group presents their work in front of the class one by one and collects feedback from classmates. This is a very critical aspect as students need to consider

the feedback objectively and make necessary improvements in their presentation before they present it in front of the school and parents.

Look for:

- Contribute to others learning and development
- Motivate and inspire others to higher levels of performance
- Provide direction and indicate to your colleagues that you are attentive to them and care about their performance
- Show appreciation for a job well done
- Redirect undesirable behaviour
- Point out a more productive course of action

Debrief

Despite knowing in abstract that giving feedback is important, sometimes students might still be hesitant to do it, especially when it comes to giving corrective feedback. Discuss some of the reasons that would cause them to be reluctant to give feedback to someone:

- They fear an awkward situation.
- They feel the person is already too stuck in his/her ways and feedback will not help.
- They assume the person cannot handle the feedback.
- They know from previous instances that the person resists feedback or does not act on it.
- They don’t want to jeopardize the relationship they have with the group members.

Tips for the facilitator

Based on the number of groups and students, you can decide on the time required for this session.

Session 23: Final presentations

Time 2 hours

PLAN

This session will depend on your relationship with the school community. The programme can be a grand share out with parents, teachers and other school students taking part as an audience. Students share their final projects with the community. This allows them to talk about the issues that concern them and share the possible solutions they have at hand.

Learning Objectives

By the end of this session learners will

- present the project and share the solutions with the larger audience.

Prior Preparation and Material

Students may need more time to prepare their projects and be ready to present them in a way they want.

Process

Once student teams choose an event date, they will be responsible for developing a plan that explains the goal of the event and describes what will happen. The plan should be discussed with the class beforehand and should include specific information. Some suggestions for planning;

- Location(s) and layout(s)
- List of the audience and chief guests
- Time of event and duration
- Decorations
- Program plan - layout of introduction of chief guest, project presentation, vote of thanks
- Invitations and/or advertising
- Documentation of the event - Photo/Video

Tips for the facilitator

Here students need to take the lead and step forwards in the planning and preparation process.

You can take the help of the teachers in the school to plan the event during PTM or any other suitable time where parents could be invited. Try to involve the teachers/ class teacher in the various steps like finalising the project, project planning, rehearsal and giving feedback. They could also review the project plans.

Parent Engagement

Ask the students to design and create a personal invite for their parents to participate in the project share-out event.

Module 3 – Basics of learning to make

Covering the basics of doing projects on the open-source programming platform Scratch, it will set the foundations for the end-of-module projects they do in the entire curriculum. The sessions provide opportunities for creating stories and simultaneously developing communication skills required in creative collaborations.

Session 24: Learning to code

Time 2 hours

Executive Summary

This is the introduction session to Scratch. This session intends to give students the basic idea of Scratch. They will also be able to create custom sprites, animate their names, change backdrops which can later be used to build artefacts

Learning Objectives

By the end of this session learners will

- open, create and save projects.
- follow simple instructions to code and create projects.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- A computer or laptop connected with a projector
- Scratch 3.0 installed in all the computers
- Open Scratch and play with it, perform all the steps suggested for students for your preparation
- Colour pencils

Also, have a look at the following resources:

1. Scratch Educators Guide: https://esources.Scratch.mit.edu/www/guides/en/EducatorGuidesAll.pdf
2. Scratch Cards All: https://resources.Scratch.mit.edu/www/cards/en/Scratch-cards-all.pdf

Process

Step 1- First look at Scratch

- Play a game
  Blindfold one student and ask the other students to give directions to do an activity. For example, pick up a piece of chalk from the table and write something on the blackboard. You can also draw a picture of an animal and ask a student to draw its tail. Note that the other students give directions for the activity. Explain that doing the activity requires giving step-by-step instructions. Just as we follow the instructions, the computer also needs instructions from us to do the activity. What we call step-by-step instructions is called programming in computer language

- Explain:
  Scratch is an easy-to-use programming language that makes it easy to create your own interactive stories, animations, games, music, and art -- and share your creations on the web. Scratch is designed to help young people (ages 8 and up) develop 21st-century learning skills. As they create and share Scratch projects, young people learn important mathematical and computational ideas, while also learning to think creatively, reason systematically, and work collaboratively.
- Scratch was developed out of the MIT Lifelong Kindergarten group. In contrast to text-based programming languages, Scratch uses drag and drop blocks that snap into place to perform different commands or actions. This is a space where kids can animate stories, build their games, and create interactive art to share with other kids over the Internet.

Show them a story project (preferably on gender - refer to the repository) and a game from the toolkit and discuss the following questions.

- What did you like in this project?
- Who are the main characters in the project?
- How did the characters move around, run and talk?
- Do you think you can make projects like these in Scratch?

Tell the students that they are going to learn how to work in Scratch, after that they can create their projects. Show them the 'Getting Started' tutorial.

Step 2- Create a folder

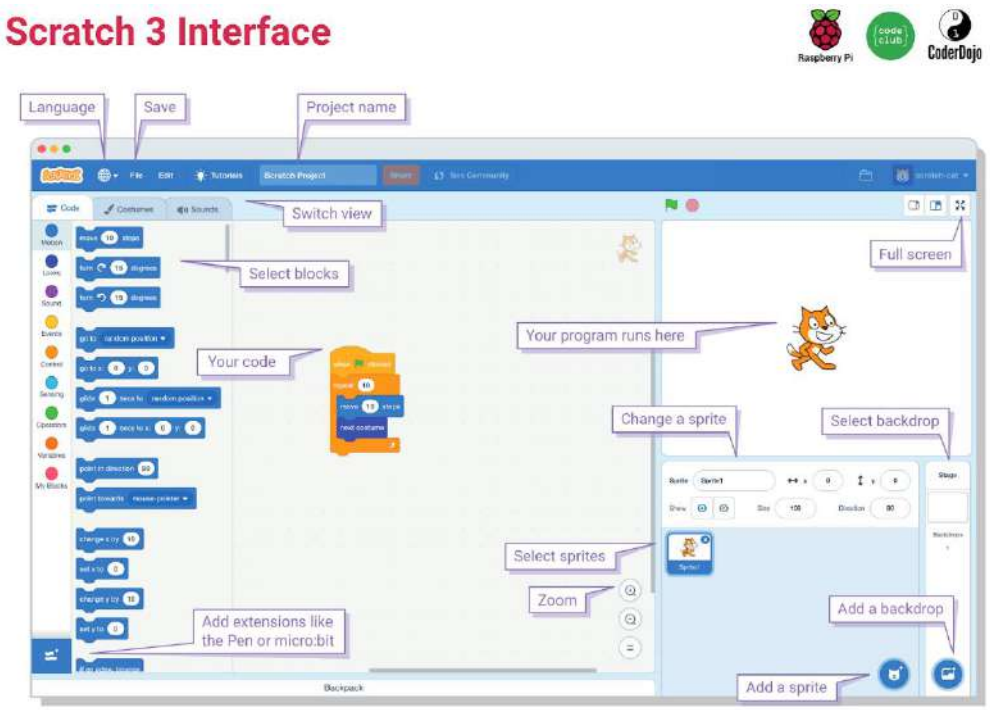
Ask students if they have seen shelves where people keep different books. Folders are like shelves; we keep books on shelves, and we save files and projects in folders. To create a folder:

1. Right-click on the window with your mouse.
2. Select ‘create folder’ Give the folder a name.
3. The name you give to the folder can be anything you like. Eg: Rani, team A, Rani April 2020

Ask questions such as 'What would happen if the sub-folders were not used and all the contents were placed in a single folder?' Encourage students to think and reason out the necessity of organising files into folders.

Step 3: How to open Scratch

- You can see an icon of a cat on your Desktop (computer screen).
- Double click on that icon with the help of mouse.
- A window will be opened (see the picture below).



- Tell the students that this is the Scratch platform and show the following instruction with the help of a projector.

- As students open Scratch and explore, ask them to colour the icons in the workbook looking at the screen. This will help them revisit some of the icons.



- For e.g draw a flag and fill in green.
- Ask them to fill the colours wherever they see this pencil mark. This needs to be done in lessons 18 and 19 in the workbook. Give them some time to do this.

Step 4 – Creating a project

- How to start a new project
  - Click on File.
  - Then, click on New.
- How to see the previous project
  - Click on File.

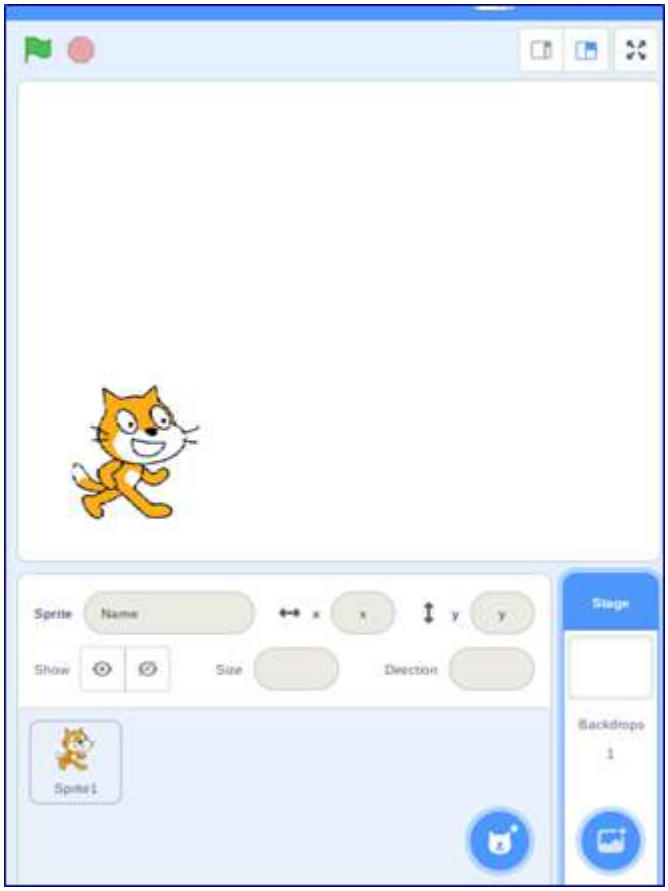
    - Then, click on load from your computer.
    - A window will pop up.
    - Select the folder where you saved the project.
    - Select the project.
    - Click on Open.
- How to save a project
    - Click on File.
    - Then, click on Save to your computer.
    - A window will pop up.
    - Give a name to your project.
    - Select the folder you want to save.
    - Click the save button.

    (remind them to save the project once they start the project to control the chance of missing the project)

Step 5- Stage and Sprites

- Stage

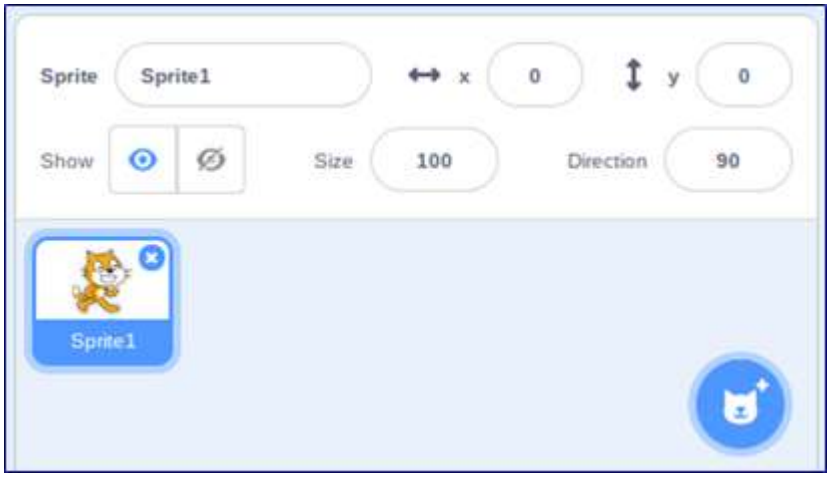
  Just like a theatre's stage, the stage (see Scratch Interface image above) in the Scratch interface is where you see all of a program's activities/scripts happen. Programs are called projects in Scratch. A project (program) consists of one or multiple scripts, which you create by combining code blocks. When you run a project or activate a script, the result is displayed in the stage area. The dimensions of the stage are 480 pixels wide in the horizontal direction or X-axis, and 360 pixels high in the vertical direction, or Y-axis. When you want to indicate an exact position on the stage, you use a pair of X and Y values, or coordinates, similar to how you'd plot a point on a graph.



- Scratch 3 stage area

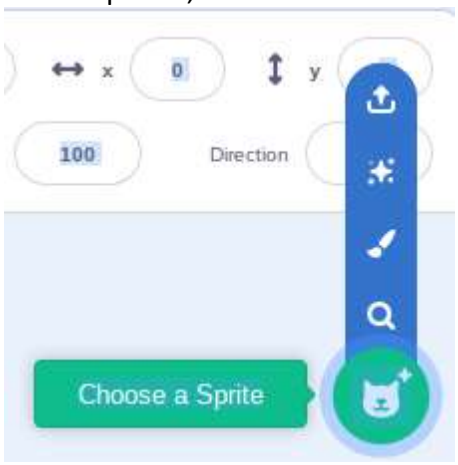
  The top of the stage provides some controls. Clicking the green flag in the upper-left corner of the stage area can activate (trigger) a script that includes a corresponding green flag code block. Clicking the red octagon in the upper-right corner of the stage area will stop all the scripts in a project from running.
  Change the stage size with the 3 buttons in the top-right corner of the stage area. The stage can be 3 different sizes.

- Sprites Pane
  The Sprites pane (see image below of the Scratch 3 Sprites Pane) is where Scratch displays thumbnails of the sprites that are being used in the current project. Sprites are objects that perform actions in a project. These actions are determined by the scripts that you create. The scripts tell the sprites what to do and what actions to perform. The cat sprite called Sprite1 always appears by default when you create a new project.



Sprites Pane

- To add a new sprite to a Scratch project, you use the icon in the bottom-right corner of the pane. Clicking this button allows you to choose from a library of already existing Sprites offered for free on the Scratch website. Moving the mouse over this initially reveals more options, like this:



Add Sprite options

Let us go through these quickly to see what they do:



Upload Sprite. The folder button (with upload arrow) allows you to upload a sprite from your computer.

Tips: You can upload animated gifs to make your Sprites animated. You can also find already created and free to use Sprites for Scratch online.



Surprise. This randomly selects a Sprite from Scratches library and inserts it into your current project.



Paint. The paintbrush button creates a blank sprite with an empty costume.



Choose a Sprite. A redundant button. Same as the button that initially holds all of these buttons. (Scratch's head with a + in the top right-hand side.) Both of these buttons allow you to choose a Sprite from the library.
Show them the Indian sprites library and tell them that they can even create their customised library.

Step 6- Backdrops Pane

- The Backdrops pane (see image below) is where Scratch displays a thumbnail of the current backdrop that is being used in your project. A backdrop is a background that appears behind your sprite in the stage, and every project has at least one. You can keep track of the backdrops used in a project with the Backdrops pane, which is to the right of the Sprites pane in Scratch 3. Backdrops are explained more thoroughly here.

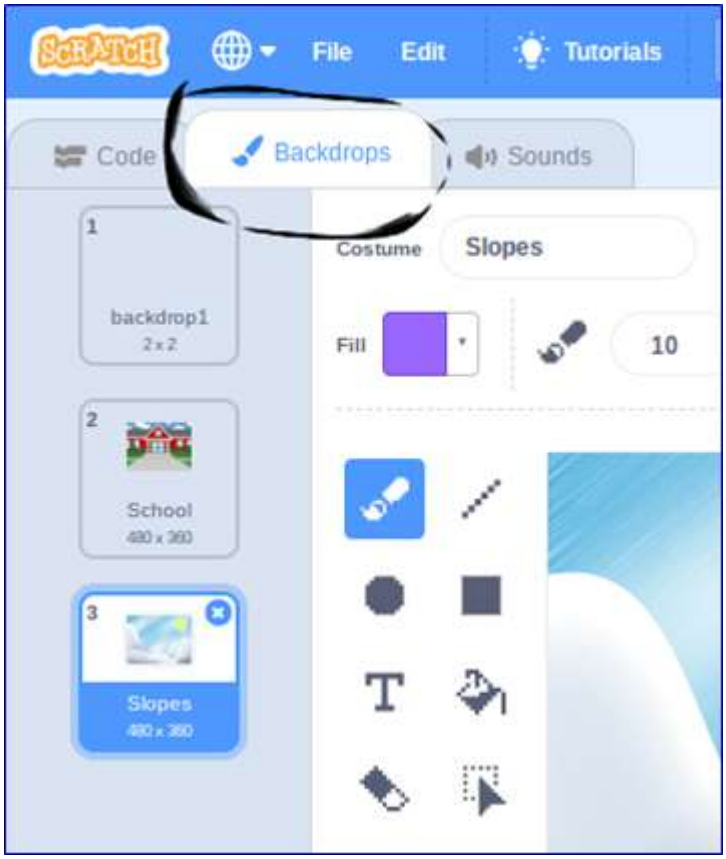


Backdrops Pane

The white backdrop always appears by default when you create a new project. The Backdrops Pane button has the same options as the Sprite Options button, except they are for the background image instead of the Sprite.

- Backdrops Tab

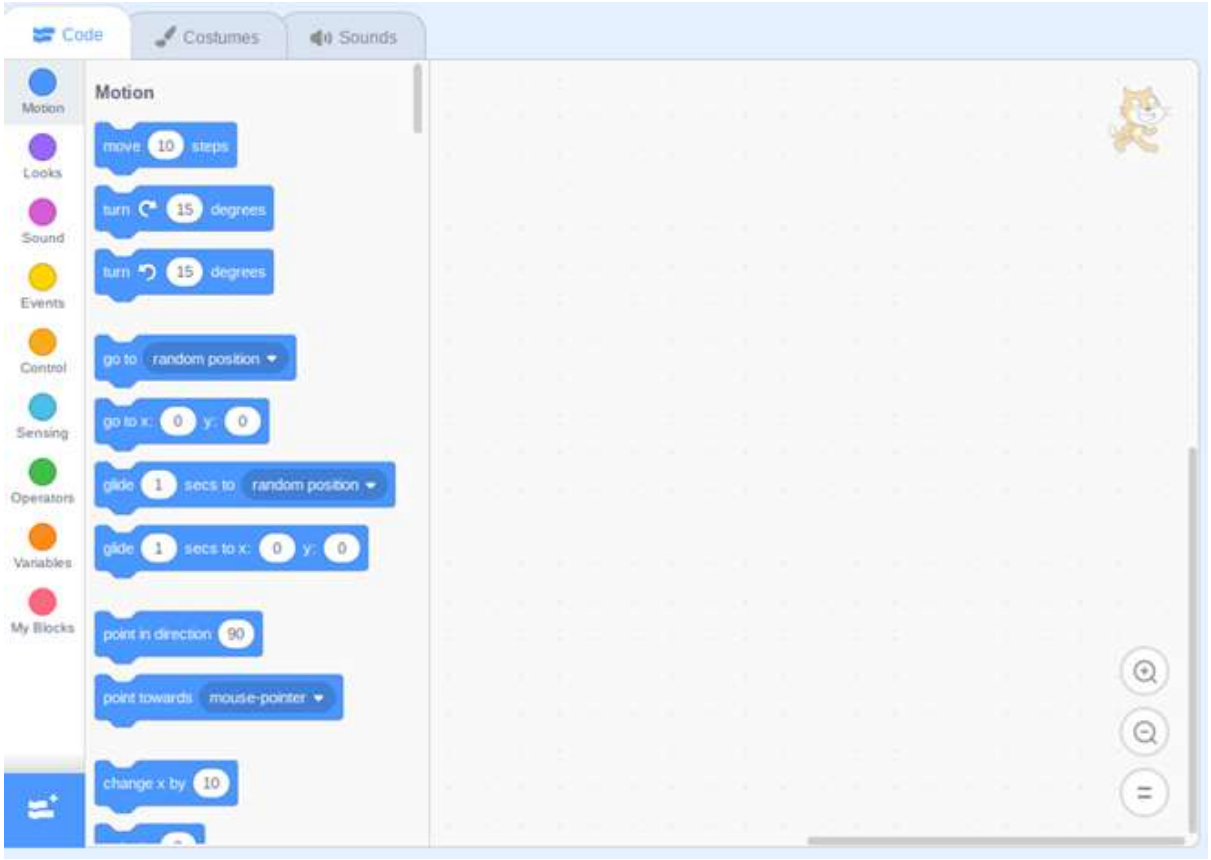
If you click the Backdrops tab, in the top left of the screen. (see image below) This tab shows all the backdrops that are being used in the project.



Backdrops Tab

- Block Palette

The block palette (see image below) is where you find the different categories of code blocks. You drag and drop these code blocks to the scripts area (right) and snap them together to create scripts.



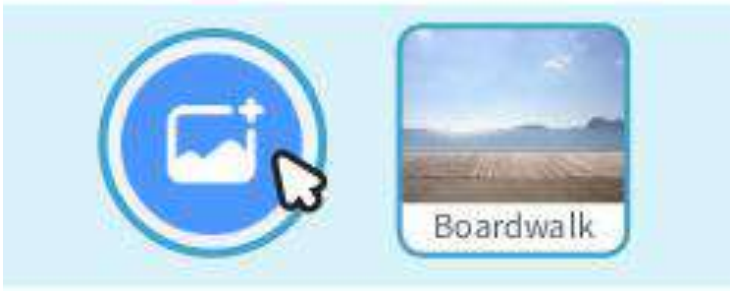
The block palette

The block palette contains ten categories of code blocks. Each category has its colour, so whenever you see blue blocks, for instance, you know they deal with motion. These are the categories:
Motion blocks: These blocks control the movement of the sprite. You'll learn how to use motion blocks here.
Looks blocks: This category includes several blocks of code that can be used to modify the appearance of a sprite. With these blocks, you can apply graphic effects to the sprite, change the colour of the sprite, or change the size of the sprite. More about this category can be found here.
Sound blocks: These blocks add and control sound in your Scratch project. More about this category can be found here.
Event blocks: These blocks control when and how the scripts are activated. With these, you can control whether a script starts running when the user clicks the green flag or a sprite. You'll learn more about these blocks here.
Control blocks: These blocks control how the scripts run. For example, you can pause the script for a specified amount of time or you can repeat a sequence of blocks a specified number of times. More about this category can be found here.
Operators blocks: These blocks perform math functions, such as adding, subtracting, and dividing numbers. You can also perform operations on strings of characters, such as comparing them and adding multiple sentences or words to create a new sentence. More about these blocks can be found here.

Step 7: Animate your name

- Use the letters of your name in a fun way: make them jump, spin or change colour.
- Warm-up Activity: Letter Shapes
- Gather the group in a circle. Ask each participant to say their name, and then have everyone in the group act out the shape of the first letter.
- Show the introductory video for the Animate Your Name tutorial. The video shows a variety of projects for ideas and inspiration
  Video links – www.Scratch.mit.edu/name
- Demonstrate the first few steps of the tutorial so participants can see how to get started: In Scratch, click Create.

Choose a new backdrop:



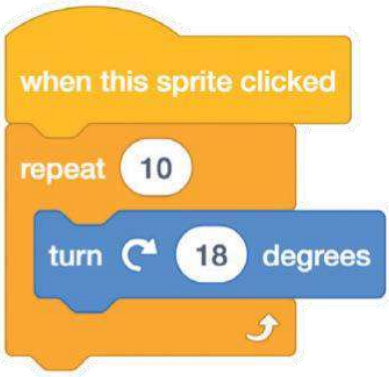
Choose a letter from the Sprite Library. To see just the letter sprites, click the Letters category at the top of the Sprite Library.



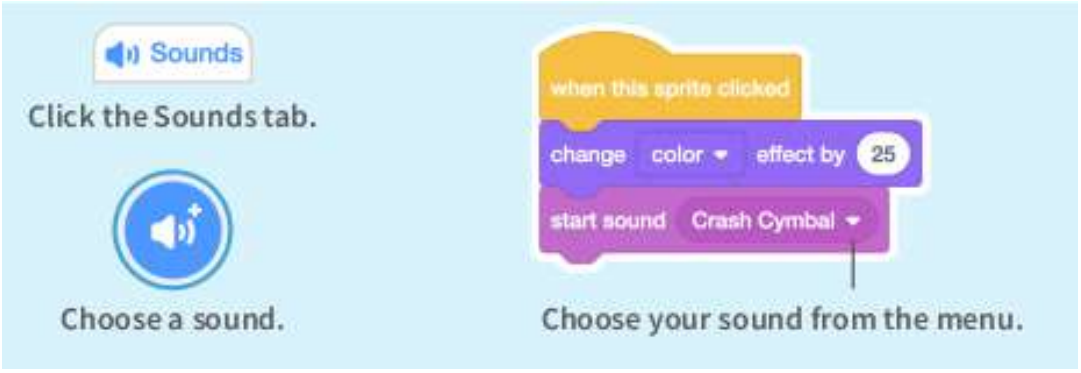
Make a letter change colour when you click it:



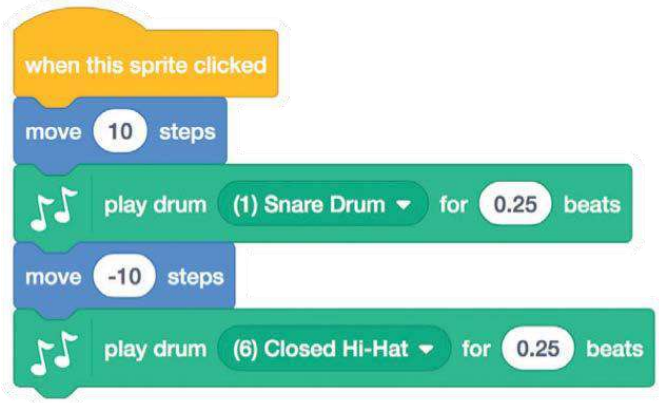
Make a letter turn when you click it.



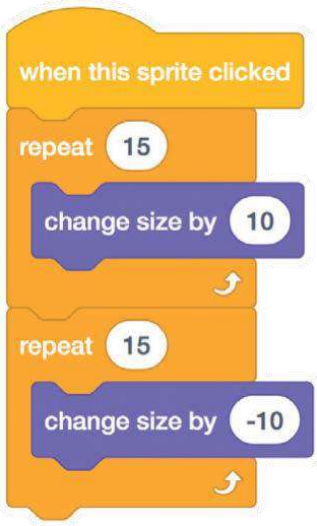
Add a sound:



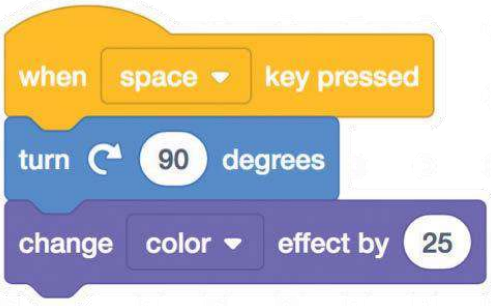
Make a letter move to the beat:



Make a letter get bigger and then smaller:



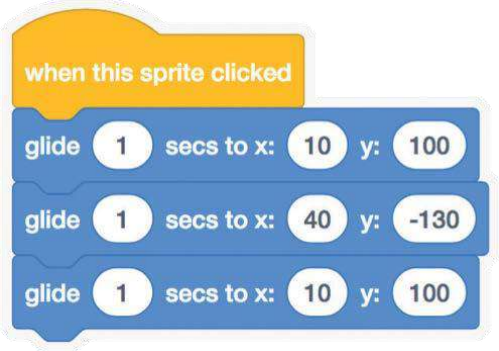
Press a key to make your letter change: You can choose a different key from the menu.



Make a letter glide smoothly from place to place: When you move a sprite, you can see the numbers for x and y update. Try different numbers.

x is the position from left to right.

y is the position up and down.



Have participants share their project with their students. Ask questions they can discuss:

- What do you like best about the project you made?
- What was the hardest part?
- If you had more time, what would you add or change?

Tips for facilitator:

- Support collaboration: When someone gets stuck, connect them to another participant who can help. See a cool idea? Ask the creator to share with others.
- Encourage experimenting: Help participants feel comfortable trying different combinations of blocks and seeing what happens. Highlight the importance of Scratch as a tool to build meaningful artefacts.
- To understand their thought process, you can ask questions:
    - What are you working on now?
    - What are you thinking of trying next?

Also, have a look at the following resources:

Scratch Educators Guide:
https://esources.Scratch.mit.edu/www/guides/en/EducatorGuidesAll.pdf

Scratch Cards All:

https://resources.Scratch.mit.edu/www/cards/en/Scratch-cards-all.pdf

Session 25: Let's make a game

Time 40 minutes

Executive Summary: Students will create an animation to practice the following concepts: – Sequential execution of instructions, and Loops

Learning Objectives

By the end of this session learners will

- explore the forever loop.
- gain experience with coding as they design a bouncing ball game.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- A computer or laptop connected with a projector
- Scratch 3.0 installed in all the computers
- Open Scratch and play with it, perform all the steps suggested for students for your preparation

Process

Step 1- Design a bouncing ball game

Introduction:
First, gather as a group to introduce the theme and spark ideas. The Pong Game tutorial shows participants how to create their projects. Show the introductory video for the Pong Game tutorial. The video shows pong games with a variety of themes, including everything from soccer to a magic potion-themed Pong game.: www.Scratch.mit.edu/pong

Bouncing Ideas
To get participants thinking about a theme for their game, take turns calling out a theme, such as orange pong or flower pong and brainstorming ideas for the type of images they could use to represent the theme.

Start with Prompts
Ask participants questions to get started like:

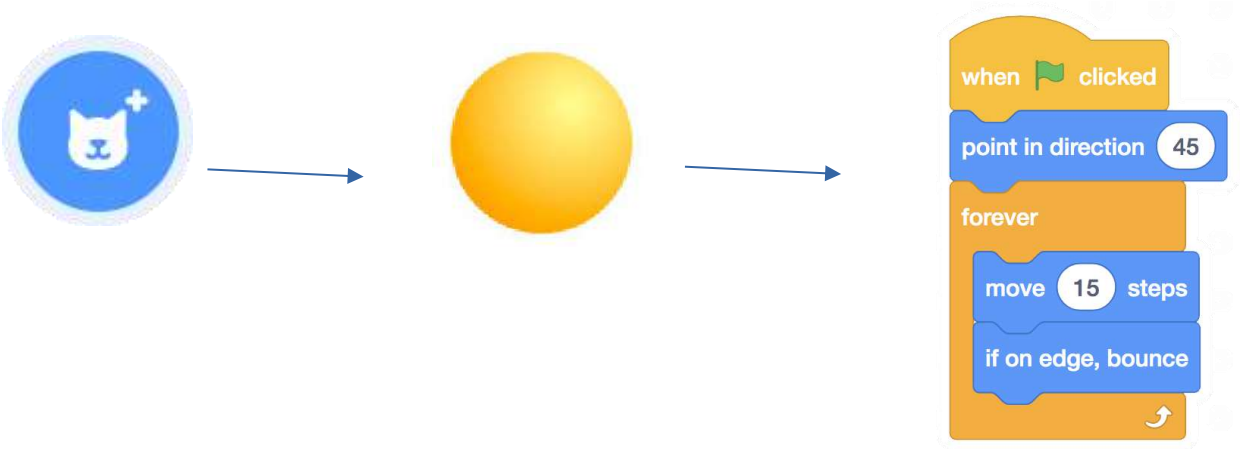
- What background do you want for your game?
- What colour or type of ball?

Demonstrate the first few steps of the tutorial so participants can see how to get started.

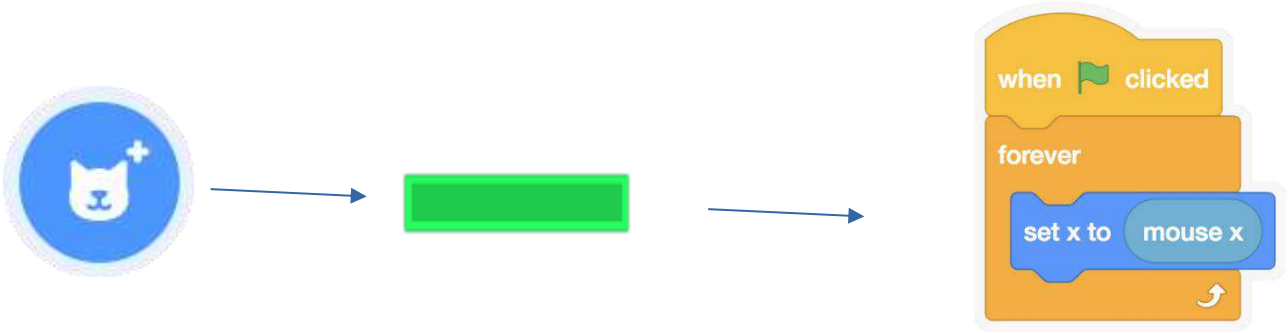
Step 2
Open the Scratch website. Click Create. Choose a new backdrop.



Step 3
Choose a ball sprite and make it bounce around. Students can also draw a ball sprite.



Step 4
Add a paddle sprite and control it with the mouse



More Things to Try:

- Add sounds and colour effects.
- Keep score by adding a variable.
- Add a way to win or lose the game.
- Change the backdrop when you reach a certain number of points.
- Duplicate the ball for an added challenge.

Offer strategies for problem-solving:

- Talk out what you're working on with someone.
- Try out small bits of code at a time to figure out what's happening at each step.
- Look closely at the blocks on the tutorial or activity cards to see if they are the same or different from the blocks you're using.

- Look at the code for other pong games on the Scratch site.

Debrief

Have participants share their projects with others in the room.
Ask questions to encourage reflection:

- What did you notice about the games you tried?
- What do you like best about your game?
- If you had more time, what would you add or change?

Session 26: Creating a Scratch project

Time 2 hours

Executive Summary

The session will introduce the concept of storyboarding and help students identify the elements of the story and how to organise the story. The students will plan and write a program/ create a story in Scratch. It will enable students to think logically and plan an activity.

Learning Objectives

By the end of this session learners will

- identify the elements of a story.
- use the storyboarding organiser and organise the story.
- create a story using Scratch.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- A computer or laptop connected with a projector
- Scratch 3.0 installed in all the computers
- Storyboarding organiser
- Open Scratch and play with it, perform all the steps suggested for students for your preparation

Process

Step 1- Sharing the story

- Discuss with the students about the last activity where they created new sprites. Recall some of the sprites they may have made. Tell the students that they will now learn more interesting activities using Scratch. You can say that they will learn to do animations/ create stories to arouse their curiosity.

- Ask them if they remember the story of Poorna – a girl who climbed Mt. Everest. They would have heard it in the session 'My dreams'.
- Share the story of Poorna quickly-
  The first time Poorna Malavath saw Mount Everest, she turned to her coach and said cheerfully, 'It's not that tall. We can climb it in a day.' She was 13 years old.

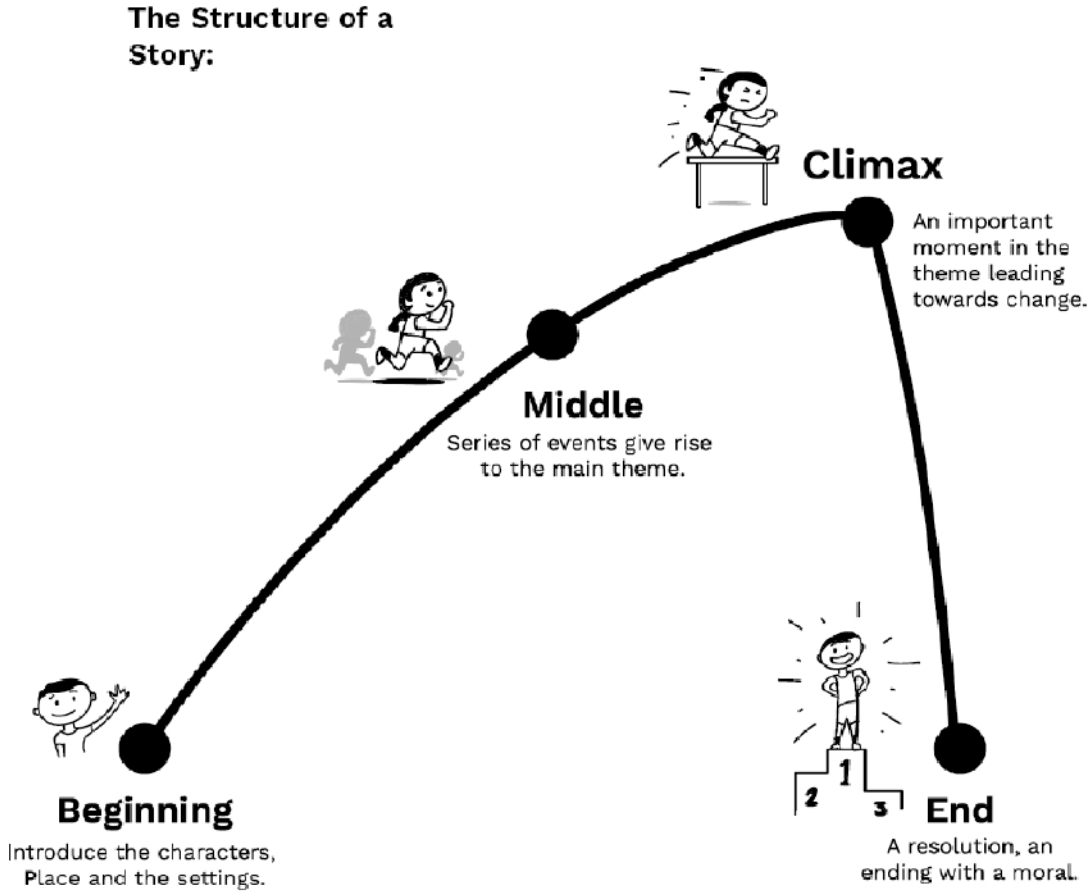
  Malavath had come to the Everest base camp from a government residential school in Telangana after eight months of gruelling mountaineering training. As part of her training, she had to scale Mount Renock at 17,000 feet in the Kanchenjunga range in the Himalayas, which was then followed by acclimatisation in the mountains around Ladakh, at −35 degrees Celsius. On 25 May 2014, Malavath, along with her 17-year-old friend S Anand Kumar, summited Everest. She became the youngest girl in the world to have ever done this. She says time and again that 'girls can achieve anything'.

Step 2- Identifying the story elements

Ask them the following questions (make a note on the blackboard):

- Who are the characters in the above story?
- Where does it take place?
- How is this story starting?
- How does the story end?
- What is the message?
- What are the 1-3 major events that happen during the story?

Share with them the structure of the story,



(This could be presented as is or re-illustrated)

Show them some of the already existing projects
For example: Women in History
https://Scratch.mit.edu/projects/171610974/
https://Scratch.mit.edu/projects/199609402/

Step 3- Creating their own story/ presentation

- Ask them if they would like to create similar story projects or some other topic of their interest. Recall some of the triggers from the previous lessons
    - Story of a girl who has won a bravery award
    - Story of a girl who has tried to climb a mountain
    - Story of a woman scientist
    - Story/ clipping of a girl who has won a medal in cycling/ marathon

- You could brainstorm on some topics for presentation
    Indian women scientists
    Indian women politicians
    Women athletes
- Ask students to work in groups of 3 and choose either a story or a presentation to create on Scratch.
- Tell them that before they start writing any code, it's a good idea to take some time to plan out what they want to create. A storyboard is a graphic organizer that is used to plan out a narrative or story. Ask them to note the following elements as they did for the story of Poorna.

  <u>Steps for storyboarding</u>

  Brainstorm on the elements of the story, and answer the following questions

    - Who are the characters in your story?
    - What scenery or backdrop(s) will you want for your story? Where does it take place?
    - How will your story start?
    - How will the story end?
    - What do you want the viewer to take away from your story? What message are you hoping to send?
    - What are the 1-3 major events that happen during the story?

  Sequence the script and finalise the story

  <u>Steps for presentation on a topic</u>

    - Research on women scientists/ politicians/ athlete/ or other topics you chose
    - Collect four to five lines of biographical information
    - Finalise the content and sequence them in the order as shown in the example- https://Scratch.mit.edu/projects/171610974/
    - https://Scratch.mit.edu/projects/199609402/

  Give the groups time to research and finalise the script. You could move among the groups, give feedback and help them finalise the content.

Step 4- Create Scratch projects

Once students have finalised the content, ask them to start working in Scratch

- Create a new project using Scratch. Open the Scratch interface (online/offline editor)
- Click Create to create a new project
- Add sprites and backdrops:
  - Ask the students to watch the 'Add a Sprite' and 'Add a backdrop' Tutorial from the Scratch Toolkit
  - Explain: Add any sprites or backdrops you may want from the library by clicking on the sprite or backdrop icons in the bottom right-hand corner of the editor. If you found images online or have created one that you want to use in your project, you can hover over the sprite or backdrop icons and select Upload Sprite or Upload Backdrop.
- Create the First Scene
  - We all know that Scratch is an event-based programming language, which means that the code is run or triggered by different events. For example, the When _ key is pressed or When mouse moved blocks can trigger scripts to run whenever that event takes place. In Scratch, event blocks are found in the Events menu. In many projects, the event When Green Flag Clicked is used to start most programs.



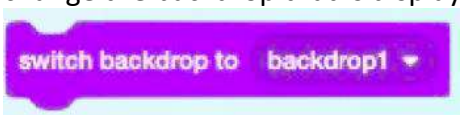
  - Let's try this in our project: Show them by selecting the main sprite and add the starting event in the scripts area
    - Use the already created storyboard to guide your actions on Scratch. You might use a combination of blocks from the Looks and or Motion menu including the Say _ for 2 secs block to have your sprite share part of the story.



      Tell them they can write some other message for as many seconds as they want. Show a few examples
  - Test Your Project:
    - Test it out by clicking the green flag or whatever has been set to trigger an event. Check
      - Is it working as expected?
      - Are the actions happening in the right order?
    - If not make adjustments and debug your code before moving on

Add Additional Scenes

- Now look into your storyboard and continue telling the rest of the story. Think about:
  - Using new sprites and additional backgrounds to enhance the story. You can use the Switch backdrop to _ block from the Looks menu to change the backdrop that is displayed or move onto the next scene.



Remember to keep looking into the storyboard and also keep testing the code.

- Encourage the students to add graphics, movement, change costume, add sounds which they have learnt in the previous sessions

- End the Story: All stories must come to an end. Refer to your storyboard and complete the ending script. Think of prompts to end the story, like an inspirational source or an action a user must take.
- Ask students to run the project, revisit to check if they want to make some changes, and share with them that they will soon present the project to the larger audience.

Session 27: Let’s learn to present

Time 30 to 40 minutes

Executive Summary

This session stresses on good presentation skills. Different aspects of presentation skills like having good body language, maintaining eye contact and speaking confidently are explained to the learners. The learners will then rehearse, make a presentation and receive feedback from their classmates and teachers.

Learning Objectives

By the end of this session learners will

- share their projects, give and receive constructive critical feedback.
- understand the importance of good body language, eye contact, speaking confidently.

Prior Preparation and Material

- Student Workbook
- Instructor manual for this session
- Colour pens, hats and chalk

Process

Step 1

Start the session with an activity

- Ask 2 or 3 students to volunteer.
- Encourage students who have not volunteered till now.
- Tell students they are going to present something on the spot.
- Give each student the prop (colour pens, hat and chalk) and ask them they will get one minute to think, and then they have to present the prop and talk about it for one minute.
- After the activity, tell them it's important to present what they made and they should feel proud of it.
- Tell them they are going to present their Scratch projects in front of other people soon. So, this session is to give a few tips on how to present in front of their teachers and external people.

Step 2

Explanation of the do’s and don’ts in a presentation

- Make eye contact. Eye contact is crucial to holding the attention of your audience. Look at everyone in the audience from time to time. Try to involve everyone, not just those directly in front of you.
- Feel confident about your presentation: It is important not to be nervous before the presentation and have confidence in yourself that you will do well. This confidence can come only through prior preparation and study for the presentation.
- Good Body Language: Try to appear confident and enthusiastic. If you're standing up, you will need to hold your head up and have your arms open

    - Smile at the audience.
    - Voice: You can use your voice to emphasize certain parts of your presentation to make the presentation more interesting.
- It is normal to feel scared or tensed when you present something in front of a group. You can come out of it through practice.

Step 3- Sandwich model

Introduce the feedback technique to the students. Ask students to give feedback strictly based on their observation during the presentation.

- Begin your feedback with a compliment that will break the ice. Be sure not to exaggerate, but genuinely compliment someone on something they're good at or got right. For example, 'I noticed you did quite a good job with your research. I must say I'm impressed and glad you are taking this topic as it is a very challenging issue.'
- Second, offer constructive criticism about what could have been differently done for the presentation to be more effective. It has to be short, and clear. You don't want them to leave the class confused or exhausted. Try to limit the number of aspects you're criticizing. Make sure you are respectful and setting realistic expectations. It has to be aimed at a specific outcome and expressed as a point of view and not as absolute truth.
- End it with a positive statement sharing your thoughts about what worked well and appreciate the efforts of the participants.

Step 4: Rehearse presentation and collect feedback

- Here, each group presents their work in front of the class one by one and collects feedback from classmates. This is a very critical aspect as students need to consider the feedback objectively and make necessary improvements in their presentation before they present it in front of the school and parents.

Look for:

- Contribute to others learning and development
- Motivate and inspire others to higher levels of performance
- Provide direction and indicate to your colleagues that you are attentive to them and care about their performance
- Show appreciation for a job well done
- Redirect undesirable behaviour
- Point out a more productive course of action

Debrief

- How did the activity go?
- Did they understand the do’s and don'ts of a presentation?
- What are the key things they would remember while giving feedback?

Tips for the facilitator

- Make it clear that no one should make fun of someone while they present.
- Ask the students to divide the presentation in their group and practice the presentation in the house.
- Make sure that all the projects done by students are copied to a pen drive.

Session 28: Final presentations

Time 90 to 120 minutes

PLAN

This session will depend on your relationship with the school community. The programme can be a grand share out with parents, teachers and other school students taking part as an audience. Students share their final Scratch projects.

Learning Objectives

By the end of this session learners will

- present their Scratch projects.

Process

Once student teams choose an event date, they will be responsible for developing a plan that explains the goal of the event and describes what will happen. The plan should be discussed with the class beforehand and should include specific information. Some suggestions for planning;

- Location(s) and layout(s)
- List of the audience and chief guests
- Time of event and duration
- Decorations
- Program plan - layout of introduction of chief guest, project presentation, vote of thanks
- Invitations and/or advertising
- Documentation of the event - Photo/Video

Tips for the facilitator

Here students need to take the lead and step forwards in the planning and preparation process.
You can take the help of the teachers in the school to plan the event during PTM or any other suitable time where parents could be invited. Try to involve the teachers/ class teacher in the various steps like finalising the project, project planning, rehearsal and giving feedback. They could also review the project plans.

Parent Engagement

Ask the students to design and create a personal invite for their parents to participate in the project share-out event.

Growth chart – 3

The Growth Chart Activity should be done 3 times over the entire course, after module 1, 2 and 3. This helps the students to take a pause and see their progress on the different skills they are learning through the course. As a facilitator, it will help you understand the level at which the class is. You will be able to see patterns in the student's understanding - where most of the students are, what have been the easy and the difficult parts and how they are progressing.

Objective

The Growth Chart shall help students understand where they stand individually and as a class on:

1) the learning progress: remembering, understanding, applying, analysing, reflecting, creating.
2) the skills in learning: communicating, collaborating, enquiry and research.

This would look something like this:

		I Can…	My Growth Sticker		
			Seed (Image)	Plant (Image)	Tree (Image)
1	Remember	I can remember what I learnt in the sessions.			
2	Understand	I can explain what I have learnt in the sessions.			
3	Apply	I can use the information and understanding from the sessions in my everyday life.			
4	Analyse	I can recognize the meaning of the sessions for my life and why we are doing it.			
5	Reflect	I can examine my ideas, notions, perspectives on			

		self, gender and the world around.			
6	Create	I can create new ideas/artefacts and bring my point of view into it.			
7	Communication	I can share my point of view and understand others too in group work.			
8	Collaboration	I can work in teams and contribute actively.			
9	Enquiry/Research	I can confidently use observation and data to answer any of my questions.			

Material and Preparation

- Student workbook
- Instructor manual
- Growth Stickers – seed, plant, tree. Alternatively, children can tick in the rows.
- You can read these statements and think of ways you shall explain each if children ask for examples/explanation.

I Can…	My Growth Sticker		
	Seed (Image)	Plant (Image)	Tree (Image)
I can remember what I learnt in the sessions.			
I can explain what I have learnt in the sessions.			
I can use the information and understanding from the sessions in my everyday life.			
I can recognize the meaning of the sessions for my life and why we are doing it.			

I can examine my ideas, notions, perspectives on self, gender and the world around.			
I can create new ideas/artefacts and bring my point of view into it.			
I can share my point of view and understand others too in group work.			
I can work in teams and contribute actively.			
I can confidently use observation and data to answer any of my questions.			

Activity Details: 20 Min

Pre-Activity Preparation

- Help children look back/recap at what we have done so far.
- Help them understand the purpose of the Growth Chart activity which will give a sense of their progress collectively and as individual learners.
- Talk about how learning happens:
    - Learning is a process which involves interaction with the concepts/topics, new knowledge, knowing what others think, reflecting on one's ideas, learning at each step and not just towards the end of something.
    - Everyone learns at a different pace, so it is important to not compare themselves with others.
    - Different people are good at different things, so it is natural to do well in some things while understanding the need for improvement in something else.
- Show the Growth Chart and its statements. Tell them how each statement must be seen in terms of their journey through the course.
    - Do they remember things, have they understood, are they able to apply what they have learnt, could they analyse their learning? Are they able to evaluate the effectiveness of the learning, have they been able to create something new using this learning, along with the experience of the process of learning – communicating with each other, working in a team and using data?
- Explain how the growth chart will be used especially the first time they see it after module 1.
- Explain with examples how the 'growth sticker/tick' has to be put.
- Explain how a tree grows from a seed to a plant to a tree, the same way, when we are learning, we also go through different stages.

- They have to mark the stage they are at – a seed (just beginning), plant (developing) or tree (grown and spreading the learning sphere) based on how confident they feel on different aspects.

The activity can be done in the following manner:

- Ask students to open the growth chart given in the workbook.
- Ask them to put the sticker or tick under seed, plant, or tree against each statement.
- They do not have to write their name on the chart.
- Be available to explain the statements as required.
- Once everyone's chart is collected take help of students & count the number of seeds, plants & trees for each statement.

Write the result on the Growth Chart against the date. Assume there are 30 students in the class, here is an example of how the chart will look is given below.

I Can…	My Growth Sticker		
	Seed (Image)	Plant (Image)	Tree (Image)
I can remember what I learnt in the sessions.		30	
I can explain what I have learnt in the sessions.		22	8
I can use the information and understanding from the sessions in my everyday life.	8	27	5
I can recognize the meaning of the sessions for my life and why we are doing it.	20	10	
I can examine my ideas, notions, perspectives on self, gender and the world around.	28	2	
I can create new ideas/artefacts and bring my point of view into it.	8	21	1
I can share my point of view and understand others too in group work.	2	26	2
I can work in teams and contribute actively.			30

I can confidently use observation and data to answer any of my questions.	18	3	7

Share and Reflect:

Towards the end help children reflect on the completed chart through the following trigger questions:

- Did this help you to know where you individually stand in relation to the class?
- Does the class seem to have a pattern? Are most students, seeds at one part of the class? Or plant in another? What does this mean as we move ahead?
- Do you find that you are strong at one skill & not strong at another? What do you think you should do in that case?