# Teaching & Assessing the **21ST CENTURY SKILLS**

IGAN

I CAN

DESIGN for CHANGE

# TEACHER'S MANUAL

FOR CHILDE

Unleash the I CIII superpower in your children



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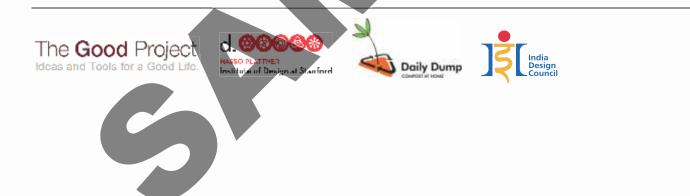
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# Dear Teachers

Design for Change first began in 2009 at Riverside School (Ahmedabad) India, as a ONE week challenge to inspire children to Be the Change, and now reaches over 200,000 schools across the world.

Design for Change begins with the simple and powerful premise: 'I CAN'

More specifically, children can. The 'I CAN' model of design thinking consists of four simple steps: Feel, Imagine, Do and Share. Through these steps, children use the lens of empathy to uncover the overt and latent needs of the society around them, imagine potential solutions to the problems, then re-frame their ideas using a systemic view of the field.

By empowering students to identify the challenges that most affect them, their schools and their communities, Design for Change gives children a sense of agency and inspires them to make the world a better place.

FEEL IMAGINE **DO** SHARE is **I CAN** 

This book is a response to the need we saw from teachers who expressed a desire to see their children use the design thinking process beyond just the challenge and as a year long immersive curriculum. Teachers were excited that this model offered a structured approach to teach and assess the 21st century skills. The Design for Change team collaborated with the best minds in the fields of design and education to introduce Design Thinking in schools.

We are excited to introduce you to the revised version of the Design Thinking Guide. It had a successful pilot over seventy schools across India in 2014-16. DFC is an inclusive idea and this was seen in the diversity of our pilot schools. We had schools from different education boards: CBSE, ICSE, IGSCE, IB, State Education Boards and NIOS. And our enthusiastic teachers and students came from private schools, affordable schools and government schools. They took to the spirit of Design Thinking Guide and contextualized it to fit it in their own frameworks and timetables.

Teachers and students from different parts of our country came together to take forward the Design for Change movement. They put in all their efforts and hard work to create a meaningful impact through this curriculum. We are extremely grateful for their support and feedback to help improve the Design Thinking Guide.

We heard some amazing things from both students and teachers. Both of them said that the Design for Change sessions fostered stronger relationships in the classrooms.

"I got an opportunity to become Friends with my students. I had more open and Frank conversations which helped me in teaching them better"

> " Each student got an equal say in the classroom and we became the centre of Focus. We could say what was on our mind."

"We discovered the hidden strengths of each of our students, even the ones we thought were mischievous. They came Forward to lead their class in this collective act of change."

"The whole class came together. We talked to each other, we listened to each other. And we supported each other's ideas to make the DFC project a success. We got to know what an interesting class we are"

" Our students became more aware about the people and the different issues around them. And they took initiative to change things that bother them."

These stories from students and teachers have inspired us to take forward the Design Thinking Guide and continue our learning journey with schools across the country and the world.

Excited to have your school on board!

Being the Change, Changes the Being

Kiran Bir Sethi Founder | The Riverside School | Design for Change

# Why Design Thinking in Education

### **Consider the Current Scenario**

The top 10 in demand jobs in 2010, did not even exist in 2004

Technical information doubles every two years

We are currently educating children for jobs that don't exist..... With technology that has not been invented..... In order to solve problems that we don't even know are problems yet!

That means for a student starting a 4 year degree, half of what they learn in their first year, will be **outdated** by the 3rd year of study!

Research by Karl Fisch | Scott McLeod | Jeff Bronman

# The Preferred Scenario

What does this mean For the 21st century LEARNER EDUCATOR CURRICULUM

Design starts with saying 'what if' rather than asking 'what's wrong'. This shift is significant otherwise we end up solving the wrong problems and wonder why change does not happen.

Students are NOT HELPLESS, CHANGE IS POSSIBLE and THEY can drive it!

#### The DESIGN THINKING mindset is:

Human centered - builds on user patterns and behaviors Collaborative - it works with the user instead of 'for' Optimistic - at the heart of this mindset is the message that we are not helpless, that change is possible and that we can drive it.

# The Design Thinking Framework

# FIDS (Feel, Imagine, Do, Share)-4 steps to say I CAN

Design for Change has demystified the design thinking process into 4 simple steps-Feel, Imagine, Do, Share (FIDS). This empowers students to believe that they can make a difference to their environment and also provides a structured method to learn the **21st century skills**.

### FEEL

what bothers me the most, and transform helplessness into empowerment

Why is it important?

#### It develops EMPATHY

When you want to create a better solution, you need to empty your mind of all the assumptions and start afřesh. This stage helps you observe and identify opportunities for change and engage with the user.

#### 21 st CENTURY SKILLS

Self-Awareness, Effective Communication, Decision-Making, Critical Thinking, Interpersonal Relationships, Interviewing, Empathy Managing Emotion.

# IMAGINE

ways to take the **current** situation to a **preferred** state for self and others

Why is it important?

#### It develops ETHICS

The biggest factor for how innovative your solution will be, depends on how clearly you **define** the problem. This ensures that you take **responsible action** for the change.

21 st CENTURY SKILLS

Effective communication, Decision making, Creative Thinking, Collaboration Critical Thinking, Ethics.

#### DO

what it takes to bring about change with **courage** and **determination** 

Why is it important?

It develops **EXCELLENCE** 

Doing allows one to bridge the gap between **intention** and **action** for maximum **impact**.

21 st CENTURY SKILLS

Effective Communication, Problem Solving, Decision Making, Creative Thinking, Time Management, Human Resource management.

# SHARE

my story to **inspire** others to **be the change** 

Why is it important?

It develops **ELEVATION** 

Sharing helps to **inspire** and let others know that **it is possible.** 

21 st CENTURY SKILLS

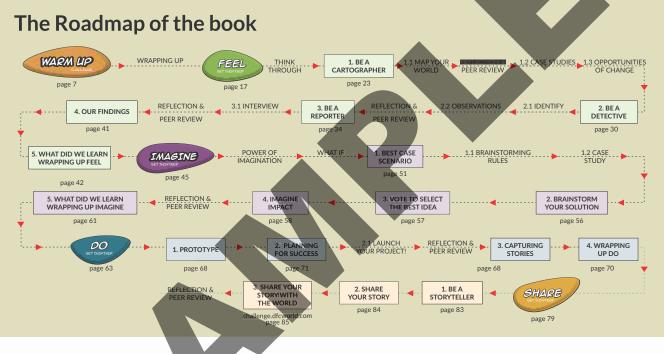
Decision making, Effective communication, Digital literacy, Creative thinking, Presentation, Problem Solving.

# The Guide's Structure

The structure and design of The Guide is different to that of many conventional textbook formats. The expectation is that students will take an active approach to their learning with the teacher acting as a facilitator, guide and mentor.

Each of the four steps: FEEL, IMAGINE, DO, SHARE is explored using the same structure:

- **Inspire :** A real life case study of one school's actual DFC story in cartoon format with a YouTube link, so it can be viewed by students as a practical example.
- Reflect: Getting students to review the DFC story to discuss and bring out the different issues bothering them
- Action: Undertaken in pairs or groups and designed to bring to life, the theme being explored and build key skills.
- Assess: Students review their own work and growth through self and peer assessment tools given at the end of each section



### Routine and timings

The Guide can be introduced as a whole course over a three to six month period. It covers 30 sessions which are divided into 60 minute time slots, making it around **30 hours** in the year. The guide offers enough flexibility to be comfortably included into your existing timetable.

### Involving parents and others

This is a key part of the DFC culture given that the students are working to change the world around them. This is particularly relevant at the Share stage. We encourage you to get your students to talk to their families, friends and others about their DFC activity, so that when they get to the Share stage, they have a level of support and engagement that makes the sharing even more powerful and meaningful.

# Documenting the journey

It is important that the students capture each stage of their DFC journey visually, as well as by writing in their copy of The Guide. This can be done by photo or video so you will need to make the relevant equipment available throughout each session, and assign individual students the responsibility of capturing each stage of the DFC process so that no moment is lost for the final story telling.

## **Materials and Tools**

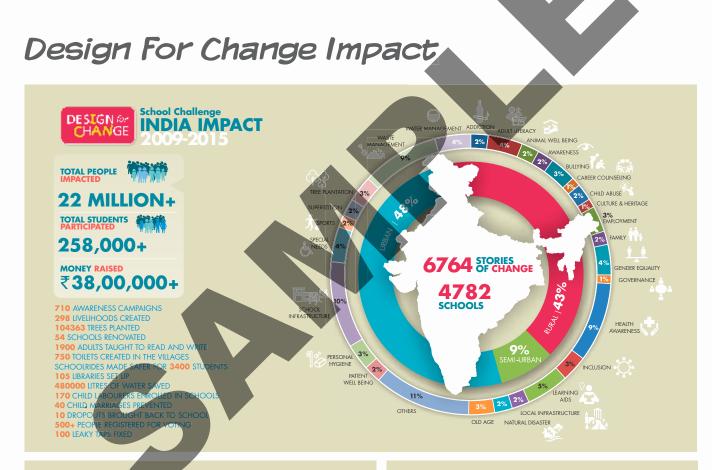
Though the guide needs only very limited learning materials and tools; certain sessions require additional materials which a teacher needs to provide.

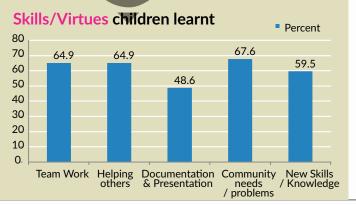
### Learning Environment

Teacher needs to be mindful of the environment and surroundings in which students work on the Guide. While some sessions work best in classrooms, others benefit from open spaces.

## Support Material-www.dfcworld.com

It is often said that inspiration is a **perishable commodity** and we need to keep replenishing it. Therefore, we strongly recommend the Design for Change website to get yourself and your students regularly inspired by the real stories of change.







For more information visit us online : designthinkingguide.dfcworld.com

# Design Thinking Guide and your School

Creativity Action

& Stare

BSE

Design

Thinking Guide

CSE BOar

Socially Useful Productive

# **CBSE & State Boards**

CBSE and State Boards have introduced Life Skills Curriculum in schools. Life Skills Education aims to enable adolescents to articulate their issues and know their rights; build their self-esteem and self confidence; and develop the ability to take responsibility for self, relationships and the immediate society around them. The major objectives of Life Skills Education are to develop skills to **empower young adolescents to respond to real life situations in positive and responsible ways.** DTG begins with children mapping their community and identifying the hot spots that they would like to work towards to bring a positive change. The process followed in DTG empowers children with the "**I Can**" mindset building their self confidence and acting as catalyst for their transformation into change-makers.

## **ICSE Board**

In ICSE, Socially Useful and Productive Work (SUPW) is a mandatory subject and the focus is on building values of citizenship in children. The core idea is to provide children with a space to engage with society and develop skills through which they can add value to their community. DTG will be able to adequately provide the same and further build value of empathy in children leading to their fruitful engagement in society.

# **IB Board**

DTG can be a part of CAS (Creativity, Action, Service). The objectives of CAS focus on students developing reflective thinking, \*willingness to accept new challenges\*, awareness of themselves as members of communities with responsibilities towards each other and the environment. These objectives are completely in synergy with what Design Thinking Guide also aims for, therefore DTG can be very easily incorporated as a part of CAS.

Design creates culture. Culture shapes values. Values determine the Future

-Robert L. Peters



MONTH	KEY FOCUS OF THE MONTH	WEEK 1	WEEK 2
JULY			
AUGUST			
SEPTEMBER			
OCTOBER			
NOVEMBER			
DECEMBER			
JANUARY			
FEBRUARY			
MARCH			
APRIL			
MAY			
JUNE			

WEEK 3	WEEK 4	Major events For this month which might keep the children busy	How could we reschedule the lost DFC sessions For this month

# LETS GET STARTED! Session 1

### Why Design for Change

#### OBJECTIVE

Inspire children about the power of Design Thinking and how it can be used to make the world a better place. Introduce them to the 4 step framework of Feel, Imagine, Do, Share and how this builds the I CAN superpower in every child.

#### **INTRODUCTION - 20 mins.**

If you have access to internet, a great way to inspire students is to show the DFC promotional video and some stories to show them how students are using design thinking to be role models of change.

#### DFC Promotional Video (3 mins.)

http://youtu.be/8dHjwXP8jIM Potholes on the Way to School (2 mins.) http://www.youtube.com/watch?v=O56wsPDRBGQ Education Drive (3 mins.) http://www.youtube.com/watch?v=So3U8X-3fws Let me Feel your Face (2 mins.) http://www.youtube.com/watch?v=Qfv9RNxMFEk

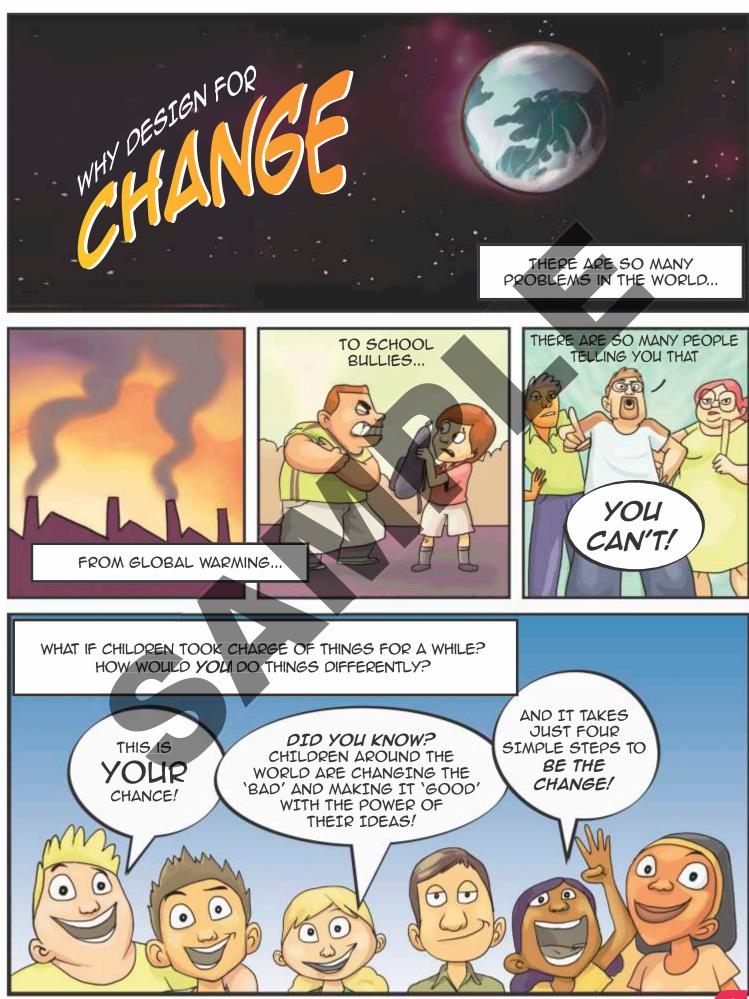
#### IF YOU DO NOT HAVE INTERNET

Hand over the Design Thinking Guide to the students and allow them 10 minutes to explore the guide. Ask them questions about how they feel about the guide. Get them to understand that they are going to be part of a global movement.

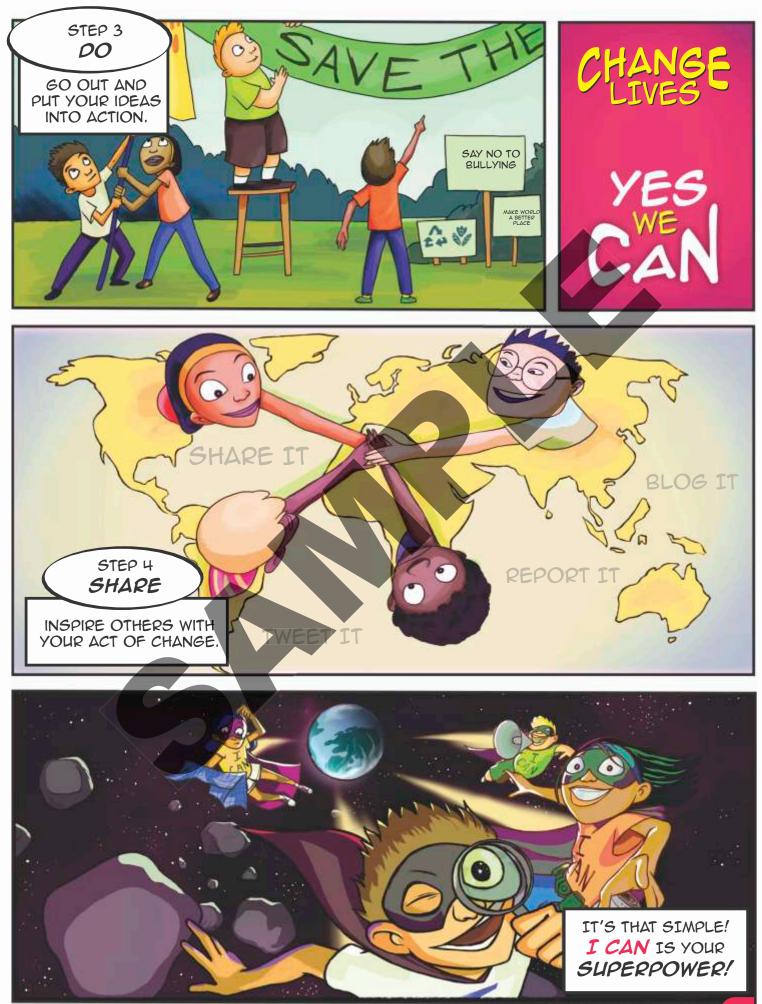
	PAGE NO.	TIME	DESCRIPTION
1	1 to 5	15 mins.	Why Design for Change Start by getting the students in groups or individually read aloud/share 'Why Design for Change' comic strip from pages 1 to 3. Then, review the world map on pages 4-5 and show them that they will be part of a global movement. You can ask students to identify the superpower used by the children in DFC stories. Have a discussion with them about what is their superpower
2	1 to 5	15 mins.	Ask students if they have any thoughts, comments or responses to what they have just read. Get them excited that the four steps of <b>Feel</b> , <b>Imagine</b> , <b>Do</b> and <b>Share</b> will help them ' <b>Be the Change</b> ' and make them believe that ' <b>I CAN</b> ' are the two most powerful words in their vocabulary.
3	None	10 mins.	<b>Closing the Loop</b> Get children to share about what the I CAN superpower is and how does one get this power. This will help you assess if the 4 step framework has been understood. What words did they use to describe the book in terms of layout and design.

#### **TEACHERTIPS**

- 1. Teachers should let the children explore the book. Allow children to react and respond to the feel of the book. Pay close attention to how children approach and interact with the book.
- 2. To save time download the videos before the session.







# DFC PROJECTS IN COUNTRIES ALL OVER THE WORLD!

WE CREATED BICYCLE PATHS TO TACKLE OBESITY!

> WE STOPPED 13 CHILD MARRIAGES!

WE CLEANED UP BEACHES AND CONVERTED WASTE INTO FUN PRODUCTS!

WE CONVERTED GARBAGE DUMPS INTO PLAYGROUNDS!



WE PRESERVED THE SONGS OF OUR TRIBAL CULTURE!

WE REDUCED THE WEIGHTIOF SCHOOL BAGS BY 50%!

> WE CLEANED THE OLD AGE HOME, COOKED HEALTHY FOOD FOR THEM AND HELD A TALENT SHOW!

# Session 2 : Warm-up Challenge

### Overview

This is a quick introduction to the idea and process of design thinking and is to be taught in one 60-minute session. Since it is a very quick exercise, it is important for teachers to monitor timing carefully to make sure students complete all parts of the exercise and that they get a clear understanding of the four-stage DFC process.

This session also starts to build skills in questioning, listening, analysis, giving / receiving feedback and reflection.

# Unit at a glance

Total 1 session x 60 mins.

SESSION NO.	PG. NO.	TIME	TOPICS	WHERE
	-	5 min	Tone Setting and Grouping	in class
	7	5 min	Design a school bag for your partner	in class
2	8	15min	Step 1: Feel	at home
-	9	10 min	Step 2: Imagine & Do	in class
	10	10 min	Step 4: Share	in class
	11	5 min	Wrapping up	in class
	11	10 min	Closing the loop: Shift	in class

#### 60 mins

#### OBJECTIVE

This session is designed to introduce children to a very quick exercise that takes them through the four steps of the design process.

#### 21<sup>st</sup> Century Skills : Empathy, Creative Thinking, Critical Thinking, Listening

	PAGE NO.	TIME	DESCRIPTION
1	-	5 mins.	<b>Tone setting and Grouping</b> Group the students into pairs for this challenge.
			<b>Teacher Tip</b> Give the pairs regular updates on timing so they complete the whole session effectively using the timings set out below. Let them know when they should move on to the next exercise. Walk among the pairs to check that they understand the exercises and are completing them effectively.

	PAGE NO.	TIME	DESCRIPTION
2	7	5 mins.	<b>Design a school bag</b> This is a quick drawing exercise where each student designs and illustrates an ideal school bag for their partner on page 7 of their Guide. This is to be done without any interaction between the partners.
			<b>Teacher Tip</b> Inform the children before this session its not about how 'well' you can draw, its just about illustrating YOUR concept of a bag.
3	3 8 15 mins.		<b>Step 1: Feel</b> Each student has 7 minutes to interview their partner to get a better understanding of their partner's usage and needs in a school bag, covering the facts, form, function and relationship with the bag. Questions are given on page 8 of the Guide and the partner's answers should be recorded in the space below each question. You can ask the student to build on the responses of their partner and ask more questions, if required.
			<b>Teacher Tip</b> Make sure the pair swaps after 7 minutes so both get an opportunity to complete this exercise.
4	9	10 mins.	<b>Step 2&amp;3: Imagine &amp; Do</b> Each student has to redesign the bag keeping in mind their partner's need. They can do so through illustrations and words.
			Teacher Tip Encourage them to go beyond the obvious and probe deeper.
5	10	10 mins.	<b>Step 4: Share</b> Ask children to share their redesigned bag with their partner and ask for their feedback to further improve it. Next tell them to fill their responses for the given reflection questions. Ask them to first mark their own self and then get their partner's feedback on their listening skills.
6	11	5 mins.	Wrapping Up Ask children to reflect on what they learnt from this exercise and the new things they have been able to find out about their partner.
7		10 mins.	Closing the Loop 'The Shift' gives an important insight to close the loop with. Discuss how the initial design has changed to the final design and link it back to how the Feel, Imagine, Do, Share process helped bust your initial assumptions. Emphasize the significance of designing WITH the user instead of FOR the user. Questions you may want to ask your group to check in on their understanding: How did you feel about the warm-up challenge? Three key things that you learnt? Do you feel ready to start the DFC journey? What did you find particularly challenging/exciting/inspiring and why?



# WARM-UP CHALLENGE

#### Pesign an ideal school bag for your partner.



# STEP 1: FEEL

DIG DEEPER-Now interview your partner to understand about his or her current bag.



# STEP 2 & 3: IMAGINE & DO

Now that you know your partner better, use the information from the interview to redesign the bag.



# STEP 4: SHARE

Share this new design with your partner.

Ask your partner to compare the old and the new design. Will he/she prefer the new design over the First one. If yes why / If no why not? Get Feedback on how you can further improve on your design.

# WRAPPING UP



**CONGRATULATIONS!** YOU HAVE JUST EXPERIENCED A VERY QUICK LESSON IN DESIGN THINKING. YOU USED THE FOUR SIMPLE STEPS OF **FEEL**, **IMAGINE**, **DO**, AND **SHARE** TO DESIGN A SOLUTION THAT IS NOT ABOUT BEING 'DIFFERENT' BUT ABOUT MAKING A 'DIFFERENCE'.

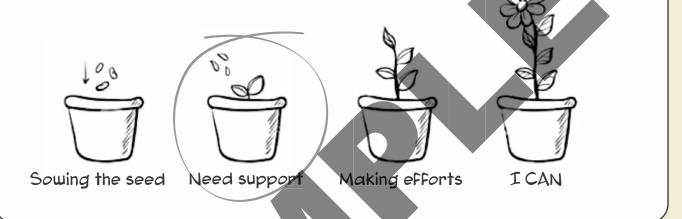
THE KEY SHIFT IS THAT WHEN YOU DESIGN **WITH THE USER** (IDENTIFYING REAL NEEDS) RATHER THAN **FOR THE USER** (ASSUMING THE NEEDS), THEN YOU GET SOLUTIONS THAT IMPROVE LIVES.

# REFLECTION & PEER REVIEW

One of the important steps in realizing your super power is to understand yourself better. You can do this by working on your strengths and accepting your mistakes honestly. Given below are some reflective questions to help you observe yourself more closely.

We are constantly changing and building our strengths and our measuring scale needs to take that into account.

Circle the image to mark where you are at the present moment in the superpowers of Listening.



#### LISTENING WITH SENSES

Listening is more than just hearing. Pay attention to how well you listen and understand when someone talks to you.

Take 5 minutes to first put your markings under "I Think" and then pass it to your activity partner to get their thoughts on your present behaviour.

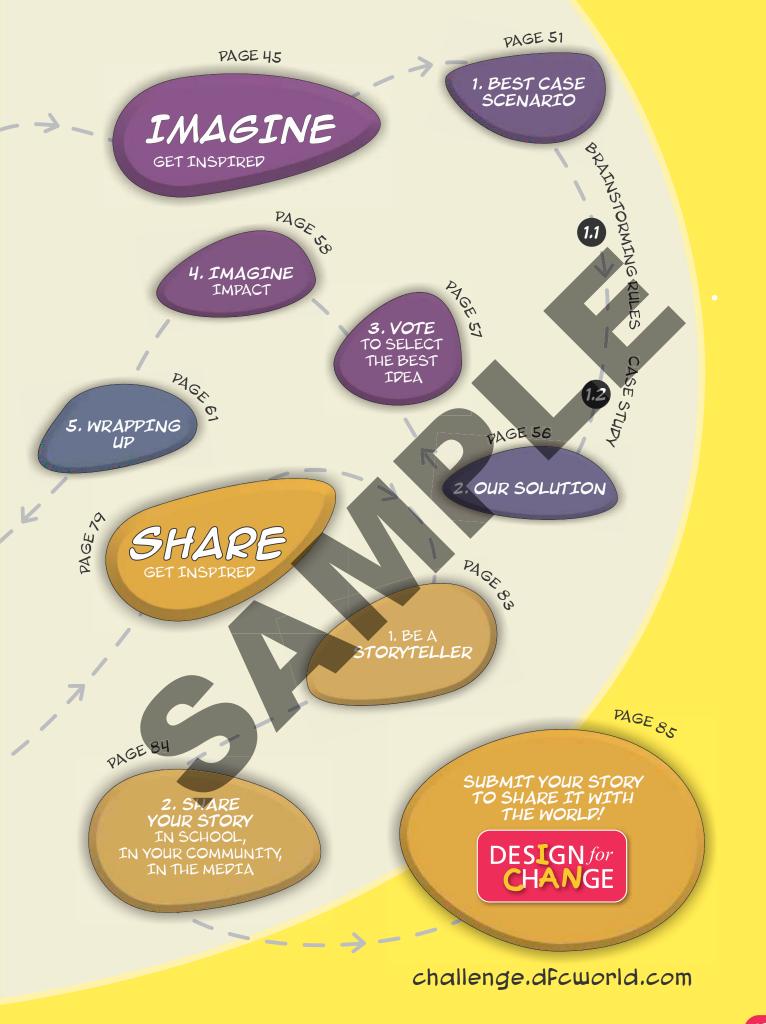
SUPERPOWERS	I THINK	MY FRIENDS THINK
I listen without interrupting in between		
I make eye confact and listen with Full attention	6 6 Å Å	6 6 ð ð
I listen without getting distracted	8 8 8 Å	8 8 8 8

Now compare the stages you have marked for yourself and where your friend has put you for the present. Why might there have been a difference in the marking of stages?

# SCRIBBLE PAD







# **FEEL | Engagement**

**Engagement:** Individuals need to care about the work they are doing and they need to find it personally meaningful to them in some way, in order to spend the time and energy it requires to produce work that is of high quality and has a positive impact on others.

- This stage involves observing, discussing and analyzing situations close to one's heart. Becoming passionate about a situation or problem provides a gateway to being engaged in solving it and creating change.
- Students are encouraged to observe and be open to the world around them.
- Students learn how to become empathetic to the people, places, things involved in the particular situations they are addressing.
- Students assess what bothers them about the situation and why. What part of the problem is most troubling? Why is it important to help fix it? What connection do they have to the issue?
- Through the feel stage students become changed, in part by becoming engaged with the issue they will try and design a solution to address it.

We recommend that the teacher refer to this page just to refresh what the core understanding of the section FEEL is going to nurture in the children. These insights allow you to guide the questions and direct the conversations.

# Unit at a glance

#### Total 6 sessions x 60 mins.

SESSION NO.	PG. NO.	TIME	TOPICS	WHERE
3	23-26	60 min	Be a cartographer - map your world	in & out of class
4	29	60 min	Identify   Discuss   Vote	in class
5	30-32	60 min	Be a Detective	out of class
6&7	34-40	120 min	Be a Reporter   Interview	in & out of class
8	41-42	60 min	Findings   Wrapping Up	in & out of class

### 21st Century skills

Self-Awareness Effective Communication Decision-Making Critical Thinking Interpersonal Relationships Interviewing Empathy Managing Emotion

### Sub skills

Observation Listening Improvisation

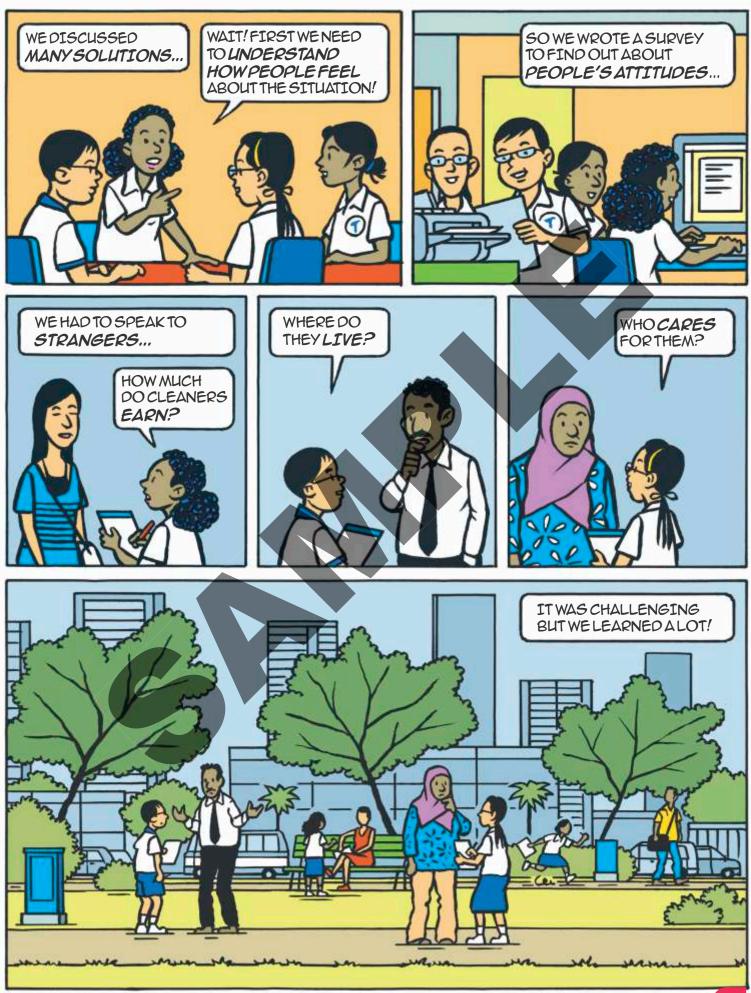
# FEEL

Tampines Primary School, Singapore Real story: **bit.ly/dfc-cleaners** 

The First step towards making change happen is to try to understand how people Feel. Let's explore how a team From Singapore helped others Feel For the cleaners in their school.



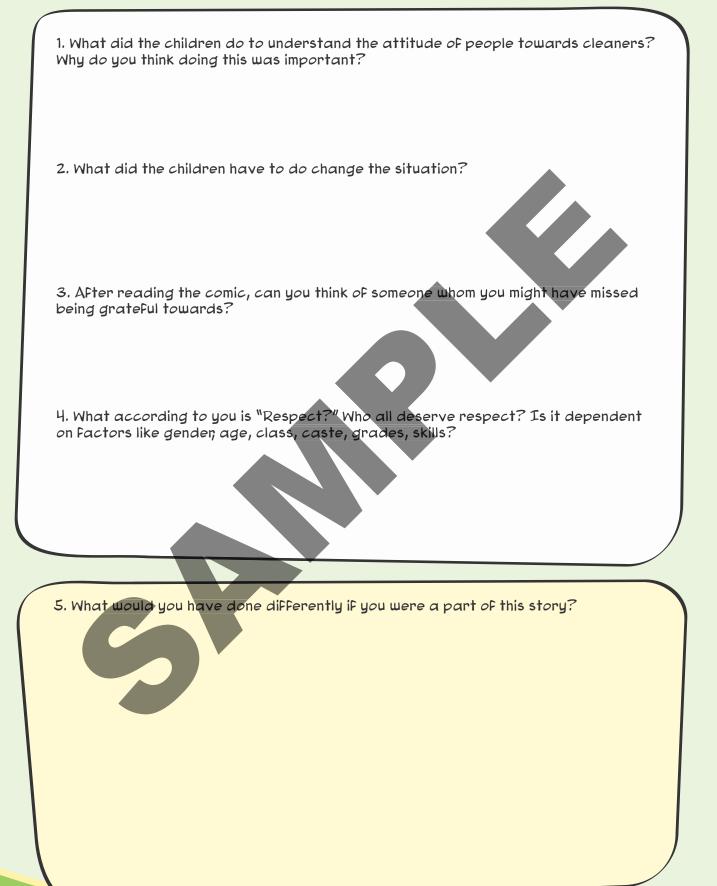








# THINK THROUGH



# Session 3 : Be a cartographer

#### OBJECTIVE

The objective of this session is to look at the world with fresh eyes and to notice the unnoticed. Students will learn that they can view their world through multiple filters-seeing, hearing and feeling- and map it; Children learn to identify the opportunities for change around them, both hot spots and bright spots. By doing these activities, they become more aware and sensitive to people and the environment.

# **21<sup>st</sup> Century Skills:** Self-Awareness, Empathy **Sub-skills:** Observation

	PAGE NO.	TIME	DESCRIPTION
1	-	5 mins.	<b>Reconnect</b> Start the session by discussing the comic story and how children looked not only through their eyes, but also their heart to identify what bothered them.
2	23	10 mins.	Introduction Introduce the word 'Cartographer' and have a discussion around who a Cartographer is and what he/she does, Highlight 'OBSERVATION' as the key skill that a Cartographer needs. Next, spend time discussing the sample map given on page 23, and use it to explain the 3 ways in which students can observe their world – Physical, Social and Emotional. Teacher Tip: Introduce the concept of 'Hot Spots' and 'Bright Spots' with the help of the case studies given on page 28.
3	24-25	30 mins.	Be a Cartographer Send the children to different areas within the school and ask them to observe these spaces using both their hearts and minds. Remind them they have to identify opportunities for change and not problems. They can illustrate/ write/ take photos to map their environment. Teacher Tip: Ensure that students are mapping an environment that they are familiar with.
4	26	15 mins.	Closing the Loop & Reflection and Peer Review To close the loop, ask the students if this activity had helped them notice what they had missed earlier. Highlight how observation is an important skill to cultivate 'Empathy'. Next tell them to fill their responses for the given reflection questions. Ask them to first mark their own self and then get their partner's feedback on their observation skills. By the next session, ask students to revisit the areas that they have chosen to map in this session and look at them more closely in order to add more details.

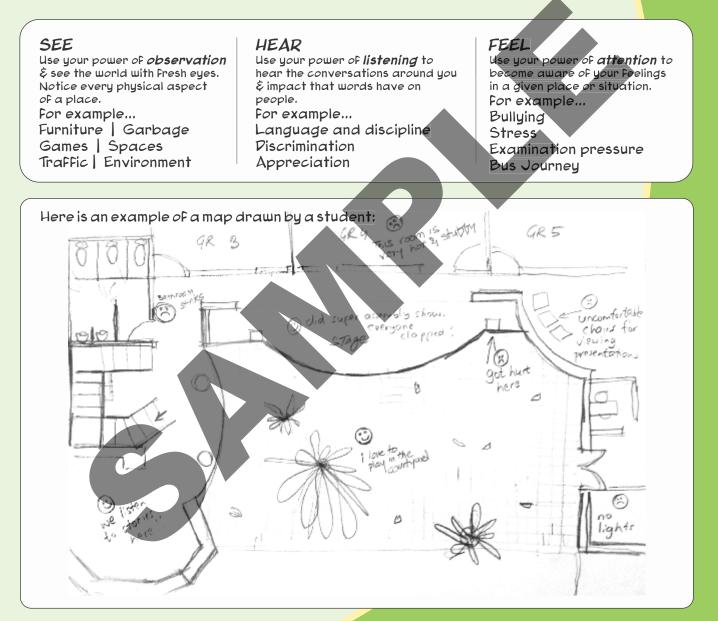
#### FOLLOW UP ACTIVITY

Ask students to revisit the areas that they have chosen to map in this session and look at them more closely in order to add more details.

# NOW BEGIN YOUR STORY OF CHANGE! BE A CARTOGRAPHER

The First step to Figuring out what you want to change is to look around you and record what you see. In this exercise, you will map your world.

Here are some ways in which you can observe your world. Consider not only the physical world but also the social and emotional world.



# Here are some examples of what students in other schools identified as their hot spots...

- Our Football Field is not Fit For playing
- Girls and boys in our class do not like working together
- We sometimes take our teachers For granted
- Our bathrooms are dirty
- Our school canteen is very chaotic
- People in our community do not consider girls to be equal to boys

### 1.1 MAP YOUR WORLD

Praw/Pescribe/Take pictures to make a map of your class, school, or immediate community. Add labels to your map that describe the places you drew. Mark the map with *Hot Spots* (things that bother you) and *Bright Spots* (things that are good but can be improved).

You can either make a verbal map of words or illustrate your observations. Keep these questions in mind while making the map of your chosen location:

1. What did you see?

2. What did you hear?

3. What did you Feel?

You don't have to be an artist to map your world. Feel free to use photographs in your map.

## REFLECTION & PEER REVIEW

Given below are some reflective questions to help you observe yourself more closely. We are constantly changing and building our strengths and our measuring scale needs to take that into account.

Use these images to mark where you are at the present moment in the superpowers of Observation.



#### OBSERVATION

You can be more empathetic by being more observant. Reflect on how aware are you of people, places and practices around you.

Take 5 minutes to First put your markings under "I Think" and then pass it to your activity partner to get their thoughts on your present behaviour.

SUPERPOWERS	I THINK	MY FRIENDS THINK
I notice my Feelings.	* G & Š	3 3 Š Š
I notice moods and Feelings of others around me.	ਨ ਨੇ ਨੇ ਨੈ	6 6 Å Å
I notice opportunities of change in my surroundings.	6 6 6 Å	66 <b>6</b> 8

Now compare the stages you have marked for yourself and where your Friend has put you for the present. Why might there have been a difference in the marking of stages?

### SCRIBBLE PAD



## Scribble Pad

For more information visit us online : designthinkingguide.dfcworld.com

# Session 4 : IdentiFy | Discuss | Vote

#### OBJECTIVE

The objective is to introduce children to the idea of democratic choice. They will learn that actively listening allows them to understand that different people have different worldviews. They will learn that respectful discussions and voting are important strategies to make democratic choices.

# 21<sup>st</sup> Century Skills: Effective Communication, Decision-Making, Critical Thinking Sub Skill: Listening

	PAGE NO.	TIME	DESCRIPTION
1	29	5 mins.	<b>Reconnect</b> Discuss the new details (bright/hot spot) they have added to their maps as a part of the follow up activity and have them fill up exercise 1.3 on page 29.
2	29	25mins.	<b>Discuss</b> Make small groups (upto 6), ask students to discuss and complete exercise 1.4. Conclude the discussion by asking them to vote for one hot or bright spot that they want to work on (exercise 1.5). Make sure that each child in the group gets 2 minutes to share their hot/bright spots.
3	29	20 mins.	Vote As a class, list all the selected hot and bright spots on the board, and get students to vote for the hot/bright spot that they want to work on as a class. This is to be filled in on page 29, exercise 1.5. Teacher Tip: Allow students to debate and justify their choices.
4	29	10 mins.	<b>Closing the Loop</b> Bring the students' attention to the fact that discussions and voting are effective strategies to come to a decision when there exist different points of view. Highlight that how active listening is an important skill to reach a democratic decision.

### 1.2 CASE STUDIES

These are some "hot spots" that students around the world have noticed:



Students noticed that the drinking water area in their school had leaky taps. This wasted water and attracted swarms of bees, making the area unsafe.



After their area suffered from a serious flood, students conducted a survey to determine the immediate needs of Families. The survey revealed that delivering Food supplies was most important.

bit.lu/dfc-floodrelief

#### bit.ly/dfc-brokentaps



Students were concerned about the growing problem of obesity in their school. They noticed that the real problem was that students do not have a lot of physical activities. They decided that promoting bicycling to school could be a solution. But there were no safe bike paths and hence nobody was cycling.

bit.ly/dfc-bikepaths



Students noticed that there was a lot of noise and commotion during their school break. Looking at the situation with Fresh eyes, they saw that the playground was dirty and the playground equipment was broken. They realized that the noise and commotion was caused by the fact that children did not have a place to play.

bit.ly/dfc-playground

### 1.3 OPPORTUNITIES FOR CHANGE (INDIVIDUAL ACTIVITY)

From your map, list one hot spot and one bright spot that stood out the most. Mention why.

Hot Spot:	Ë	Bright Spot:	
Why:		Why:	
1.4 DISCUSS			
Make small groups, share similarities in the observati		pot and bright spot	r. Do you Find any
Things that were similar		Things that w	ere unique:
1.5 VOTE			
As a group select one hot o it below.	r bright sp	ot that you want to u	uork on and write
As a class vote for one hc	ot or brigh	t spot that you all u	ant to work on
	i ci ci gli		

## Scribble Pad

For more information visit us online : designthinkingguide.dfcworld.com

## Session 5 : Be a detective

#### OBJECTIVE

The objective of this session is to pause to find the cause. It helps students to understand how every clue tells a story and that no clue is too small. Getting all the clues helps them to bust assumptions and finally identify the real challenge.

#### 21<sup>st</sup> Century Skills : Critical Thinking, Self Awareness Sub Skill : Observation

	PAGE NO.	TIME	DESCRIPTION
1	-	5 mins.	<b>Reconnect</b> Recap the journey that the students took as cartographers, and how this helped them become more aware and sensitive to their surroundings. Quickly recap the hot/bright spot they chose to work on and why.
2	30	10 mins.	Introduction Introduce the 'Be a Detective' activity as a tool to challenge their assumptions regarding the hot/bright spot they have chosen to work on. Explain that this will help them define the real challenge.
3	30	5 mins.	<b>2.1 Identify</b> Help the students break down the hot/bright spot that they have chosen, by identifying the people, environment and behaviors that contribute to the current situation in their opinion.
4	31	25 mins.	Out of Class Observation Divide the class into smaller groups (maximum 6 people per group). Each group is assigned the responsibility for reviewing the environment, people and the behaviours. This will require them to work outside the classroom and observe the way the challenge they have identified affects those around them. Ask them to note the impact on page 31 of the Guide. Teacher Tip: Ensure that all groups have a spokesperson to report findings of answers to all the
5	32	<b>15 mins</b> .	<b>Closing the Loop &amp; Reflection and Peer Review</b> Close this session with students sharing some of the details they have observed. Question the authenticity of the observation to push them to think further. Ask them to reflect on the shift between their assumptions (on page 30) and their actual observations (on page 31). Highlight how detectives value all the clues, allow themselves to be surprised, don't work from assumptions and judgments based on people and places. Ask them to keep observing their chosen hot/bright spot through the week and at different points of the day to help them understand different patterns of behavior. Next tell them to fill their responses for the given reflection questions. Ask them to first mark their own self and then get their partner's feedback on their critical thinking skills.

The next two steps (Be a Petective  $\xi$  Be a Reporter) will help you understand your area of concern better and define the **real challenge**.

## BE A DETECTIVE

Petectives are trained to notice details that help them solve crimes. By breaking down the situation into parts, you are more likely to gain a deeper understanding.

#### 2.1 NOTICE (INDIVIDUAL ACTIVITY)

How does a detective dig deeper? He/She notices who all were present at the scene of crime? What were they doing when the crime happened? What does the crime spot look like?

For e.g A Few grade 7 students at Riverside School identified dirty washrooms in their school as their hot spot.

Environment

People

Behaviours

1. Storage in the washroom

2. Cleaning equipment

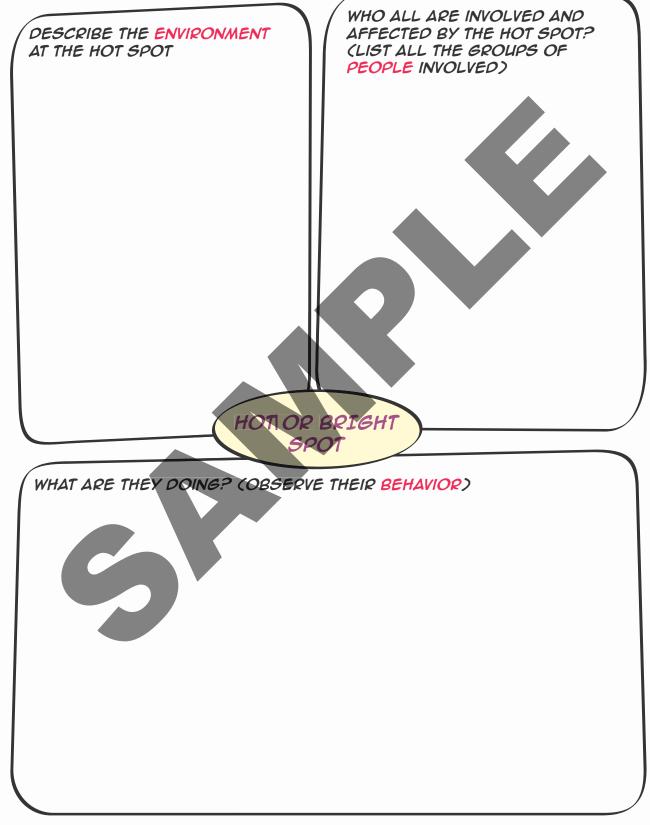
 All the students who use the washroom
 Cleaning staff 1. Training of cleaning staff 2. How children currently use the washroom

A good detective also writes down his hypothesis before going to the Field. What according to you is causing the problem?

What according to you are the major causes of the selected 'Hot Spot'. Remember these are just your assumptions. You do not have evidence to prove them right

### 2.2 OBSERVATIONS (GROUP ACTIVITY)

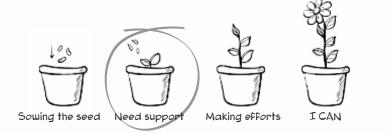




## REFLECTION & PEER REVIEW

Given below are some reflective questions to help you observe yourself more closely. We are constantly changing and building our strengths and our measuring scale needs to take that into account.

Use these images to mark where you are at the present moment in the superpowers of critical thinking.



#### CRITICAL THINKING

To be able to solve a problem, one must understand it completely. Observe how you investigate the problems you come across everyday.

Take 5 minutes to First put your markings under "I Think" and then pass it to your activity partner to get their thoughts on your present behaviour.

SUPERPOWERS	ITHINK	MY FRIENDS THINK
I take into account the people who are affected by the problem and their perspectives	6666	
I spend time understanding the reasons which might be causing the problem	6 6 6 Å	8 8 Å Å
I look at the problem from different perspectives before reaching a conclusion	8 8 8 8	6 6 8 Å

Now compare the stages you have marked for yourself and where your friend has put you for the present. Why might there have been a difference in the marking of stages?

### SCRIBBLE PAD



## Session 6 : Be a reporter

#### OBJECTIVE

Students will learn that interviewing is an important skill that helps them bust assumptions. They will also realise that in order to get relevant information and interesting details, they need to listen carefully to effectively understand the user's perspective.

Students will learn that interviewing is a skill that helps them record not only the spoken language but also the body language. Being sensitive to both - the words, the tone and the body language, will reveal a story from which they will understand the user better.

#### 21<sup>st</sup> Century Skills : Effective Communication, Interpersonal Relationships Sub skill : Improvisation

	PAGE NO.	TIME	DESCRIPTION
1	-	5 mins.	<b>Reconnect</b> Start the session by going back to the students' observations recorded on page 31. Once more, highlight how they were able to bust their assumptions through observation. Ask them about any patterns that they observed further in the last one week of observations.
2	43-35	10 mins.	Introduction and Comic Introduce 'Interview' as another tool, which helps not only in breaking assumptions, but also in understanding a situation from multiple perspectives. Ask the students to read the 'Be a Reporter' comic on page 34-35. This can be done individually or as a class.
3	36-37	15 mins.	<b>Be a Reporter</b> Students have to identify the different people who are part of the problem to conduct an interview. In the same groups as the 'Be a Detective' activity, ask students to write down questions (factual and exploratory) that they would want to ask.
4	-	20 mins.	<b>Role play</b> Get the children to do a role-play of their interview. Ask the class to assess if the students have stuck to the interview guidelines described in the comic and give constructive feedback to refine it, keeping in mind the questions and body language.
5	-	10 mins.	<b>Closing the Loop</b> Ask students how the role-play helped them refine their questions and feel confident about going out to conduct interviews.

## Session 7 : Interview

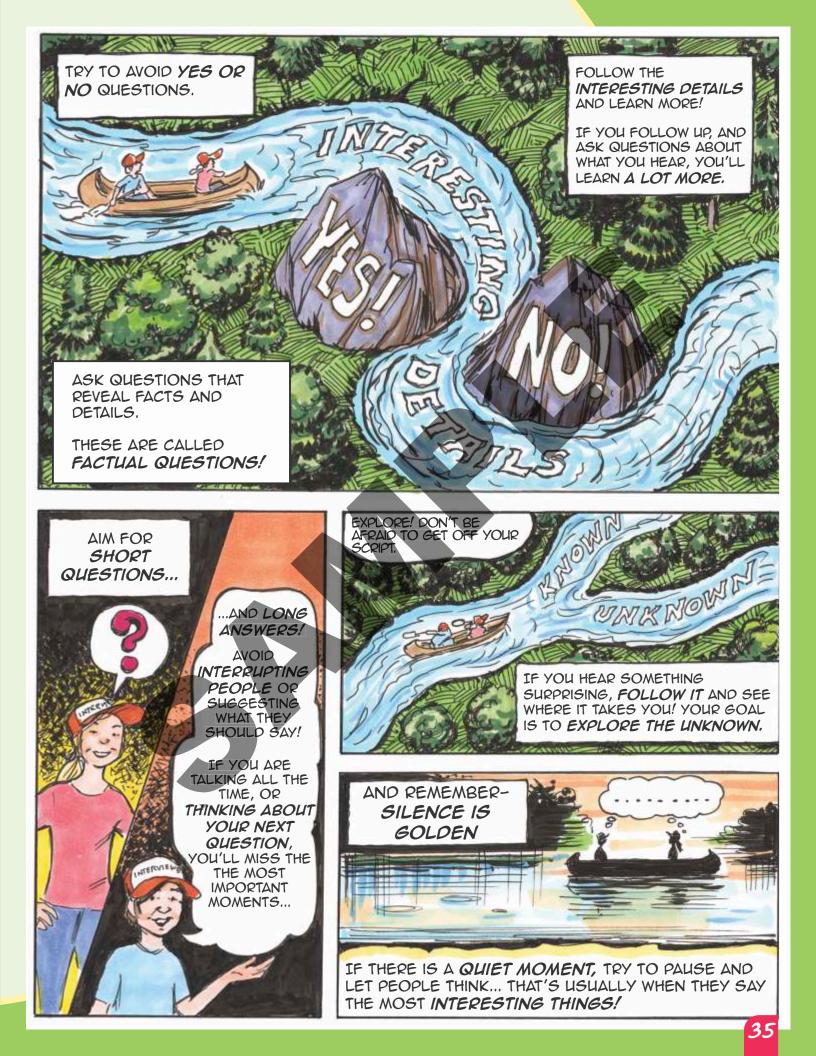
#### OBJECTIVE

Students will experience the importance of multiple perspectives in understanding a problem. They will go out and interview stakeholders to build a better understanding of the hot spot.

# **21<sup>st</sup> Century Skills :** Empathy, Managing Emotion, Critical Thinking, Problem Solving **Sub skills :** Listening & improvisation.

	PAGE NO.	TIME	DESCRIPTION
1	-	10 mins.	ReconnectRefer back to the questions and the role-play done in the previous pages 36 and37 of the Guide and adding answers to the spaces indicated.Students are encouraged to find as much information as possible on the differentperspectives of the people who are a part of the hot/bright spot.
2	38-39	30 mins.	Interview Divide children into pairs and every pair will choose a stakeholder whom they will go out and interview during this session. Remind children to take notes while interviewing their stakeholders. Ask children to remember their reflections from the role-play they did last week. Tell children that they have 30 minutes to go, conduct their interview and come back to class.
3	40	20 mins.	Closing the Loop & Reflection and Peer Review Tell children to fill their responses for the given reflection questions. Ask them to first mark their own self and then get their partner's feedback on their improvisation skills. After children have filled in their reflective questionnaires, ask them to share what they learnt through the process of interviewing other people. Focus on bringing out the point that different people look at the same issue differently. And this helps us in understanding the problem from multiple perspectives.





### 3.1 INTERVIEW

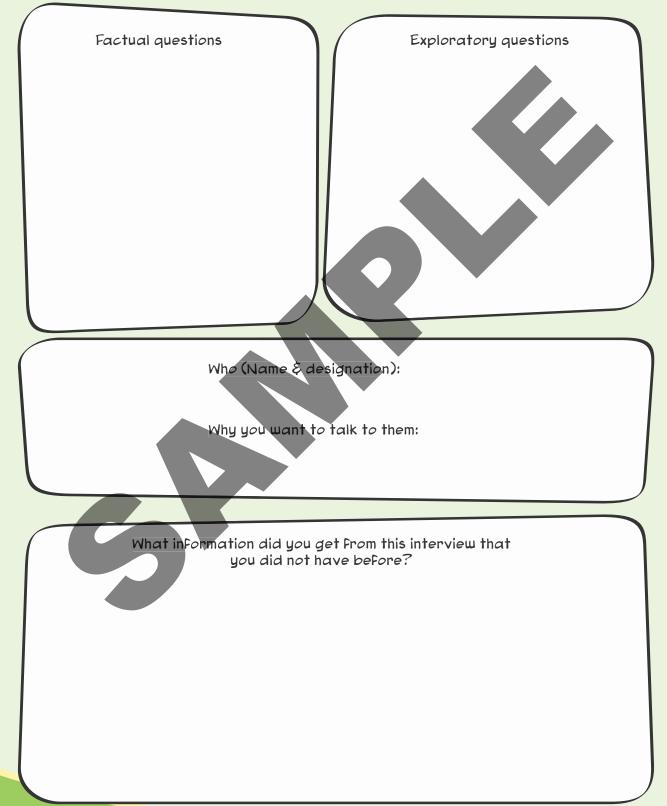
In the same groups, interview two people affected by the situation you chose. You can use two kinds of questions.

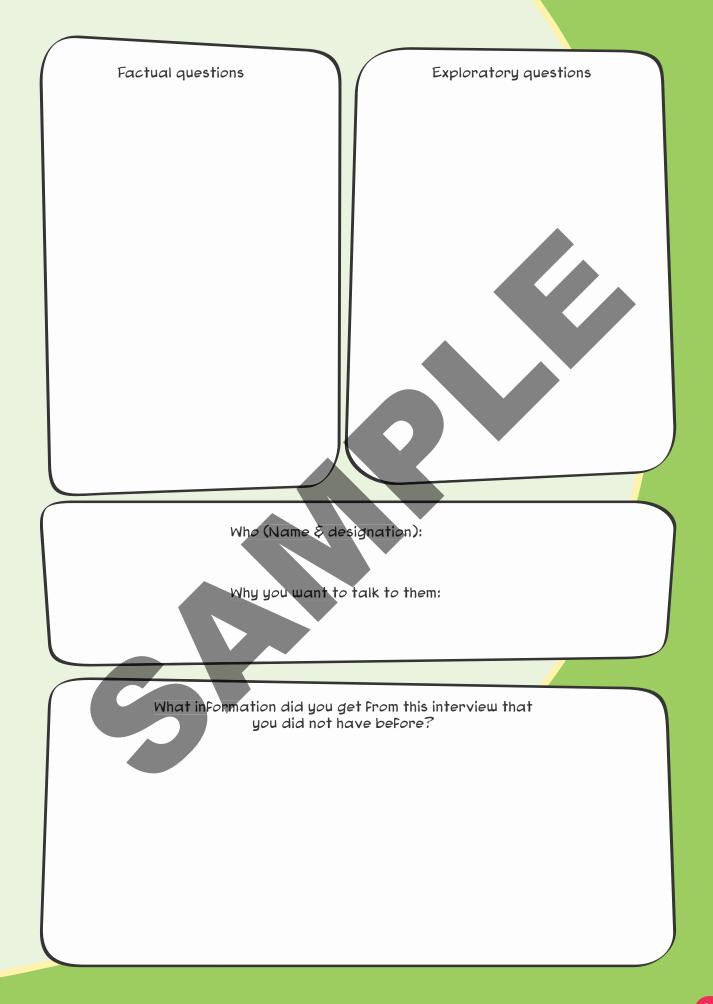
#### 1) Factual questions:

These questions reveal details and information.

2) Exploratory questions:

These questions help you discuss and inquire deeper about the subject.





### INTERVIEW NOTE PAD



### INTERVIEW NOTE PAD



## REFLECTION & PEER REVIEW

Given below are some reflective questions to help you observe yourself more closely. We are constantly changing and building our strengths and our measuring scale needs to take that into account.

Use these images to mark where you are at the present moment in the superpowers of improvisation.



#### IMPROVISATION

Improvisation is your ability to effectively respond to a situation by changing your attitude and tone. It allows you to understand the situation from another's perspective and respond accordingly.

Take 5 minutes to First put your markings under "I Think" and then pass it to your activity partner to get their thoughts on your present behaviour.

SUPERPOWERS	I THINK	MY FRIENDS THINK
I am able to change my tone and conversation based on how the other person is thinking or Feeling	6666	8 8 8 Å
I am comfortable with changing the plans to suit the situation	6 6 6 Å	5 5 5 Å

Now compare the stages you have marked for yourself and where your friend has put you for the present. Why might there have been a difference in the marking of stages?

# Session 8 : Wrapping Up

#### OBJECTIVE

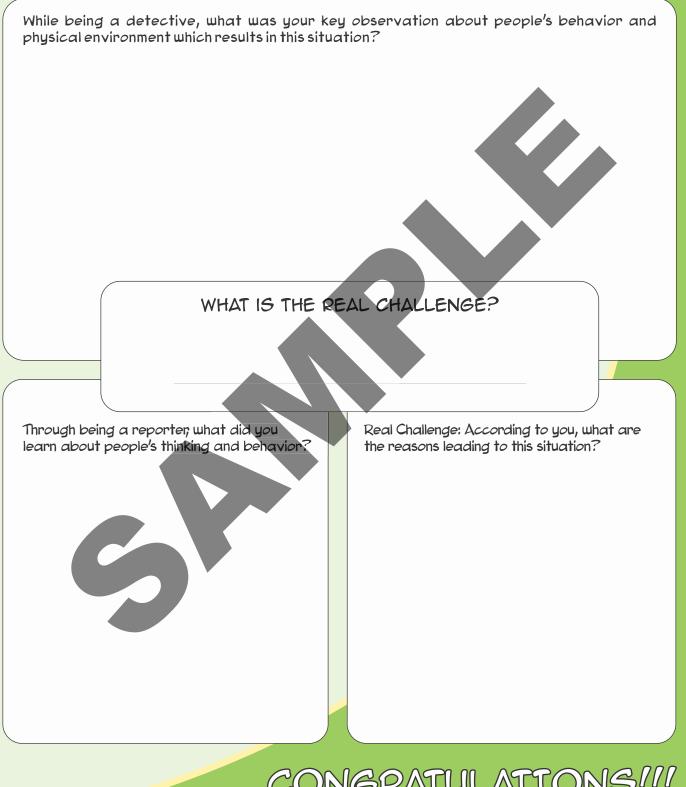
When assimilating their findings, students will learn that a problem is like a jigsaw puzzle. Putting all the pieces together will help them identify what the 'real' challenge is.

	PAGE NO.	TIME	DESCRIPTION
1	-	5 mins.	<b>Reconnect</b> Make a journey map for the children about the different things they did as part of identifying and understanding their opportunity of change. Ask them what they feel they have learnt by doing these different activities.
2	41	40mins.	<ul> <li>Findings</li> <li>Ask children to think about what they learnt about their chosen hot/bright spot by being a Detective and Reporter. Ask them to reflect and note down their key insights from both these processes on page 41.</li> <li>Bring the class together to discuss their findings and complete the answers to the questions on page 41.</li> <li>Bring the class together to discuss their findings and get them to make connections between their different observations to help them reach and understand the Real Challenge.</li> <li>Take them through the questions and answers, finally agreeing as a group on what the REAL CHALLENGE is.</li> <li>For example : children might have noticed that their bathrooms were dirty. Only after interviewing those associated with the problem (children, cleaning staff, eachers) that they will realize that the problem is built of multiple parts such as bathroom etiquette, lack of awareness of the cleaning staff, outdated or inappropriate cleaning equipment, cleaning schedule and the real challenge is not just dirty bathrooms but it is these multiple parts that leave a bathroom dirty.</li> </ul>
3	42	15 mins.	<b>Closing the Loop</b> Ask children to feel the questions given in Wrapping Up and tell them to share their reflections about the Feel process.

## Scribble Pad



Now that you have noticed details as a *Petective* and looked at different points of view as a *Reporter*, organize your findings to reveal the *REAL CHALLENGE*.



CONGRATULATIONS!!! YOU ARE READY TO LEAD THE CHANGE

5 WRAF	PPING UP: F	EEL		
How did talkir	ng to people change yo	ur perspective?		
Why is the Fee	l stage important?			
			2	
THIS STAGE	INVOLVED LOOKING	6 DISCUSSING	AND ANALYZIN	IG SITUATIONS

THIS STAGE INVOLVED LOOKING, DISCUSSING AND ANALYZING SITUATIONS CLOSE TO YOUR HEART. IT ENCOURAGES YOU TO OBSERVE AND BE OPEN TO THE WORLD AROUND YOU.

BY NOTICING DETAILS AND BEING OPEN TO DIFFERENT POINTS OF VIEW, YOU LEARN TO BECOME MORE EMPATHETIC TO PEOPLE, PLACES AND THINGS INVOLVED IN THE SITUATION.

THIS IS IMPORTANT TO IDENTIFY WHAT THE REAL PROBLEM IS. OTHERWISE, IN OUR HASTE WE OFTEN END UP SOLVING THE WRONG PROBLEM.

YOU ARE NOW READY TO EMBARK ON THE NEXT STEP - IMAGINE - TO COME UP WITH SOLUTIONS FOR YOUR CHALLENGE!

### SCRIBBLE PAD

