

SUSTAINABLE DEVELOPMENT GOALS

**Goal
1**



End Poverty

No one should suffer because they have less money.

**Goal
2**



End Hunger

No human should ever suffer because of lack of food.

**Goal
3**



Health and Well Being

A healthy world free of diseases.

**Goal
4**



Quality Education

Every child in the world has the right to good education.

**Goal
5**



Gender Equality

A world where every gender gets equal respect and is given equal opportunities.

**Goal
6**



Clean Water for all

Clean water to drink and clean themselves and improve public health

**Goal
7**



Affordable and Clean Energy

Clean Electricity in every home, every day, without pollution.

**Goal
8**



Decent Work for all

Jobs for everyone to take care of themselves and better their life

**Goal
9**



Innovation to benefit all

Modern and safe technology for development of all.

**Goal
10**



Reduce Inequality

Help and support people who don't have equal opportunity.

**Goal
11**



Safe cities and surroundings

Build communities that are safe and harmless to both people and the planet.

**Goal
12**



Responsible Usage

Careful usage of resources and products to avoid unnecessary waste creation.

**Goal
13**



Stop Climate Change

Everybody does what they can to stop climate change caused by human actions.

**Goal
14**



Protect the Ocean

Working together to keep the seas and oceans clean and life under water safe.

**Goal
15**



Life on Land

Earth is the only home for a lot of animals and living things. Take care of them.

**Goal
16**



Live in Peace

No fights, No crimes. Peaceful solutions to problems, fights and crimes of all kind.

**Goal
17**



Work Together to reach goals

Educate people about these goals and work together to complete them.



Worksheet

1. Each of the 17 SDGs have a special logo assigned to it. The first one has been identified as an example. Discuss and try to identify what the other symbols could represent and write its goal number in the space provided.

A) Goal 13



B) Goal ___



C) Goal ___



D) Goal ___



E) Goal ___



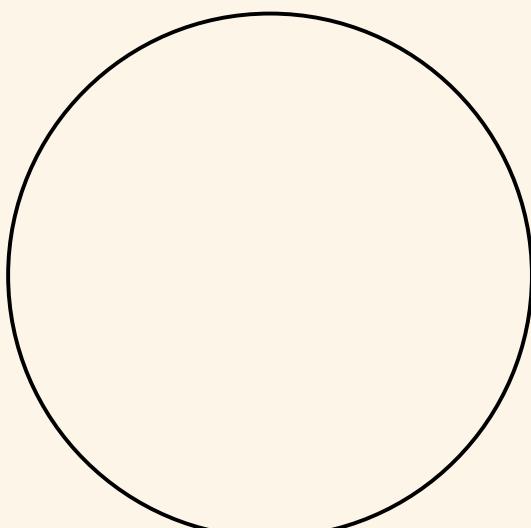
F) Goal ___



G) Goal ___



2. Discuss with your group and pick one of the 17 SDGs that you think is important for your community. Design a new logo for it and write down why you think it is the most important goal for you?



Activity

Plastic being dumped in the water is a huge problem. Packaging and plastic bags while shopping, buying products, food are one of the most common ways of making plastic waste.

Find out about the packaging methods given below. Put a tick on sustainable packaging that will not create harmful waste and put a cross on those which will.

**Plastic Bags****Paper Bags****Jute Bags****Bubble Wraps****Banana Leaf Wraps****Paper Bubble Wraps****Paper Containers****Cloth Bags****Plant-Based Dissolving Material**

Find out more about different types of packaging used to replace plastic! You will find many innovation, crazy solutions to replace plastic bags and bubble wraps. Some even made from sea weed and leaves!

Activity

Now it is your turn to pack a gift!

YOU HAVE TO SEND A GLASS CUP AS A BIRTHDAY GIFT TO A FRIEND.

1. Make a creative, sustainable packaging
2. Choose the best options – you can combine or create new idea.
3. It should protect the glass
4. It should not create more waste.

Write and Draw your Idea and if you can, try and make it!

Activity

LOGO QUIZ

What is a LOGO?

Remember the SDG Logos?

Logo is a symbol or a design that serves as an identity for a team, cause or company. Sometimes they visually shows a name or cause just like in the SDG's!



It tells people who it is and what it means.

Think of some logos you remember. You might even recognize your favorite sports team, some companies or schools just by looking at their logo.

That's how powerful logos are!

What is a LOGO?

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Think of some logos you remember. You might even recognize your favorite sports team, some companies or schools just by looking at their logo.

That's how powerful logos are!

**Here are the answers to your previous worksheet 1
Look at how the colors and icons are used to show the GOAL logo in a simple way!**

**Goal 11 : Sustainable cities and communities**

Different buildings are used to represent cities and communities.

**Goal 6 : Clean Water and Sanitation**

The icon has a glass of water to refer to clean water.

**Goal 2 : Zero Hunger**

A bowl is used to represent food and zero hunger.

**Goal 14 : Life below water**

Water is represented by wave lines and the fish stands for life underwater.

**Goal 7 : Affordable and Clean energy**

The icon of switch and sun represents clean natural energy.

**Goal 15 : Life on Land**

The tree and birds stand for life. The color green and straight lines refer to the land.

Activity

LOGO QUIZ

Look at the logos given below carefully. Each of them uses different creative ways of logo design. Observe the hints given and try to answer the question.

1



Room to read is a company that creates spaces for children to read books.

How is the logo representing what the organization does?

2



Olympics is an international sport competition played between countries all over the world.

Can you guess why the logo is made of **5 rings**?

3



This is the logo of San Diego Zoo.

Look closely, how do you think the logo represents a zoo?

4



Amazon is a company that delivers **all kinds of products**.

Can you guess why there's a arrow from **A to Z**? It also looks like a smile.



DREAM TEAM LOGO



Now it is time for you to come up with your team logo!

STEP 1: Think together with your team and come up with a team name and write it below

Team Name

CHECKLIST: Is the team name

Short and easy to write?

Easy to spell?

Easy to pronounce?

Doesn't require a lengthy explanation

Memorable and unique

Step 2: Give your team a unique identity with a logo of your own!

Draw it below!



Ask yourself

1. Did everyone in team agree to the logo?
2. Did you feel it was better to work alone or as a team? Why?
3. Do you think you could have made the same logo alone?
4. Did someone else's idea help you think better?

"If everyone is moving forward together, then success takes care of itself."

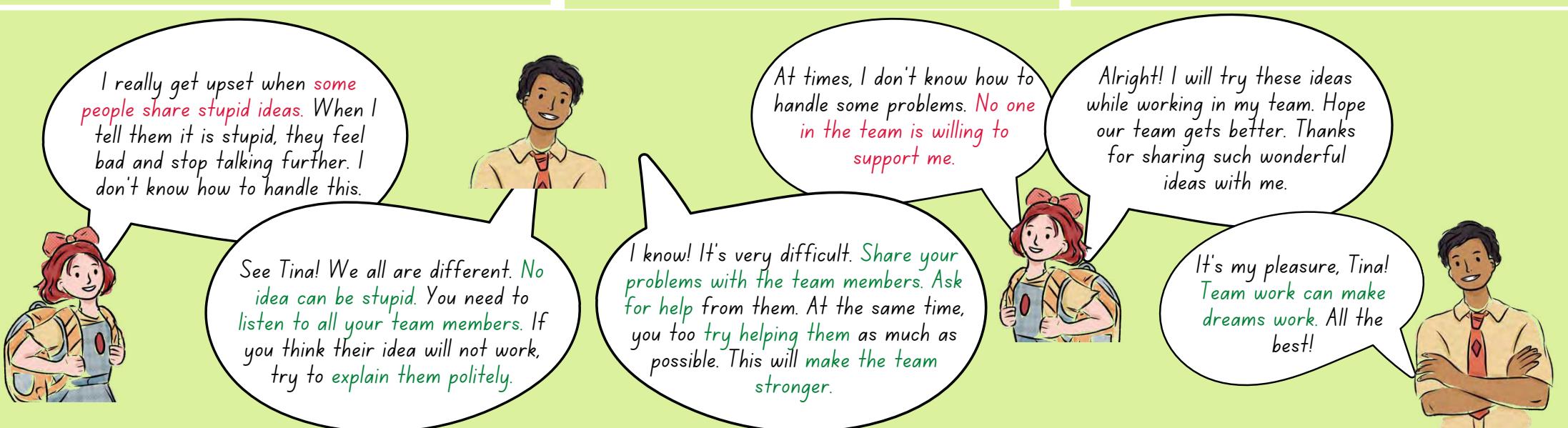
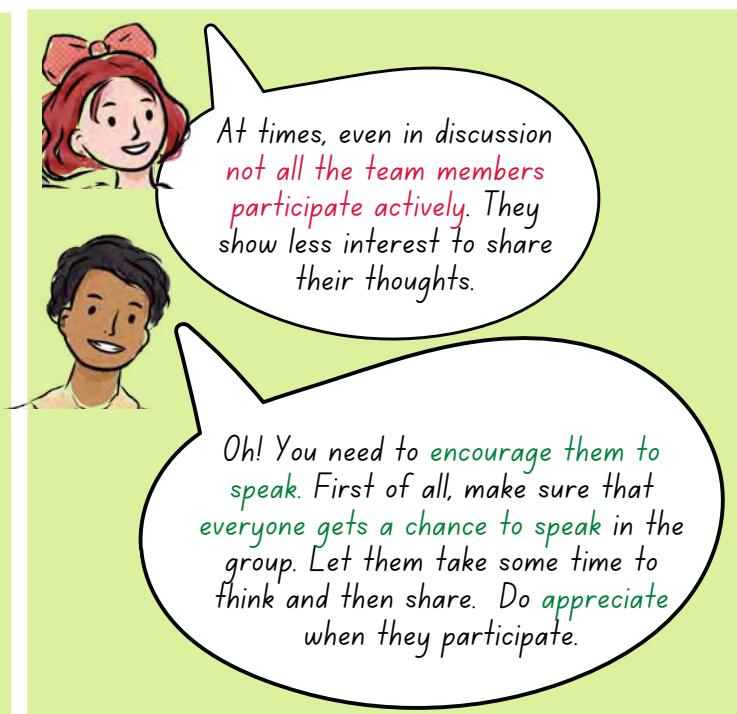
- Henry Ford



(find out who this person is!)

TEAM WORK

Tina and Rinku are best friends. Tina is not happy working with her team. On the other hand, her friend Rinku enjoys working with his team. He is suggesting ideas for her on how to work better in teams. Let's look at their conversation.



Worksheet

STRONGER TOGETHER

It's investigation time! Time to collect STRENGTHS!

Now that you have worked together, you must have seen that each of you have certain STRENGTHS that add great value to your team.



Carefully go through the list of qualities and find at least one STRENGTH that is most related to you and your team mates!

Good at encouraging people.
TAG : Appreciator

Shares ideas and opinions to others clearly.
TAG : Vocal

Pays attention to what others say or share.
TAG : Listener

Good at solving fights between my friends.
TAG : Mediator

Asks for feedback and comments from others.
TAG : Open-Minded

Cares about others feeling
TAG : Accepting

Takes good decisions to get work done.
TAG : Decision maker

Makes sure to complete their part of work always
TAG : Responsible

Takes charge of the team and motivate them to do more.
TAG : Motivator

Ready to try new, different ideas, without worrying about failing.
TAG : Risk taker

Keep track of time and the tasks that I need to do.
TAG : Planner

Comes up with new, different ideas.
TAG : Creative

Worksheet

STRONGER TOGETHER !

Write down each team members name on each petal.

Now take turns one by one.

1. Refer to the strengths on previous page.
2. Discuss and write the strength you found for yourself on your petal.
3. Add the strengths you observed for others in their petals

SAVE THE PAGE!

These are your strengths!

They are good, helpful, positive traits that you possess.

The more we work as a team the more strengths we will discover in each other and ourselves!

Don't forget to keep adding them.



LOGO QUIZ - Answer Key

Have you tried hard to make a guess on what that logo means ???

Here is the answer!... To know more about the organization and the story behind their logos, click on the picture.

1



Means 'books'

Roof represents the 'room'

Room to Read is an organisation that creates space for children to read and improve their reading ability.

2



Five different continents of the world.

Olympics is an international sports event. The five rings represent five different continents of the world participating in the event.

3



Rhinoceros

Bird

Lion

If you look closer, you can see the picture of a rhinoceros, a lion and a bird in the logo. In this way, it represents the zoo.

4

amazon

A to Z conveys that it delivers all kinds of products starting with any letter,

The arrow goes from A to Z. It tells us that the company delivers all kinds of products. Name any product from A to Z. You will get it.

Click on the the logo to visit their website and know more about these organization !

Activity

THE BLIND MIND : Observation Activity



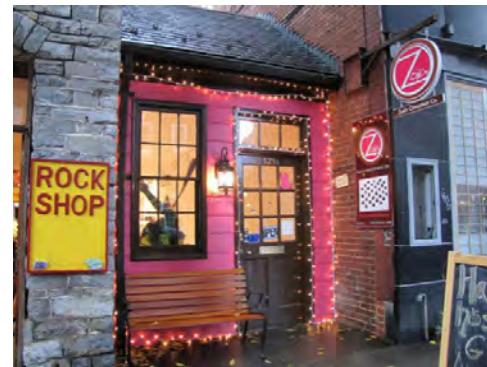
Here is a fun activity for you to understand the power of OBSERVATION

There is one difference in each set of images. SPOT the differences in 30 seconds!

One who finds the most differences, wins!



a



a



b



b



c



c



d



d

We can also use such careful observation, to identify different problems around us!

Activity

WHO'S THAT?: Interview Activity

Form teams of 2 players.

- Your team thinks of a famous person. Don't let the opposite team know!



- The opposite team has to guess the name.



- They can choose one of the cards below and ask you a question using that word.



- If the opposite team can't guess the name in 8 questions, you win!



- Repeat the game. This time you will guess the name!



- Avoid asking and giving direct hints.
Eg: Don't ask 'What is the name of the person?'

**WHAT**

Eg: What is the person famous for

WHEN

Eg: When did they become famous?

DO/DOES

Eg: Do they work in politics?

HOW

Eg: How old is the person?

WHERE

Eg: Where did the person live?

WHO

Eg: Who else is closely working with them?

WHICH

Eg: Which gender do they belong to?

ARE/IS

Eg: Are they still alive?

You learnt how to make questions to get more information!

Similarly, you can use these words to ask questions while interviewing for problems.

Activity

QUIET PLEASE: Experience Activity

Listed below are different types of situations. Each of the teammates must circle the situations they have faced and share it with their team in one sentence.

**Not heard the alarm
and slept when you
were supposed to
get up early!**

**Eaten really hot food
and hurt yourself!**

Slipped on wet floor

**Someone was mean
to you at school**

**Forgot to switch off
light and were
scolded**

**Took too much food
to eat and could not
finish it.**

**Fought with your
friends**

**Cut your finger
while using knives**

**Thinking of the situations and experiences you have faced in your life can help you identify problems
as well!**

Activity

Investigation Report: Deask Research Activity

Look at this Newspaper Article. Identify the problem mentioned and find out more about it using desk research



This is a pictures from Bhutan.

Read the following article about it -

In Bhutan, it is not uncommon to see ugly sight of garbage dumped on the roadside, solid waste thrown away at river banks, and landfills amassed with huge amount of rubbish. It is becoming more and more difficult for municipalities to manage solid waste in an efficient manner as urbanization and population has both increased.

Thirty years ago, it was not a big issue as Bhutan had no more than 600,000 people and more than half of the population lived in rural areas. Bhutanese imported few goods from the neighboring countries, mainly India. They produced almost everything in their own country, such as: milk, cheese, butter, rice, meat, wool, cotton, etc. But in recent years, Bhutanese's consumption pattern has changed and people started to import a large number of goods, spending billions of Ngultrum. Because of this continuous trend, waste generation and disposal has become a major issue in Bhutan.

Researching something puts you in others shoes and helps to understand what they are facing!

Fill In

What is the problem?

Where is it happening?

What are the main causes of the problem?

What other information did you get?

What other ways can you get more information?

Worksheet

I SEE – I WISH

(What I See around me – What I wish to see)

Use the tools of Observation, Interview, Experiences and Research to identify problems around you.

Write it down in the space below.

THINK ABOUT

What I See ?

Think about all the people and all the places around you.



- Is there harming of any living being?
- Is there wasting or polluting of any resource on the planet?
- Is there difficulty or something stopping any members of the community from leading a better life?

Worksheet



Field Note Template



Take notes for your **Observation / Experiences / Interviews / Research**

It can include peoples interactions with other people or their surroundings. You can draw a picture on one side and take notes or responses on the other side. Note down which tool you used as well.

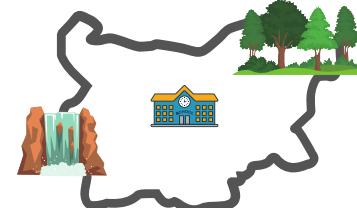
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Worksheet

UNDERSTAND MY COMMUNITY

A community map of your neighborhood is marked with all the major roads, facilities, buildings and natural resources. This map will help you understand your community better. Follow some simple steps to make a community map.

1

Set boundaries

2

Observe and Recollect

3

Draw

4

Update

5

Mark

Choose a start point and an end point of your map. For example, you might want to draw a map showing everything in between your school and home.

Make a note of major places in your way – water bodies, parks, roads, schools, forests. You can make use of Google Maps here.

Now draw the map on an A4 sized paper. You can get creative here and by using your own symbols for places, using different colours for roads, buildings, houses, waterbodies, etc.

After you are ready with a map. It should look something like this.

Now mark the places where your team has identified the problem. Different symbol can be used for marking different problem.

Worksheet

UNDERSTAND MY COMMUNITY

Create a map of your own community with major places. Mark the various problems identified by your team at various places.

Checklist

- Schools • Markets • Hospitals • Housing Areas • Public Parks • Bus Stands • Water Bodies • Main Roads • Dumpyards

Worksheet

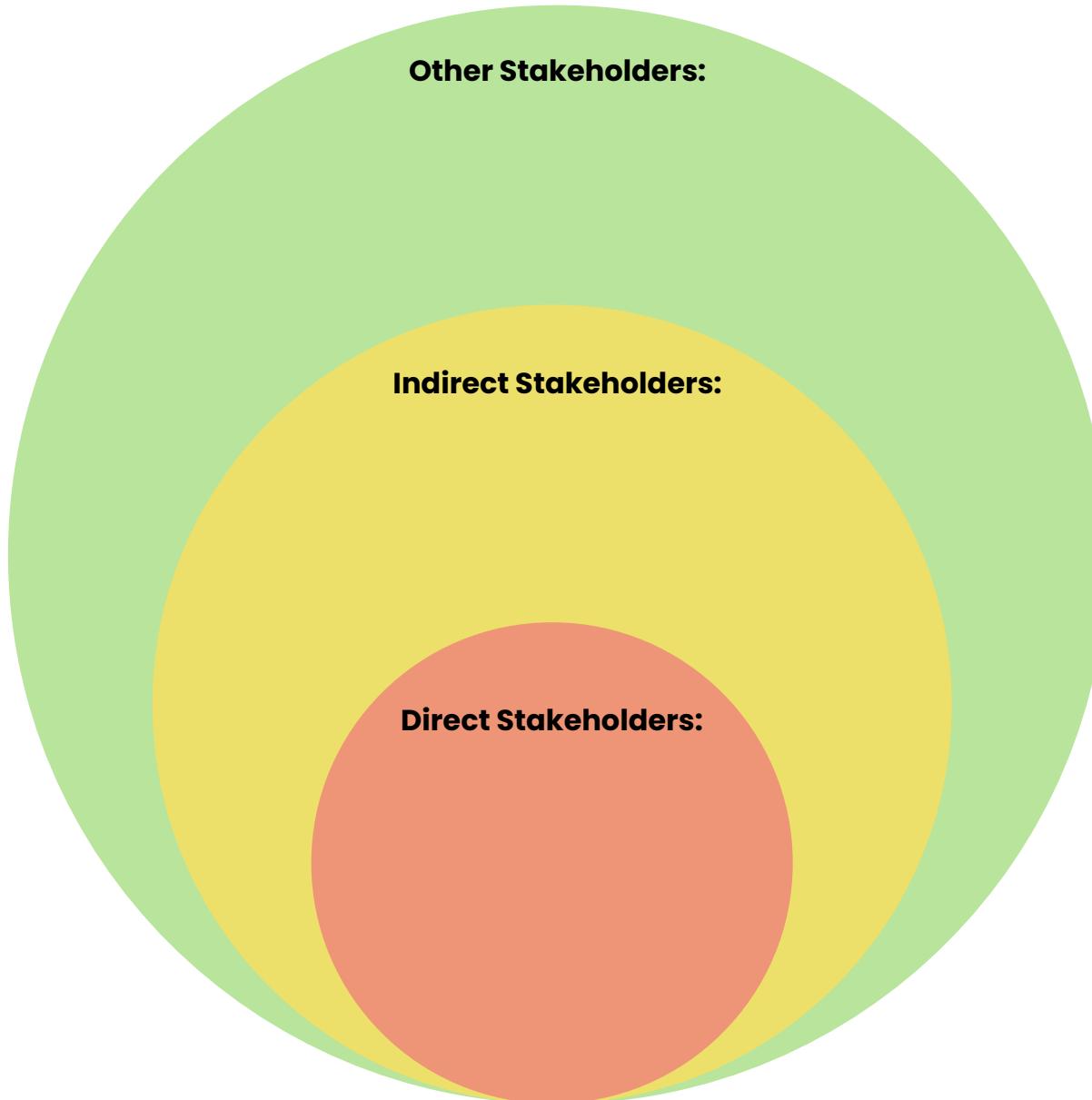
PROBLEM SELECTION RUBRIC – PEAK RUBRIC

PROBLEM TITLE	DESCRIPTION Details of the problem	PREFERENCE Are all members excited about the problem?	EFFECT How badly is it affecting people/plane around you?	ACHIEVABLE Are you confident about achieving a solution to this problem?	KNOWLEDGE How well do you know the problem?	FINAL SCORE Total added score

Worksheet

Stakeholder Mapping

A problem will have different people (stakeholders) involved in it. Identifying the different stakeholder will help to get more information about the problem and create better solutions. Start from the direct stakeholders.



3. Other Stakeholders:

- Solving a similar problem.
- Have larger influence or resources to support our solution.

2. Indirect Stakeholders:

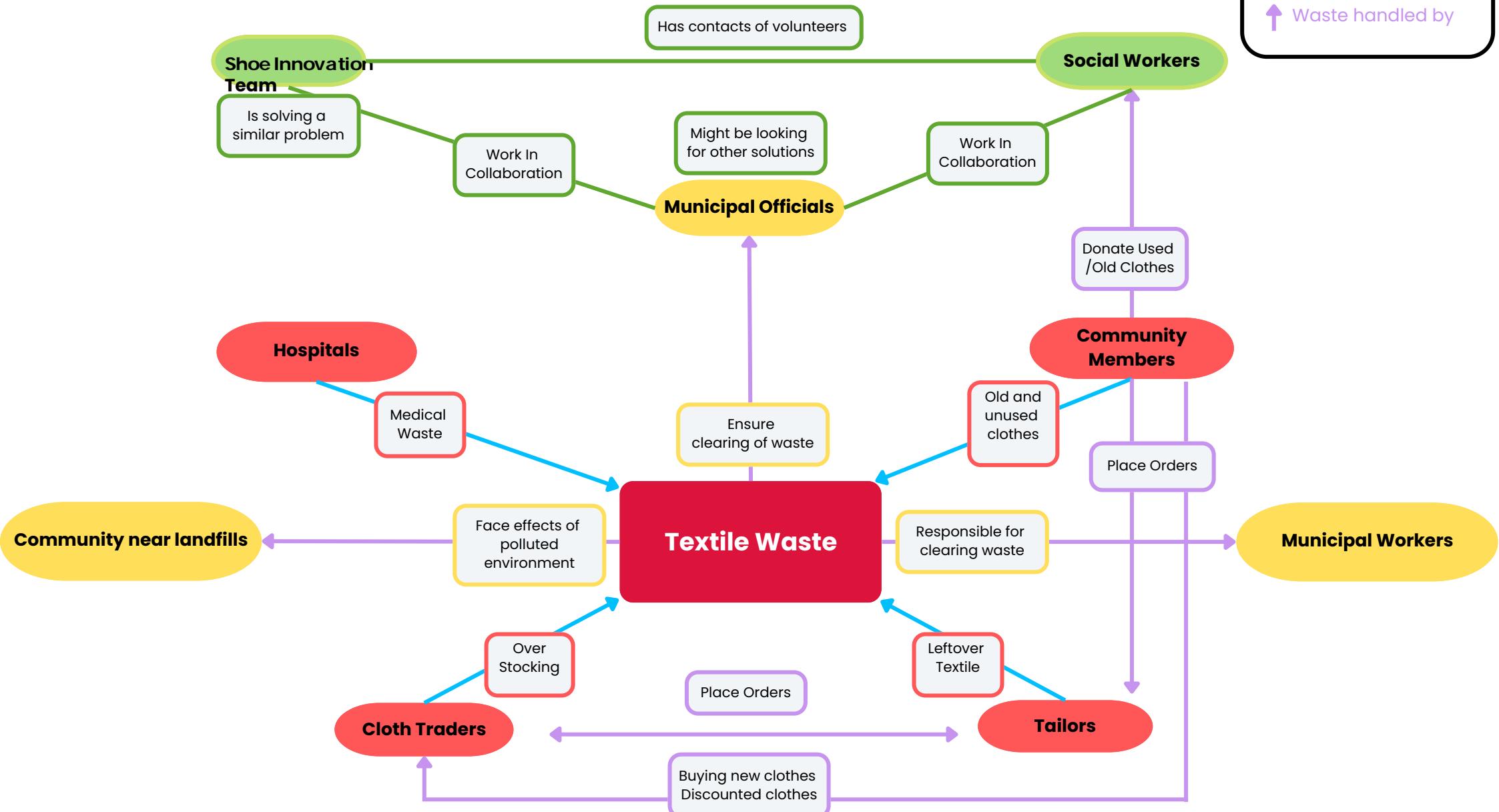
- Have information about the problem though not directly related to it.
- Close contact with people directly affected by it.

1. Direct Stakeholders:

- Directly experience the problem you have identified.
- Target group for whom we are creating the solution.

Mind Mapping

Look at the Mind-Map created for the Textile Waste problem. A mind map helps you understand how different stakeholders you identified are connected to each other, the problem, the cause and the effect.



Worksheet

Mind Mapping

Time to create your own Mind Map! Use the stakeholder mapping and link the problem, the different stakeholder and how they are connected to each other.

Note the connection between

- Causes and the problem
- Effect and the problem
- Direct Stakeholder and the problem
- Indirect Stakeholder and the problem
- Other Stakeholders and the problem

Interview Sheet

Things to remember when Interviewing :



- Do not force anyone to answer you, instead explain why you need to talk to them.



- Use a notebook to note down the responses in all interviews.



- Each stakeholder will provide different information. Prepare your interview questions differently to collect such specific information.

When preparing questions for each stakeholder, focus on:

Direct Stakeholders:

- Ask about the problem they are facing and how they are dealing with it right now.

Example:

1. When was the last time you had to throw away clothes?
2. What did you do with the old clothes?

Indirect Stakeholders:

- Ask about how they are related to the problem and if they know anything more about it.

Example:

1. What do you feel about so many clothes being wasted?
2. Why do think there is waste being created?

Other Stakeholders:

- Ask about similar problem they are working on and about other important information that can be used while solving.

Example:

1. Do you know of anyone working with textile waste?
2. What are some ways to handle textile waste?

*Refer to the Additional Resources for a Sample of an Interview Sheet

Worksheet

Interview Sheet

It's time to prepare **YOUR OWN QUESTIONS** for **Direct Stakeholders**. Think of the most useful questions to ask these stakeholders. Keep in mind the information you need to collect from them to understand the problem better. In the problem identified of Textile Waste Problem, these questions would be asked to **community members**.

Direct Stakeholders:

Worksheet

Interview Sheet

It's time to prepare **YOUR OWN QUESTIONS** for **Indirect stakeholders**. Think of the most useful questions to ask these stakeholders. Keep in the mind the information you need to collect from them to understand the problem better. In the problem identified of Textile Waste Problem, these questions would be asked to **tailors, hospital etc.**

Indirect Stakeholders:

Worksheet

Interview Sheet

It's time to prepare **YOUR OWN QUESTIONS** for **Other stakeholders**. Think of the most useful questions to ask these stakeholders. Keep in the mind the information you need to collect from them to understand the problem better. In the problem identified of Textile Waste problem, these questions will be asked to **Shoe Innovation Team and social workers**.

Other Stakeholders:

Worksheet

Problem Tree

Create the Problem Tree for your Problem

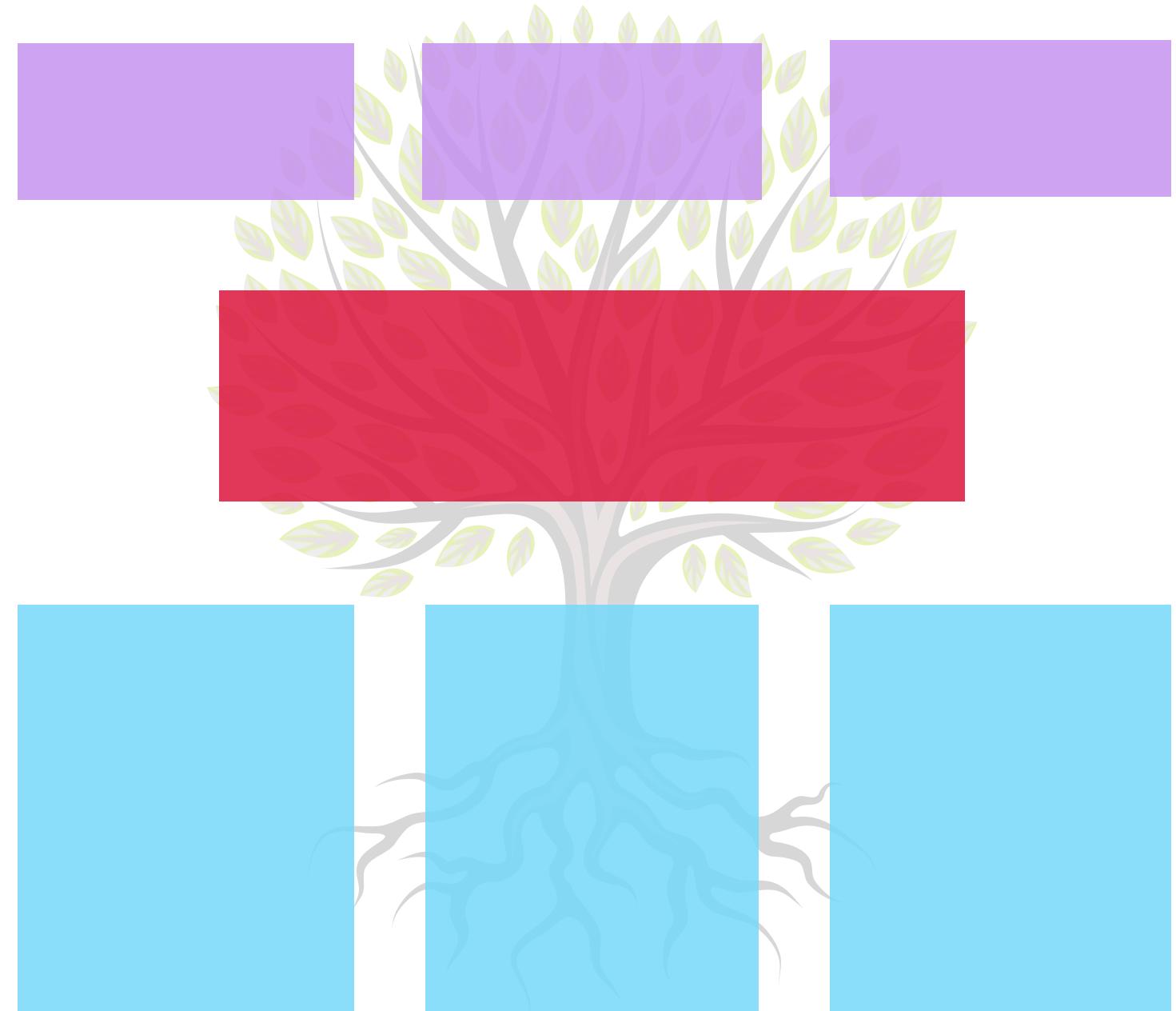
Effect



Problem



Causes



Worksheet

Why and Other Why's

Use this to find **root causes** to the causes you identified in the problem tree using the 'Why' technique?

No separation of cloth waste from garbage

WHY?

Daily practice - people are not used to doing it.

WHY?

Lack of awareness about the need to separate

WHY?

Lack of initiatives or effective ways to spread awareness

Root Cause

Note: Add additional boxes if needed!

Worksheet

State your Problem

Let's look at the problem statement made before coming up with the idea to make shoes from waste material:



Large amounts of waste being dumped into water is a problem caused by **not having a way to properly dispose waste**. This can lead to **pollution of soil and harm aquatic life**. **Handling the waste responsibly and creatively** will help us address the problem in a better way.

For the above Problem Statement, Identify and write down :



CURRENT STATE :

DESIRED STATE :

CAUSE :

EFFECT :

Develop your Problem Statement!

Does your Problem Statement

Define your problem clearly?

It is understandable to others?

State the current state of the problem?

Include the root causes and effects?

State the desired state you are trying to achieve with your solution?

After discussing, write down your **FINAL** Problem Statement. You can rearrange the order if needed.

Worksheet

STRONGER TOGETHER !

Write down each team members name on each petal.

Now take turns one by one.

1. Refer to the strengths on previous page.
2. Discuss and write the strength you found for yourself on your petal.
3. Add the strengths you observed for others in their petals

SAVE THE PAGE!

These are your strengths!

They are good, helpful, positive traits that you possess.

The more we work as a team the more strengths we will discover in each other and ourselves!

Don't forget to keep adding them.



Activity

BEST FROM WORST

Look at the bad idea for a solution and think of better ideas for solutions.



Bucket



Bucket with Holes!

Someone used it
to make a shower!

Write down a bad idea for the following products and use them to make one better idea.

**B
A
D
I
D
E
A**



Bad Idea:



Bad Idea:



Bad Idea:

**B
E
T
T
E
R
I
D
E
A**

Better Idea:

Better Idea:

Better Idea:

Thinking creatively can give you different and unique ideas and there are various ways of becoming creative!

Activity

PROCESS vs PRODUCT

Remember! You have seen or read about these solutions in your journey so far!

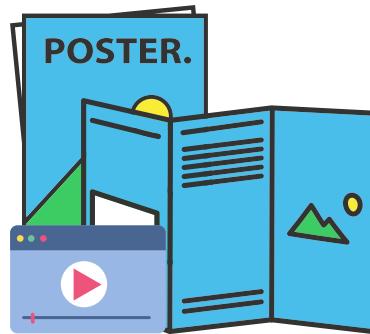
Let's see if these solutions are Product based or Process based. Mark the answers below.

**Umbrellas that can be worn on head**

Process Based
Product Based

**Having a Traffic Police to control traffic**

Process Based
Product Based

**Showing videos and sharing posters about water wastage**

Process Based
Product Based

**Making notebooks from old ones to reduce wasting unused paper**

Process Based
Product Based

Think of product and process based solutions for your problem as well! Every problem will have multiple solution!

Activity

Brainstorming : First Idea Crazy Idea

Think about this problem: "Old unused tyres lying around in parks."

Below are a few ideas to solve the problem. Look at how these old unused tyres were transformed into great ideas!



Let's think differently! Each of you can sketch the first idea that comes to your mind to solve the problem of **used old tyre** below.

--	--	--	--

While thinking of solution you can create wonderful ideas when everyone contributes.
Everyone thinks differently and that is inspiring!

Activity

Brainstorming : First Idea Crazy Idea

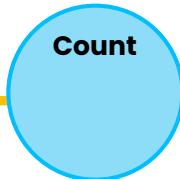
Now as a team let us think of ideas really fast. Write down all the ideas you can think of for the condition given below within the time given. Give as many answers as possible, then count and write the number of ideas below.



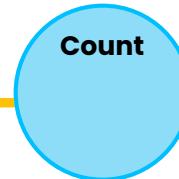
You have to measure the distance in a room but you don't have a scale.
Think of all the others ways you can measure distance.



Think all the ways in which you can use old newspaper for different uses.



Count



Count

Thinking fast and writing down all the ideas that come to your mind without waiting will give you many ideas.
Let's try it for your problem!

Worksheet

Brainstorming: First Idea Crazy Idea



Now you are ready to work on your problem!

Write down **all** the ideas you can think of for your problem in 5 minutes. Make sure all teammates add atleast one idea.

From here you can work of choosing, discussing, combining and improving various ideas!

Activity

Brainstorming: Open Storming

Combining ideas can help give better and newer ideas. Let's try this with the unused tyre problem.

1

Tyre



+

Box



=

Combined Idea



A tyre that works like a box - can be used in gardens to plant plants.

2

Tyre



+

Box



=



A box with wheels that helps to carry things and move them easily

Sometimes if you try to combine few ideas together, you might get even greater ideas!
Even while combining, you'll see that two ideas can be combined in different ways as per your needs!

Activity

Brainstorming: Open Storming

Now try to combine the below ideas in which ever way you want and sketch the best idea the team can think of.

Cup**Straw****Combined Idea****Pencil****Ruler****Combined Idea**

Let's try the same with the ideas for your problem.

Worksheet

Brainstorming: Open Storming

Use the ideas in the First Idea- Crazy Idea for your problem. Select a few ideas, discuss and combine ideas to improve idea and write them down here.

Improved Idea



The more you discuss and focus on each idea, the better the idea will become!

Activity

Brainstorming : What – If

You can also use the 'What If' method to think of other types of ideas!

Problem: Old unused tyres lying around in parks.

**Write down all possible 'What-If' Questions that can be used
to think of more solutions.**

What-if the solution is a person?

What- if the solution is another product?

What- if the solution is a communication?

What if - -----

What- if the solution is a process?

What if - -----

You can use these 'What-If' questions to think of new ideas for your problem.

Worksheet

Brainstorming : What - If

Now use the 'What If' method to think of possible other types of ideas for your problem!

Choose from above activity and apply it to your problem -

Use the questions you made before using 'What-If'

Hints : a Process, a Product, a Person, Cheap, Light, Flexible,Eco-friendly, a Communication, Sustainable

What if your solution is a

What if your solution is a

What if your solution is a

**You can use any condition you want to. Add more columns if needed*

Activity

Brainstorming : Rolestorming

Look at the following problem and solution.

Problem: Old unused tyres lying around in park

**Stakeholder 1: Gardner, used the old tyre to make flower pots. Think like Stakeholder 2 : Furniture maker.
Write down how the 'Furniture Shop' stakeholder might design a solution differently.**

Stakeholder 1:
Gardner



Stakeholder 2:
Furniture Shopkeeper

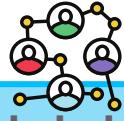


Do you see how your solutions can change for the same problems depending on who you are thinking like!

Worksheet

Brainstorming : Rolestorming

Note down the different Stakeholders you identified for your problem. Now think of the solutions as the stakeholder!



Stakeholders



Think of ideas for your problem as the stakeholder

Worksheet

SOLUTION SELECTION – FUSE RUBRIC

Solution and Description	Feasibility How effectively can it be implemented? (time, cost, materials required)	Usefulness Will users find it useful?	Sustainability Will the solution last long?	Effectiveness Is it helping achieve the goal in the problem statement?	FINAL SCORE Total added score

Worksheet

WHAT IS YOUR SOLUTION?

Draw/Sketch/Write in detail - What is/are your **SOLUTION** going to be?

Worksheet**FEEDBACK**

People who are related to a problem can give feedback on ideas. Feedback helps to make your idea more effective. Recall the following solutions that you have read about so far and try to think of people they would have talked to for feedback!

You can use the following hints:

**THINK OF PEOPLE CLOSE TO YOU
WHO ARE FACING THE PROBLEM**

**THINK OF PEOPLE WHO HAVE FACED THE PROBLEM
BEFORE AND HAVE MORE INFORMATION ABOUT IT**

**THINK OF PEOPLE WHO HAVE THE
SKILL TO WORK WITH THE PROBLEM**

**THINK OF PEOPLE WHO ARE DECISION MAKERS
AND ARE INVOLVED IN SOLVING THE PROBLEM**



Remember Thato's solution of Schools bags with Solar lamps for students in areas with electricity shortage?

Think of atleast 5 people she could have talked to for feedback when she thought of the idea at first!

Now think about your solution. List down a few people you can talk to for feedback on your solution.

Activity**FEEDBACK AND REFINE**

The Team talked to a few people and got Feedback on their selected solution. But it got all mixed up! Can you join the IDEA TITLE to their correct IDEA FEEDBACK and NEW IDEA using lines?

**IDEA TITLE****IDEA FEEDBACK
What did they say?****NEW IDEA DESCRIPTION
How are you improving the idea?**

Cloth bags and cleaning products like a mop or a duster made from clothes that can no longer be repaired

Awareness campaign in neighbourhoods in the community.

Starting a stitching class for adults in community with the help of the tailor in our neighbourhood

The students themselves will help spread the word about textile waste in their homes and communities.

Interested in being a part in solving the problem, they don't have a lot of time to spare for these stitching classes.

Really tiny pieces of cloth waste can't be used for mops

Introducing stitching classes in school and then all of us will learn to repair our own clothes.

Tiny pieces of clothes can be used by Farah to design new shoes and soles.

Focus on conducting the awareness drives within our schools and also the schools in our neighbourhoods.

Worksheet

FEEDBACK AND REFINE

Write down the feedback you got for your ideas and how you'll use them to improve the solution.



IDEA TITLE	IDEA FEEDBACK What did they say?	NEW IDEA DESCRIPTION How are you improving the idea?

*Create your own table if and Add more columns if needed

Worksheet

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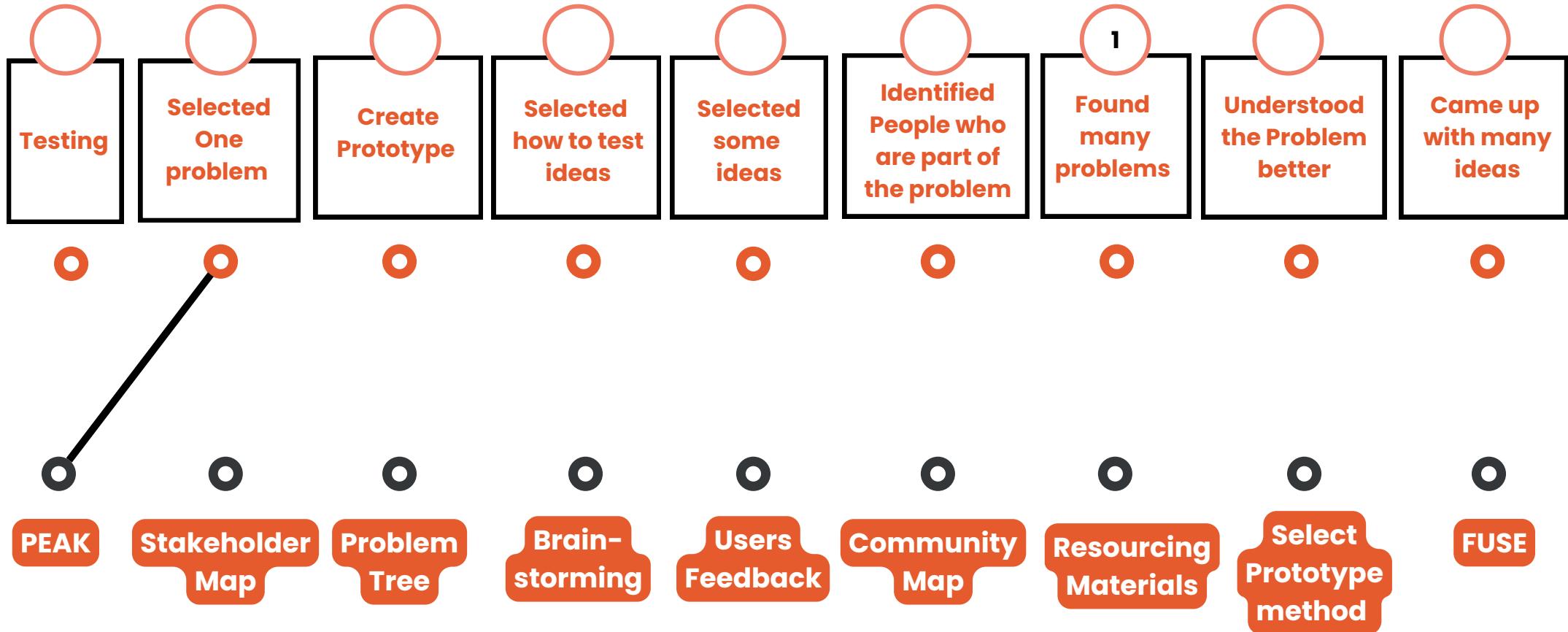
*Create your own table if and Add more columns if needed

JOURNEY OF PROBLEM SOLVING

Activity

There are many stages to solving a problem!

1. Number the steps below in order according to your understanding of a problem solving journey.
2. Connect the different steps to the keywords below.



An idea goes through many stages before it becomes an effective solution to a problem!

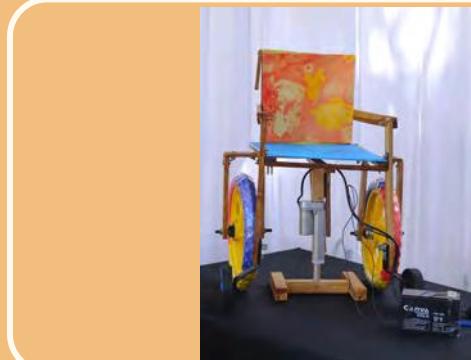
Activity

JOURNEY OF A SOLUTION

Remember learning about Basheera! She made wheelchair that can increase in height and rotate. Now look at the pictures below and number them in order of her journey.



What Prototype methods were used by Bahseera?



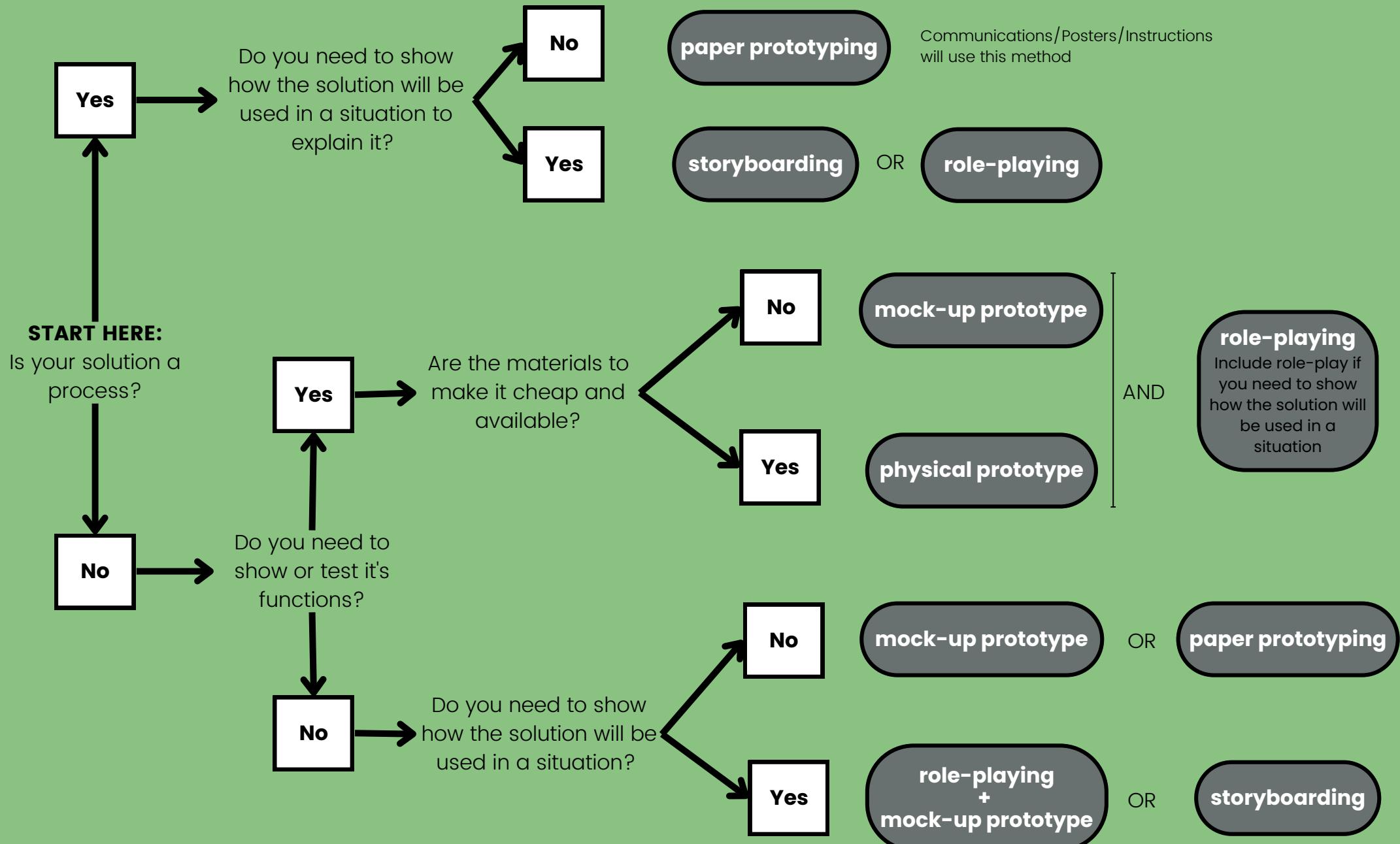
Do you think they selected the right prototype? Why?

A important part of solution is making a prototype and testing it.

By selecting the correct prototype method, you can make sure that your solution is tested and works well to solve the problem faced by the users!

CHOOSING THE BEST PROTOTYPE METHOD

Use the following question map to find out the best prototype method for your solution.



Activity**PROTOTYPING**

Now that you have learnt how to select the best prototype method for a solution, let us practice it for the few examples we have seen so far. Write down why you selected it as well.

physical prototype**paper prototyping****role-playing****storyboarding****mock-up prototype**

Have shoe rack with numbers assigned to lab seats so that students have to keep shoes in rack to pick a seat.

Why ?

Assigning a student who makes sure that everyone leaves their shoes in order

Why ?

Sticking Instructions outside the lab allowing entry only after shoes are placed in order.

Why ?

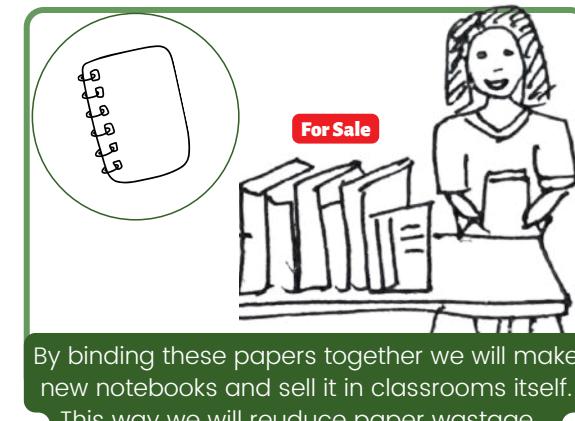
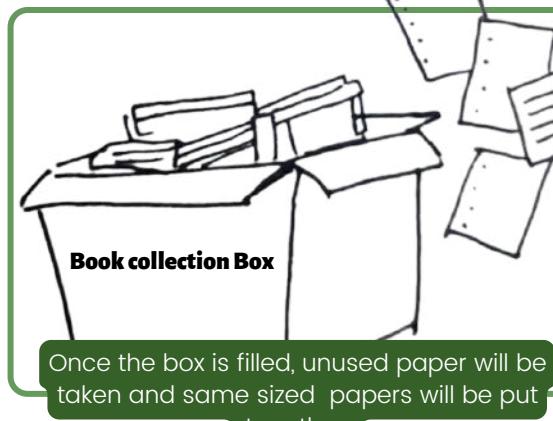
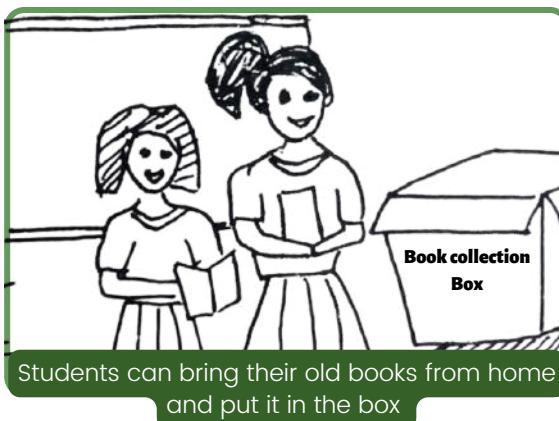
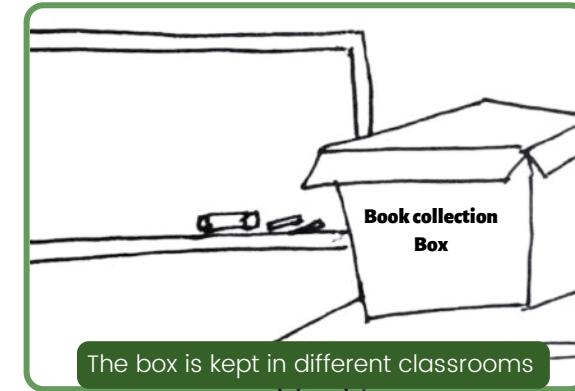
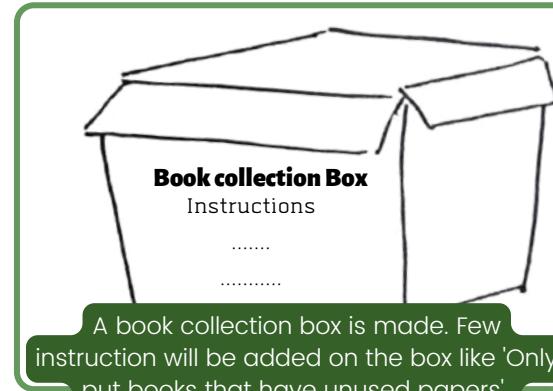
Making a shoe rack with old carton boxes and place it outside the lab.

Why ?

Activity

STORYBOARD

Try to guess the problem and solution shown in the storyboard given below



Problem:

Solution:

Worksheet

RESOURCING

Decide on your Prototyping method for each solution and plan on how to make it.

Discuss and tick the **prototype method** you want to use to test your idea.

Idea:



physical prototype



paper prototyping



role-playing



storyboarding



mock-up prototype

Discuss and make a **list of materials or any support or permissions** you need to make the prototype.

Tools and Materials

People and Permissions

Other things to keep in mind

Worksheet

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Tools and Materials

People and Permissions

Other things to keep in mind

Worksheet

USER TESTING

Write down the user you will be testing with.

After testing and feedback, tick the changes you want to make to each solutions

Idea:

			
Who is using the solution?	What do they like?	What do they not like?	Other remarks and observations

Worksheet

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Write down the user you will be testing with.

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Idea:

			
Who is using the solution?	What do they like?	What do they not like?	Other remarks and observations

Worksheet**FINAL IDEA SUBMISSION**

Describe Problem Statement and your Final Idea

Problem Statement :

Idea Description :

Worksheet

FINAL IDEA SUBMISSION