Teacher's Handbook

UPSHIFT

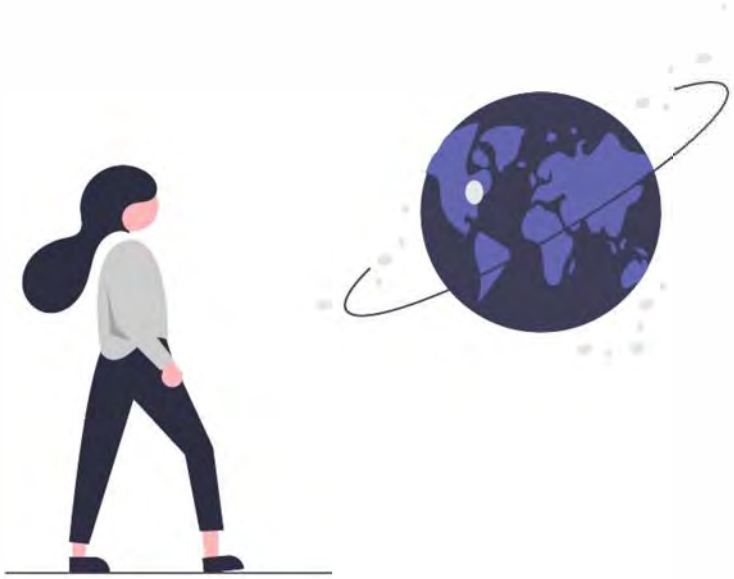
powered by UNISOLVE

Transforming Schools Into Places Of Creativity And Innovation

A practical guide to implementing the unisolve curriculum in schools.

What is *UPSHIFT*?

Powered by unisolve



We are living in a fast changing world. Rapid technological advancements may have made our lives relatively easier, yet a multitude of problems persist around us, in our communities.

Every century has a story to tell. And every century brings with it some challenges that demand our collective attention. For hundreds of years, basic education had been a privilege. Today, even as many nations around the world are still busy grappling to provide basic access to education to its citizens, it has become increasingly clear that our children are not supported enough to take on the world of tomorrow.

Our focus can no longer be limited to achieving literacy and numeracy milestones. Roughly, seven years ago in the year 2015, the United Nations set up the Sustainable Development Goals [SDGs] that are intended to be achieved by the year 2030. Of them, SDG 4: Quality Education, focusses on imparting skills that are relevant to the demands of the contemporary world.

The aim of UPSHIFT ***Powered by unisolve*** , a digital learning platform, is to help children grow in to self-sufficient and highly employable individuals with knowledge and skills that are practical and relevant.

How does *UPSHIFT* work?

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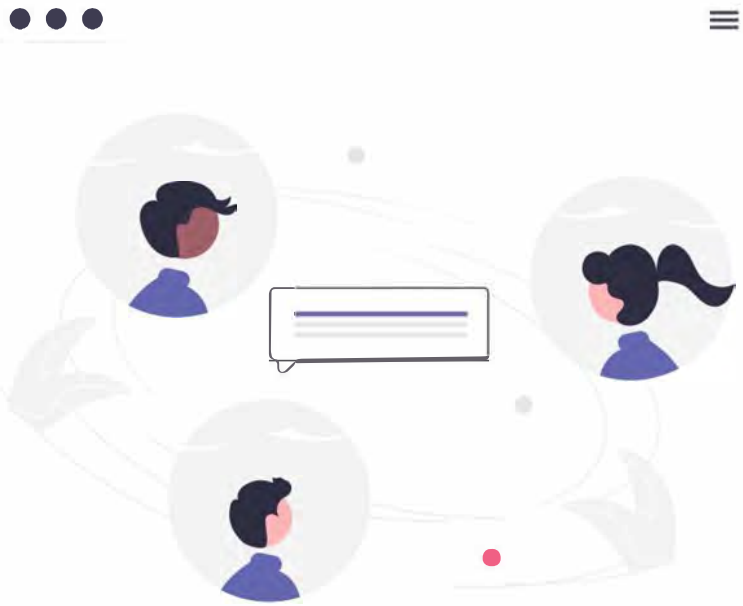
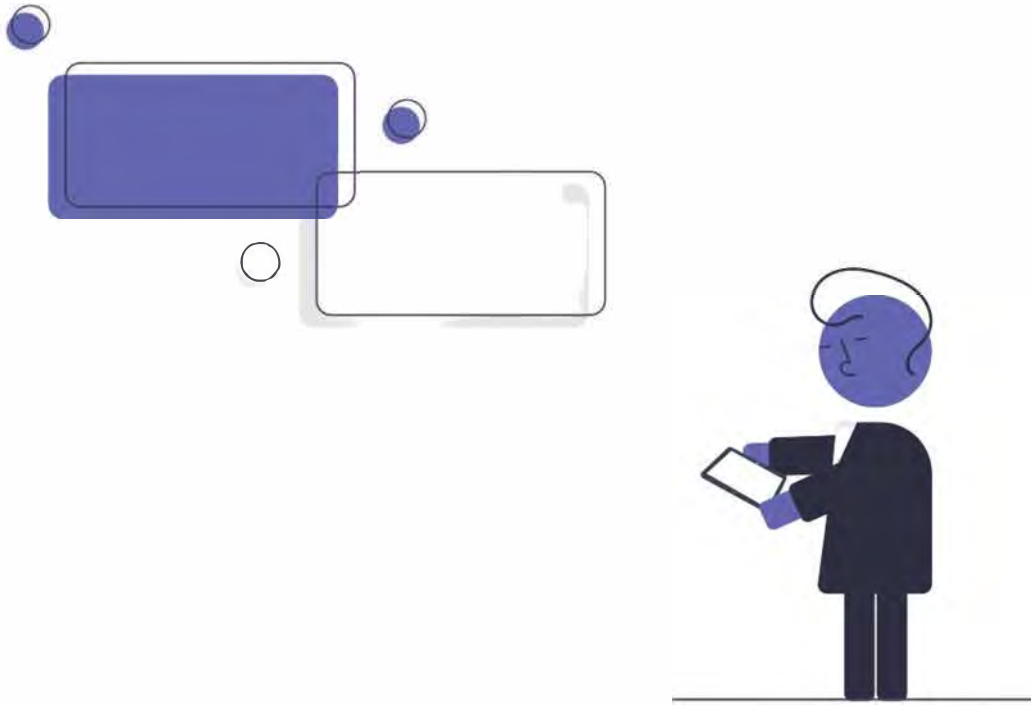


UPSHIFT ***Powered by unisolve*** is an online digital platform where students can enrol as a team and learn the critical skills required to take on the social challenges of tomorrow.
As a part of this program, students between the age groups of 10-15 years have an opportunity to learn, through a self-paced interactive online curriculum, skills such as ***critical thinking, creative problem-solving and design thinking***. They are also encouraged to put this newly acquired knowledge into practice to benefit the surrounding community around them

Students, while being supported by a teacher, will identify problems in their immediate surroundings/ larger communities and apply different problem-solving techniques such as ***research, idea brainstorming, prototyping*** and other ***design thinking*** methodologies to identify and solve problems in their communities. The best of the ideas submitted will have an opportunity for further mentorship and financial support to implement it on a larger scale.

The **PROBLEM-SOLVING JOURNEY** that the students partake in as a part of the course, in addition to self-confidence, will instil in them the skills that enable them to be the **change-makers of tomorrow**.

What problems will students solve?



The United Nations, in the year 2015, have set up 17 ambitious goals that strive for sustainable development. All of these goals, called the ***Sustainable Development Goals or SDGs*** aim for a greener, healthier, equal and more peaceful development of our planet.

Achieving these goals calls for a greater awareness about them and participation of a wide rage of audience, from students in schools to politicians and people in power at all levels.

Through the course modules in *UPSHIFT* ***Powered by unisolve*** , students will be sensitized to the 17 SDGs (goals). Then, they will be encouraged to work towards a goal of their choice in their communities.

Let us once look at what the 17 SDGs are

Sustainable Development goals

Objective: End Poverty in all forms everywhere.

Brief Description: Many people around us are poor and do not have enough money for education, health care, house or even food.

Objective: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

Brief Description: Along with poverty, events such as floods, extreme heat that are becoming more often which is leading to lesser availability of food for people all over.

Sustainable Development goals

Objective: Ensure healthy lives and promote well-being for all at all ages

Brief Description: Lack of awareness of diseases, availability of timely treatment, medicines, and good hygiene practices is increasing the risk of death.

Objective: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Brief Description: Many children are out-of-school and there is a lack of facilities in the schools for children to get the best quality education. This is leading to many educated people to end up without jobs.

Objective: Achieve gender equality and empower all women and girls

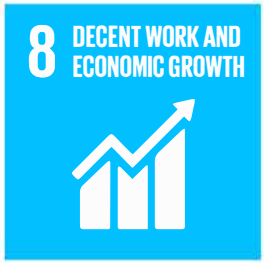
Brief Description: Boys and girls are still not treated equally in many parts of the world and the opportunities available for girls and women are far lesser than those available for men

Objective: Ensure availability and sustainable management of water and sanitation for all

Brief Description: A large percentage of people in the world do not have clean water to drink, and many water sources are contaminated with chemicals being dumped into them. This is spreading diseases at an alarming rate.

Objective: Ensure access to affordable, reliable, sustainable and modern energy for all

Brief Description: Electricity is still not available in many parts of the world, and production of electricity produces a lot of environmental waste. The world needs to use electricity carefully to avoid wastage and become aware of methods that can produce clean energy (electricity) without polluting the environment.



Objective: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Brief Description: If too many people are employed in a single industry like the wood or fishing, it causes these natural resources to be depleted faster and leave millions jobless. Hence, decent and varied job opportunities should be constantly created for the growth of both people and planet.

Sustainable Development goals

Objective: Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation

Brief Description: Countries should work towards improving access to technology for all the people and businesses. Children should be able to benefit from improved access to internet and learn new technologies to develop themselves and their communities.

Objective: Reduce income inequality within and among countries

Brief Description: There are so many differences between the rich and the poor. This gap must be reduced, and the poor and disadvantaged communities should be given the same access that the rich have to everything.

Objective: Make cities and human settlements inclusive, safe, resilient, and sustainable

Brief Description: Increasing population and unplanned development in the cities is making them unhygienic and unlivable in many ways. All these cities must be made safe, hygienic and liveable for all people.

Objective: Ensure sustainable consumption and production patterns

Brief Description: Every natural resource like wood, oil/petrol, air, soil, and water are limited on the planet. Overusing them will leave the future generations with very little or nothing of these, putting their lives in danger. People must reduce, reuse and recycle these resources whenever possible and prevent their depletion.

Objective: Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy

Brief Description: Overuse of resources like wood, electricity, petrol, plastic is heating the planet and creating many disasters like the floods, and extreme heat and cold waves. Action must be taken to save the planet from disasters caused by the climate change.

Objective: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development

Brief Description: Aquatic life below water is in danger due to human activities like over fishing and releasing of harmful chemicals and wastes like plastics in to the rivers and oceans. This could not just destroy the aquatic animals, but all those people who like by these water bodies.

Sustainable Development goals

Objective: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Brief Description: Land belongs not just to humans but to all the animals, birds, and plants that live on it. Cutting of trees, polluting air, hunting of animals are some of the activities that are destroying the life on land. All these activities must be prevented.

Objective: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Brief Description: Violence can happen due to differences between peoples religion, culture, gender, or even age. Many people do not have access to justice in their communities. All such violence must end by strengthening the justice system in the countries and actively promoting peace in the communities.

Objective: Strengthen the means of implementation and revitalize the global partnership for sustainable development

Brief Description: People should learn more about each of the SDGs, what they can do to achieve them, spread awareness about them in their communities and collaborate by working together to achieve all the above 16 goals.

Getting closer to the **Sustainable Development Goals** involves identifying and taking small actionable steps in our communities within our capacity. Each one of us have the capacity to contribute towards these goals, including children.

All that our children need is the **awareness** of this need, **tools** that inculcate in them the **skills** to meaningfully engage with the goals, and **mentorship** to motivate them to work towards the goals.

As children participate in this problem-solving journey, it will open for them a unique view of the world around. And as they engage with the world around, that will build in them more awareness of the self and inform them of the things they might want to do or contribute towards to, in the future. That will make them both **employable** and **responsible** citizens.

Together, make it a better world

Program Schedule

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6

Teacher preparation
7 days

Module 3
10 days

Module 6
11 days

Module 1
5 days

Module 4
9 Days

Final Submission
2 Days

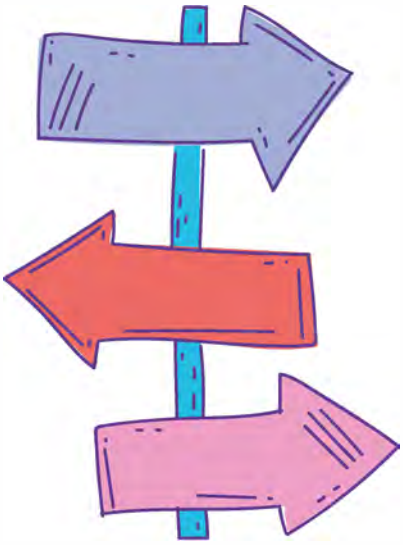
Module 2
5 days

Module 5
9 Days

Buffer Days
8 Days

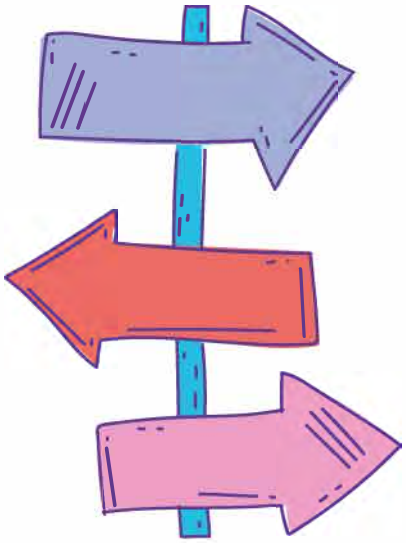
Role of a Teacher

For your students, you will be playing a dual role of:



1. A guide

2. A Mentor



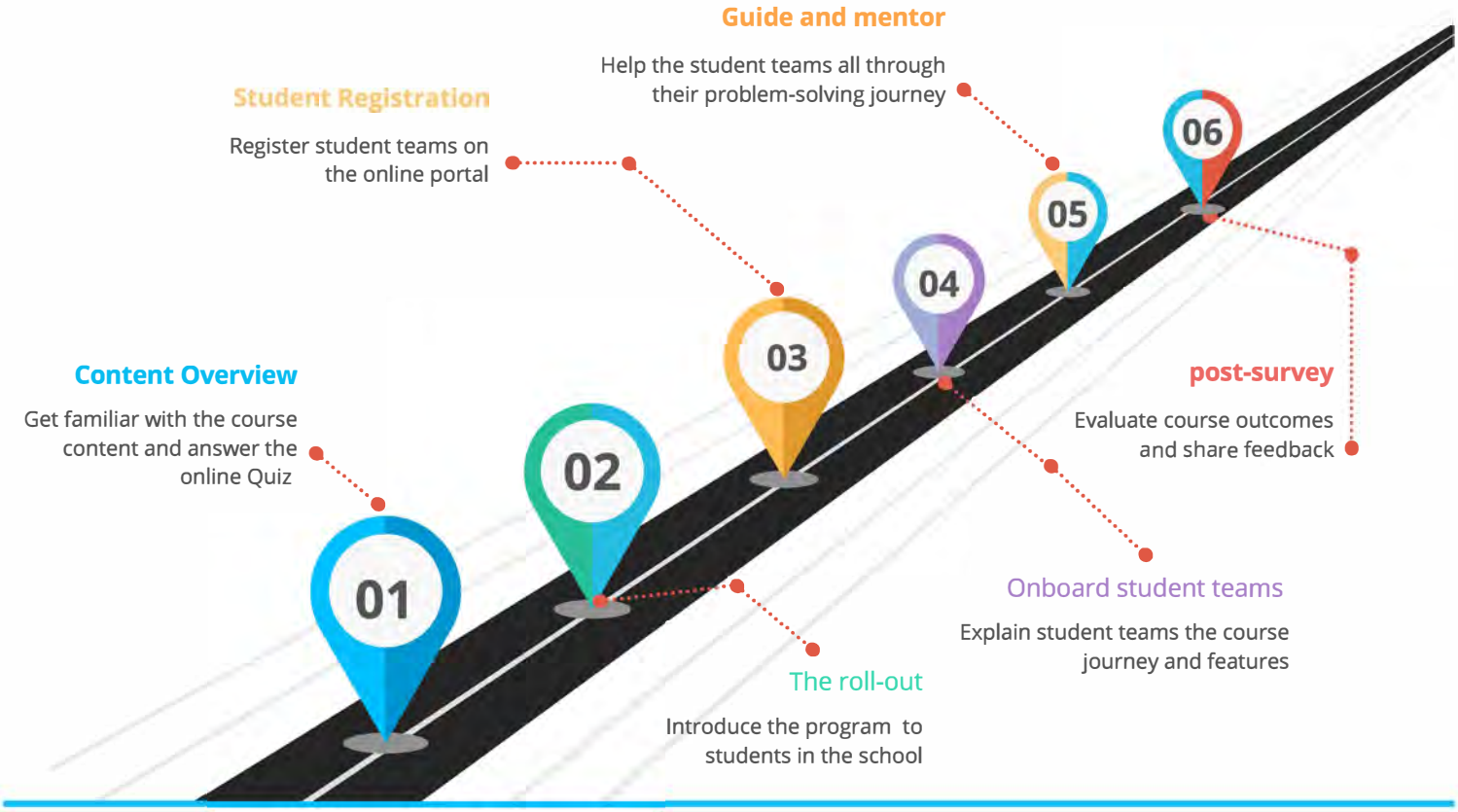
As a Guide, you can help your students with the following:

- Register student teams on the portal.
- Give them an overview of the course journey on the portal.
- Track individual and team progress by following the prescribed schedules and time checks.
- Download the Additional Reading material and Worksheets to distribute them among the students/ student teams.
- Help students navigate through Additional Reading material in between the videos.
- Guide students in conducting the end of module activities by scheduling work-time within school premises.
- Help students upload all the mandatory worksheets on the portal and submit their final idea.

As a Mentor, you can help your students with the following:

- Execute Mentor Sessions given in this handbook at specified intervals.
- Conduct timely 'Check For Understanding of important concepts' at the end of every module and clear their doubts, if any.
- Accompany students in their community visits and help them get the necessary permissions from parents, school or any other authorities.
- Ensure better outcomes by reflecting on the student performance at the end of every Module

Teacher Journey Road-map



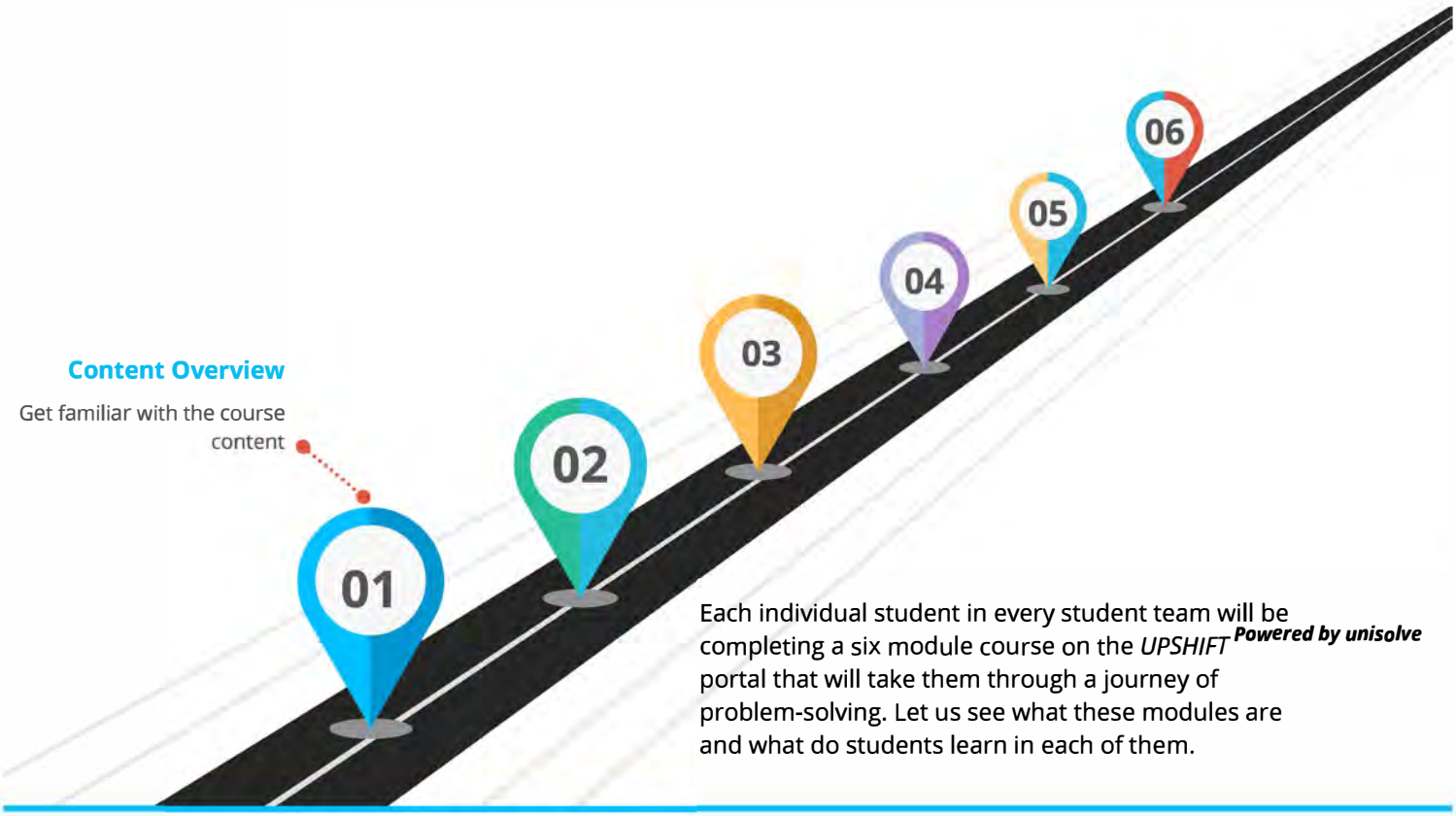
Week 1,2: Teacher Preparation

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
1	1									
2										
3										
4										
5										
6										

Teacher Preparation includes the first 4 milestones in the Teacher-Journey:

Milestones	Days required
1. Content Overview including online quiz	- Week 1 : Day 1,2,3
2. The Roll-Out	- Week 1 : Day 4
3. Student Registration	- Week 1 : Day 5,6
4. Onboarding Student Teams	- Week 2: Day 1

Content Overview



Each individual student in every student team will be completing a six module course on the *UPSHIFT* ***Powered by unisolve*** portal that will take them through a journey of problem-solving. Let us see what these modules are and what do students learn in each of them.

Content powered by Upshift

The course modules are based on UNICEF's UPSHIFT Program. UPSHIFT is a highly adaptable social innovation and social entrepreneurship programme. It combines in-person and online learning journeys, mentorship and, in some cases, seed funding, to equip adolescents and young people with the skills and resources to identify problems in their communities and opportunities to build solutions addressing them.

Young People Agency
Motivates young people by asking them to work on issues they care about the most

Human centered design curriculum
Teaches them a process and a way of thinking that seeks to solve complex problems in a user-centric way

4 Pillars

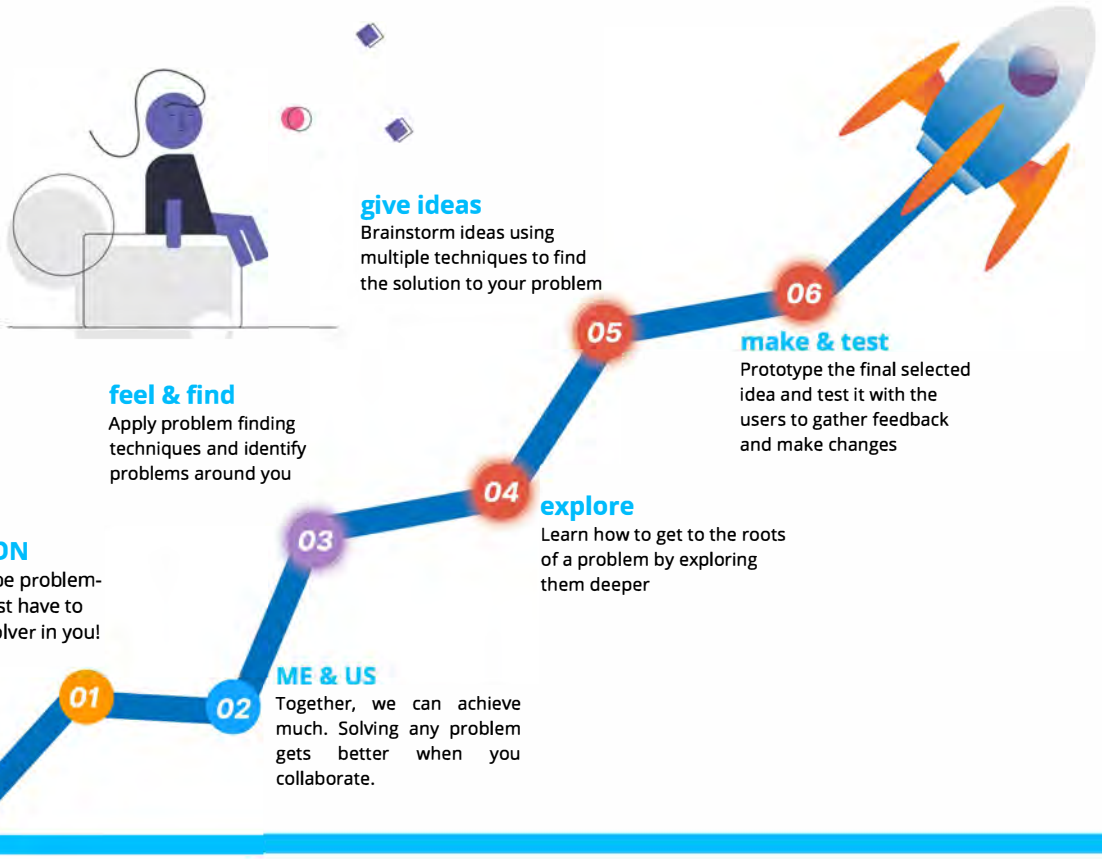
Experimental learning
PEDAGOGY & MENTORING
Not lecture-based. Students put the knowledge they gain into practice to solve a real-world problem and generate useful ideas

ENTREPRENEURIAL CHALLENGE
Apart from learning, All students have the opportunity to compete and receive seed funding and futher mentoring support to put turn their project into a reality.

The 4 pillars lead to high learning outcomes for participants, including the development of problem solving, critical thinking, creativity, collaboration, and leadership skills.

Course-modules

for students



Course components

A **team** may consist of anywhere between **2-5 students**.
While some components in the module are completed individually by each team member, others would require them to be done either both individually and/or as a team.

			Individual	Team
	VIDEOS	Every Module consists of between **2-5 videos** that trace the journey of four fictional characters who set out to solve a problem they observed in their community. Through their journey, **students learn various problem-solving techniques** that they can apply to solve a problem identified by them in their respective community/surroundings.	✓	
	REFLECTIVE QUESTIONS	Every video in all the modules end with 1-3 questions that make the viewer **reflect** on their learnings and set goals for themselves and their team. These **reflective questions** have been designed in such a way that there are no wrong answers to any of them.	✓	
	QUIZZ	Eight crucial concepts per module are picked, and the students are **quizzed** in these areas at the end of every module. In case students get an answer wrong in their first attempt, they are given an additional 2 chances per concept, after nudging them to re-cap the concept either by watching a respective video or reading an additional resource material.	✓	
	ADDITIONAL RESOURCES	**Additional reading materials** complement the concepts taught in the videos/modules. Students can use these either at the end of watching a video, during the quiz, or while they complete the worksheets in a team. These will be provided digitally, and the teacher is expected to provide printed versions to the students.	✓	✓
	WORKSHEET	After all the students in a team, individually finish watching the videos, answering the reflective questions and the quiz in a respective module, **worksheets** are unlocked. The worksheets guide the team to apply the concepts learnt in the respective module for their community project.		✓

Note: To unlock the next module, project progress is to be reported on the portal by uploading the completed worksheets of the respective module.

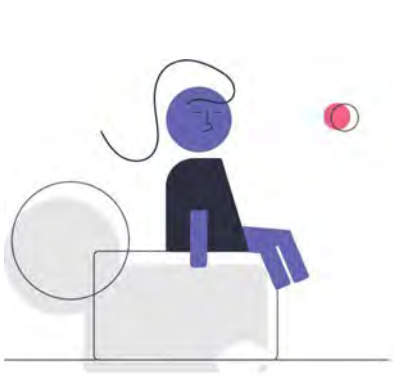
Course brief

Concepts in this course are taught through the story of four students, Aryn, Adila, Shama and Amir, who set out on a mission to solve a problem they identified in their community. They seek the help of their teacher and a mentor who is herself a social entrepreneur. The teacher and the mentor together teach them the required skills that help them solve the problem.

But what inspired them to take up this problem-solving journey?

Let us find out!

Module 1: Inspiration



INSPIRATION
Everyone can be problem-solvers. You just have to wake up the solver in you!

STORY

It was a rainy day. The teacher steps in to his classroom full of students, but seems lost in thought for sometime before he shares with his students about how concerned he sometimes gets whenever it starts to rain heavily. He further goes on to tell his students the destruction he witnessed in the country as a result of disasters such as floods.
A group of four friends, on learning that these disasters are a result of human actions, get concerned if such things will happen more often.

They visit their teacher in the staffroom later, to ask him if anything can be done about this. The teacher gets inspired by their motivation to do something and gives them examples of how small actions can make a difference and encourages them to take up such small **innovative** actions to solve problems that exist around them.
To help them understand what problems exist around, he introduces the concept of **Sustainable Development Goals (SDGs)** and asks them to identify the problems they think need attention in their community.

key-concepts

1. **Innovation**
2. **Sustainable development goals (SDGs)**

Module 1: Inspiration

Key-concepts

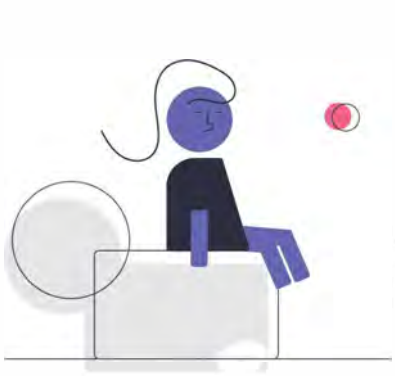
Innovation :

Any idea or solution that tries to solve the problems faced by people or planet is an innovation. When an innovation is also helpful to many people or helps the disadvantaged to lead a better life, it is called social innovation.
In this Module, social innovation is explained through the story of Basheera, who innovates a wheelchair that can rise up and rotate, thus helping to better the lives of all such differently abled people.

Sustainable Development Goals:

Our leaders around the world have identified few problems to be solved for a better society for everyone, for all individuals, communities, and societies. These Goals are called Sustainable Development Goals.
They aim to solve problems relating to hunger and poverty, lack of water, food, education, health care, and inequality in various forms and other such goals
for a better world for everyone, including nature and animals

Module 2: Me & us



ME & US
Together, we can achieve much. Solving any problem gets better when you collaborate.

Module 2: Me & Us

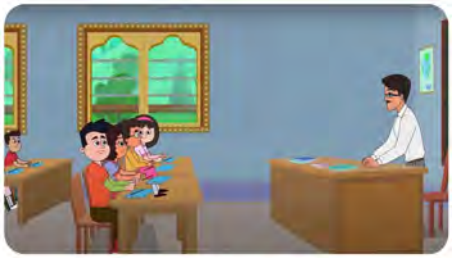
STORY

The four friends study and understand the Sustainable Development Goals and realize that there are many problems in their community that need attention. They go back to their teacher, seeking his help in understanding more about what they can do about it.

The teacher gets delighted to see his four students think about problem-solving in their community and agrees to help them.

He starts off by explaining to them the importance of working together as a team to be able to solve any problem effectively. He does this by engaging them in an activity called **'The Classroom Budget'** that teaches them the advantage of thinking as a team.

The teacher then helps the students explore and understand each other's strengths that they can take advantage of together as a team, in their quest for problem-solving.



key-concepts

1. **Team work**
2. **Team strengths**

Module 2: Me & us

Key-concepts

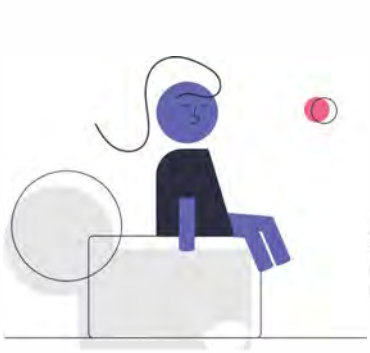
Team Work:

Working together is essential for problem-solving. Everyone is good at different things, and that makes teamwork important for a stronger and better tema. When people, resources, and thoughts come together, greater things can be achieved and getting to know each other is important to work in a team.

Team Strengths:

The best qualities of team members forms the team strength. By knowing about oneself and others in the team, it is possible to bring out the best qualities while working in a team. In a team, everyone will have skills that can be focused on - while some might be good at being a leader, some might be better at coming up with ideas or listening to others or getting additional information. It is important to learn from each other while working together as a team to bring out the best strengths.

Module 3: Feel & Find



feel & find
Apply problem finding techniques and identify problems around you

STORY

Shama, introduces the team to her elder sister, Farah, who is an entrepreneur working on solving the issue of plastic waste in the oceans, by collecting and repurposing the waste to make shoes out of them.

The team of four students are inspired by Shama's sister and seek her help in trying to identify problems that they can work on solving. Farah, teaches them how to observe for problems by challenging them to think about change they would like to see around them. She calls this challenge the **'I SEE- I WISH'**.

On the request of the teacher, Farah, who is also an alumnus of the same school that the team of four students are studying in, accepts to mentor the team in their problem-solving journey. Later, the students identify a few problems in their community with the help of other techniques taught to them by their teacher.

The students then mark the problems on a **community-map** and decide which problem to work on using a problem selection criterion known as **PEAK**.

key-concepts

1. **Problem Finding Techniques**
2. **Problem Selection Criterion —'PEAK'**

Module 3: Feel & Find

Key-concepts

Activity: I SEE -I WISH

I see - I wish is an activity used to find problems in our surrounding. Use 'I-See' statement to identity the problems that can be seen around us - 'What I see' and the 'I-Wish' statement to think how it would be better if the problem was not there - 'What I wish to see'. Ask the following questions alongside to identify a problem -

1. Is it wasting or polluting any resource on the planet?
2. Is it causing harm to any living being?
3. Is it creating difficulty or topping any members of the community from leading a better life?

Problem Finding Techniques:

These are techniques used to identify problems.

1. Observation - Seeing and watching for problems around you.
2. Experience - Thinking of problems experienced by self.
3. Interviewing - Talking to people to find problems faced by others.
4. Research - Reading, watching articles or other resources to find problems.
   Ex - News

Community-Map :

It is a sketch of the community, marking the various places where different problems are identified. A map of the community is made by marking all the important places such as schools, markets, roads etc and on it, the different places where different problems are identified, are marked. This also helps to understand where else a problem is faced and to visit these places to get additional information about the particular problem.

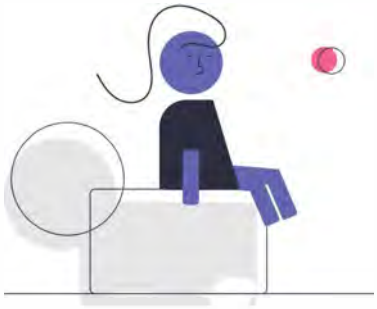
Problem Selection Criterion: peak

Peak Criteria is used to select a problem to solve from the many problems identified by rating each problem on 5 based on the following criteria. Peak stands for:

- Preference - Are all members excited about the problem?
- Effect - How badly is it affecting the people/ planet?
- Achievable - Do you feel confident about achieving a solution to the problem?
- Knowledge -How well do you know the problem?

Any of the higher scoring problems can be chosen to solve.

Module 4: Explore



04

explore

Learn how to get to the roots of a problem by exploring them deeper

STORY

The team decides to work on solving the problem of **"Textile Waste"** in their community.

They visit their mentor, Farah, at her home for guidance on what their next step can be. Farah suggests them to identify **stakeholders** that are either contributing to the problem of textile waste or know something about it. The team takes the help of their classmates to identify the stakeholders to their problem, and their teacher helps them identify the role of each of these stakeholders by putting them on a **Stakeholder-map**.

Next, the students learn to identify how these different stakeholders interact with each other by drawing connections between them in a **Mind-map**. This helps them in applying these learnings to the **Problem-tree** and **Why's-technique** to investigate and explore the deeper causes of the problem.

Once the key-causes to the problem are identified, Farah teaches them to write a clear **problem-statement** that can guide them in generating ideas for the solution.

key-concepts

1. Stakeholder-map
2. Mind-map
3. Problem-tree
4. Why's- Technique
5. Problem-statement

Module 4: Explore

key-concepts

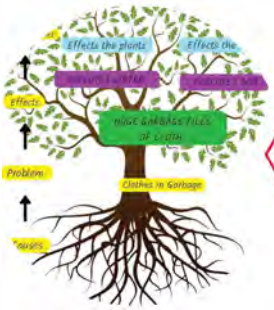
Stakeholder-Map:

Anyone who is connected to this problem in any way is called a stakeholder. They can help us understand the problem more deeply.

- Direct Stakeholders -These are the people who directly experience the problem you have identified. They are the target group for whom we are creating the solution.
- Indirect stakeholders - They might not be the people who are directly affected by the problems, but are still connected to it.
- Other Stakeholders - These can be the other people who are either solving or are trying to solve a similar problem. They will be able to connect us to experts or people who can help us solve the problem or provide resources to support our solution.

Mind-Map:

The mind map is used to find out how the different stakeholders identified are interacting with each other in the community in relation to the problem. This can give us more in-depth understanding of the problem. A mind-map will include people, places causing the problems, affected by it or contributing to it and how they are related to each other.
Understanding how stakeholders contributing to the problem and interact with each other can be useful to understand the problem.



Problem-Tree:

Problem Tree helps you arrange information easily so that you can understand the information about a problem. The problem identified is the visible trunk of the tree. The leaves and fruits of the tree that are easily visible to us are the effects and long-term effect of the problem. The roots are the reason a tree survives and grows. The causes of a problem are the reason a problem grows and are represented at the roots.

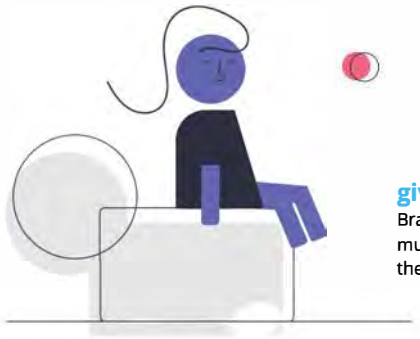
Why's-technique:

Every cause identified in the Problem Tree will have more causes. You can only solve a problem by solving the Final root cause for a problem. The 'Why's technique' is used to find this Final root cause. This is done by picking any cause from the problem tree and repeatedly asking 'Why' and answering it until you reach the final cause. This can be repeated as many times as needed.

Problem-Statement :

A Problem Statement is a statement that clearly explains the problem including the current state of a problem, its root causes and effects, and what desired state you are trying to achieve with your solution. It reminds us of our goal while we are creating solutions. It can be of the following format -
"(CURRENT STATE) is a problem caused by (ROOT CAUSES). This can lead to (EFFECT). (DESIRED STATE) will help us address the problem".

Module 5: Give Ideas



give ideas
Brainstorm ideas using multiple techniques to find the solution to your problem

05

STORY

The team is now clear about the goal their solution should be able to achieve.

As always, the team sits with their mentor, Farah, to discuss how to come up with a good solution that can achieve their goal. Farah, ignites the **creativity** in the team by engaging them in an activity that teaches them not to be afraid of thinking different. This builds confidence in the team, who further learn about different approaches to solve a problem by judging the **type of solution** that better addresses the causes.

The students then come up with a slew of solutions after applying various **Ideation techniques** taught to them by their mentor by engaging them in different fun activities.

The team then uses a **solution selection criterion-FUSE** to pick the best ideas and shares them with their classmates and a few stakeholders to get their feedback. Finally, they improve their solution by modifying their idea based on the feedback they gather.

key-concepts

1. **Creativity**
2. **Types of solutions**
3. **Idea generating techniques**
4. **Solution selection criterion- FUSE**

Module 5: Give Ideas

key-concepts

Creativity:

Best solutions come when we think differently. To be creative means thinking in new ways like never before. Ideas are the most creative when one is joyful and can think really differently and come up with many ideas. Enjoying is important because creativity happens when you are not afraid to think. So, any thinking techniques we use to solve a problem will be successful only if we can think without the fear of failure.

Types of Solutions:

Product-based solutions - Solution where you make something like a product that people can see, touch and used to solve a problem. Ex- spectacles to correct bad eyesight.

Process-based solutions - A set of clear instructions/steps for people to follow that can solve problems. Ex- boiling water to prevent typhoid, awareness drive.

Idea Generating Techniques:

These are different ways to think of different ideas.

- First Idea-Crazy Idea - Note down ideas that come first to your mind without thinking too much.
- Open Brainstorming - Discuss with others and improve and generate more ideas.
- What-If - Give a direction to think using 'What if' condition, you can get different ideas. Ex- What if the solution is a person?
- Role storming - Think like a stakeholder, and you might be able to think like them and find new ideas.

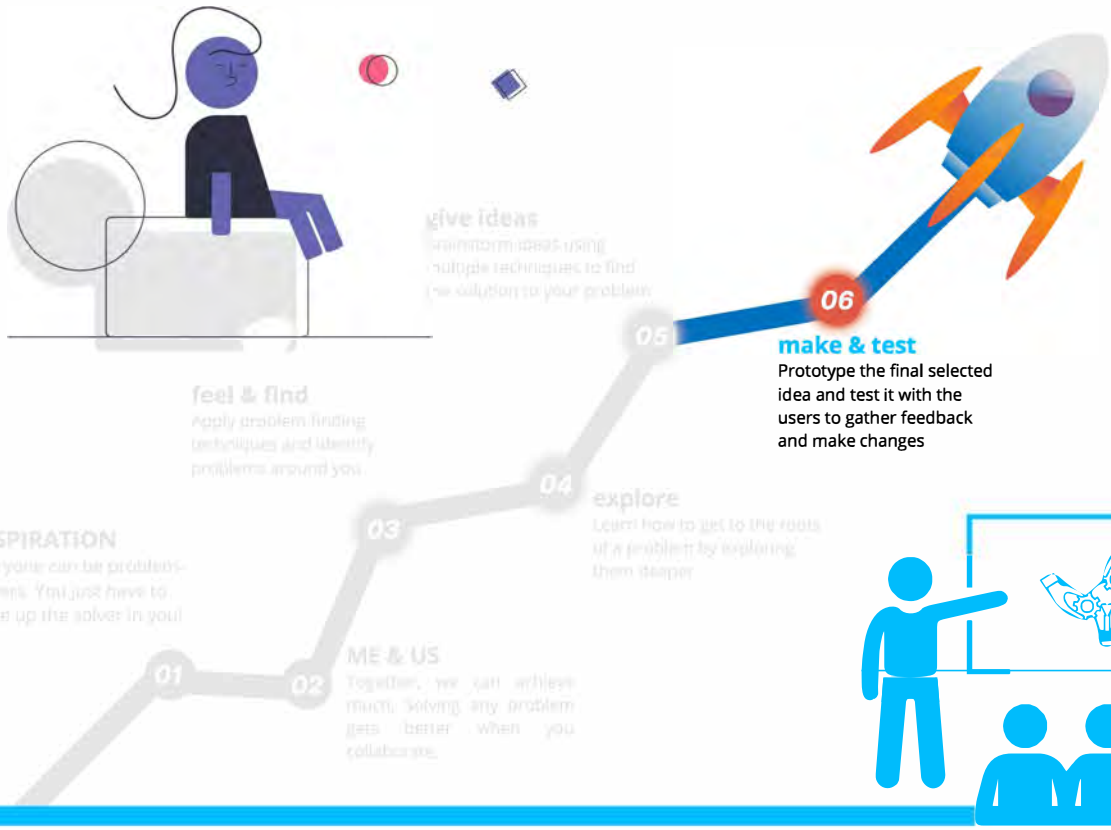
Solution Selection criterion: FUSE

FUSE Criteria is used to select the best idea to solve a problem from the many ideas you find by rating them on 5 based on the following criteria. FUSE stands for:

- Feasible - How efficiently can it be implemented? (time, cost, materials required)
- Useful-Will users find it useful?
- Sustainable - Will the solution last long or is not harmful to the environment?
- Effective - Is it helping achieve the goal in the problem statement?

Any of the higher scoring ideas can be chosen as your solution.

Module 6: Make & Test



STORY

The next day, Farah stops by the school to pick her sister, Shama, on her way home. The team engages with Farah in a casual conversation, which reminds Farah of her days in school. As the conversation builds up, Farah senses an opportunity to teach the team about an important step in the problem-solving process: **Prototyping a solution**. She narrates from her experience how missing this step proved costly for her when she was working on her solution to the problem of plastic waste. She goes on to teach them various prototyping methods, after which the team decides on a prototyping method for their testing of their idea.

After **resourcing** for materials needed, they create a prototype which they test it with the stakeholders for their feedback before making further refinements to their final idea.

Finally, the team celebrates their success by thanking their classmates and is overjoyed to learn that they have inspired a few of them to take up problem-solving in their communities.

key-concepts

1. **Prototyping Methods**
2. Resourcing

Module 6: Make & Test

key-concepts

Prototyping Method :

After Decided on a solution, it is important to make a sample design of the solution and test it with some users to get their feedback. These sample designs that help us see how a solution works are called prototypes.

1: Physical Prototype

Physical prototype is made when real materials are affordable and available. This is used when you want to test the usage and function with users like comfort, ease to handle. It can be used when prototyping can be made as per real size or function.

Prototyping Method 2: Mock-Up

In this method you use replacement materials like cardboard, clay etc as the real material are expensive or not easily available. It is helpful in showing the look, design, concept, and style of an idea to the users when it is not necessary to test usage. It can be used when prototyping cannot be made as per real size or function. (Ex - real idea may be big - design of apartments)

Prototyping Method 3: Role-Play

In Role-Play, a drama is performed in front of the people to act out the solution and to make them understand the solution. It can be used for Product as well as Process-based solutions when the steps involved in the solution need to be explained.

Prototyping Method 4: Storyboard

In storyboarding, the solution is explained to people in the form of a story in a comic book. The story shows all the actions that are a part of the process from start to end. However, it can be used for Product as well as Process-based solutions when the steps involved in the solution need to be explained.

Module 6: Make & Test

key-concepts

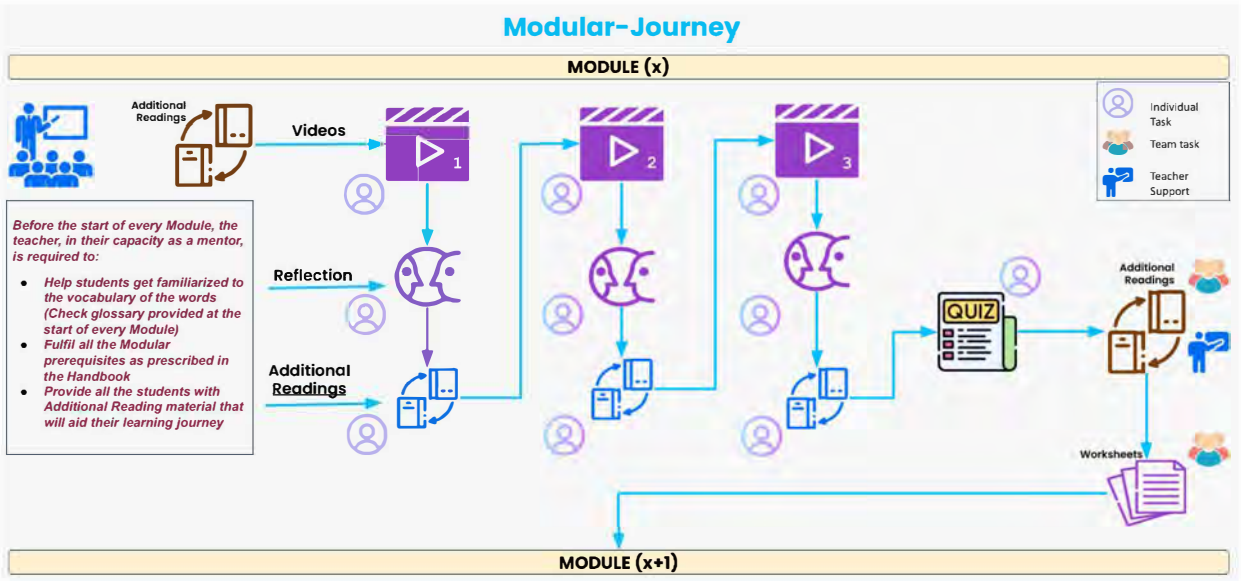
Prototyping Method 5: Paper prototype

In Paper Prototype method, a drawing of the solution is made on a white paper with details and features to explain the solution. It is shown to the users to get feedback.

Resourcing:

Resourcing is the process of identifying the materials that will be required to build the prototype of the solution. It also involves identifying whose support will be needed to make it in terms of skills, permission etc. Identifying the people whose support is needed is important because good ideas sometimes fail without proper support. Resourcing helps to plan and collect things accordingly to make a prototype. It also helps to distribute responsibilities among the team.

How does the course play out for Students?



- While the reflective questions are answered after each video, the other components (Quiz and Worksheets) are answered at the end of each module.
- Approximately 25% of the journey is online (videos, reflective questions, quizzes)
- Approximately 75% of the journey is offline (application of learning in the community using the worksheets)

Teacher's Handbook

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A practical guide to implementing the unisolve curriculum in schools.