



THE IDEAS STAGE

TEACHER'S NOTES

Learning Objectives:

- Create a list of big ideas that address the problem defined in The Problem Stage.
- Identify one idea that can become a practical solution.
- Summarise the solution in a clear and compelling way.

In this stage students will take their Problem Statement and use it to come up with lots of creative ideas. Then you will discuss which ideas have the potential to be real-life solutions.

Step 1. Generating BIG ideas

In this step you will show students how to generate lots of creative ideas to tackle your Problem Statement.

Before you start, explain that you are not trying to find a serious solution yet. This activity is all about students using their natural creativity to think about the problem in new ways and enjoying the process of letting their mind run free.

Set the ambition of coming up with as many different ideas as possible. There is no such thing as a bad idea at this stage, so no one should be afraid to say something unusual. That's the point!

Here are 5 tips for running ideas generating activities:

1. Move quickly and come up with as many ideas as possible. If you get stuck, try a new activity. You can spend only 5 minutes on one activity to keep it moving and don't worry if one activity doesn't work. Try another.
2. Ask questions and encourage students to ask questions too. Work in small groups so the conversation can flow. An ideal group size is 6-8 students working together.
3. Capture everything! Write or draw all your ideas so nothing is lost. Keep thinking of new ideas - you never know when a great idea will come!
4. Enjoy it! Be encouraging and add to each other's ideas by starting with the words "yes and...". If you find yourself or your students saying "but" or "no" remind everyone that this is about thinking without limits!
5. Go outside! Taking students into new environments can open up new ways of thinking.



Choose one of the activities below. You are going to use this activity to generate lots of ideas to solve your Problem Statement.

Explain the activity to students and give some examples of your own, so your students don't feel embarrassed. You could start with a silly problem, to show students how it's done.

- *You need to get to school without ever touching the ground. How could you do it?*
- *You need to get a message to a friend in a different country, but you don't have a phone or computer. How could you do it?*

Then remind students of your Problem Statement and ask them to come up with as many ideas as possible, the bigger the better!

- **Imaginary worlds:**
 - *Imagine if you were a superhero! What powers would you need to tackle this problem? What would you do if you could fly? Or become invisible? Or teleport? Ask students to think of superpowers, and then use those powers to solve your problem.*
- **Different perspectives:**
 - *What if you were a car mechanic? Or a dancer? Or a teacher? Think about what skills and abilities those people have. How could you use your skills to solve the problem? Think beyond the obvious answers. Some very creative ideas can arise when you combine a problem with skills that you wouldn't expect to be able to help.*
- **Random Links:**
 - *Random links often generate ideas which are completely unexpected! Ask students to write a list of any random things you can think of. For example: a rock, some make-up, a pair of trainers and the Empire State building. Anything goes! Then begin brainstorming ideas that could link the objects to your problem. What about a lipstick that can block air pollution from entering your mouth, or a giant wind turbine on the Empire State Building?*
- **How? How? How?**
 - *Start with a solution to your problem. How could you solve it? It could be any way you can think of. It doesn't need to be realistic or even possible. Then ask how you could do that. Again, any answer is allowed. Then ask "how?" again! This will help you break your problem down into lots of smaller problems.*
- **Flip it!**
 - *What if we wanted to make more of the problem - what would we do? How would we do it? For example, what if you wanted to create more air*



pollution instead of less. You could make everyone travel by car, or create giant pollution factories to pump smoke into the air. This will help you identify the causes of your problem, in a fun way. Then when you have some ideas, flip them! What if we said no one could travel by car? Or made factories to suck in the smoke instead of pump it out?

At the end of this process, you should have lots of ideas written down. Some of them will be unexpected, unrealistic and even impossible! Celebrate the creativity you students have shown.

Ask students to share some of their favourite ideas. As you read and discuss them, ask students if they can think of any ways to make those ideas even better by starting with the words “Yes and....”

Step 2. From ideas to solutions

In this step your students will take all their creative ideas and start thinking about how to turn them into real solutions. Here are two techniques to take your ideas and see how they could be applied in the real world.

Decision Tree:

This is a great way to sort through your ideas. Start at the top of the tree and ask your students to answer each question one by one. Each time you answer yes or no, follow the branch of the Decision Tree which matches your answer.

- Does it exist already?
- Would it harm people?
- Would it harm the planet?
- Would it make a difference?
- Could it be possible?

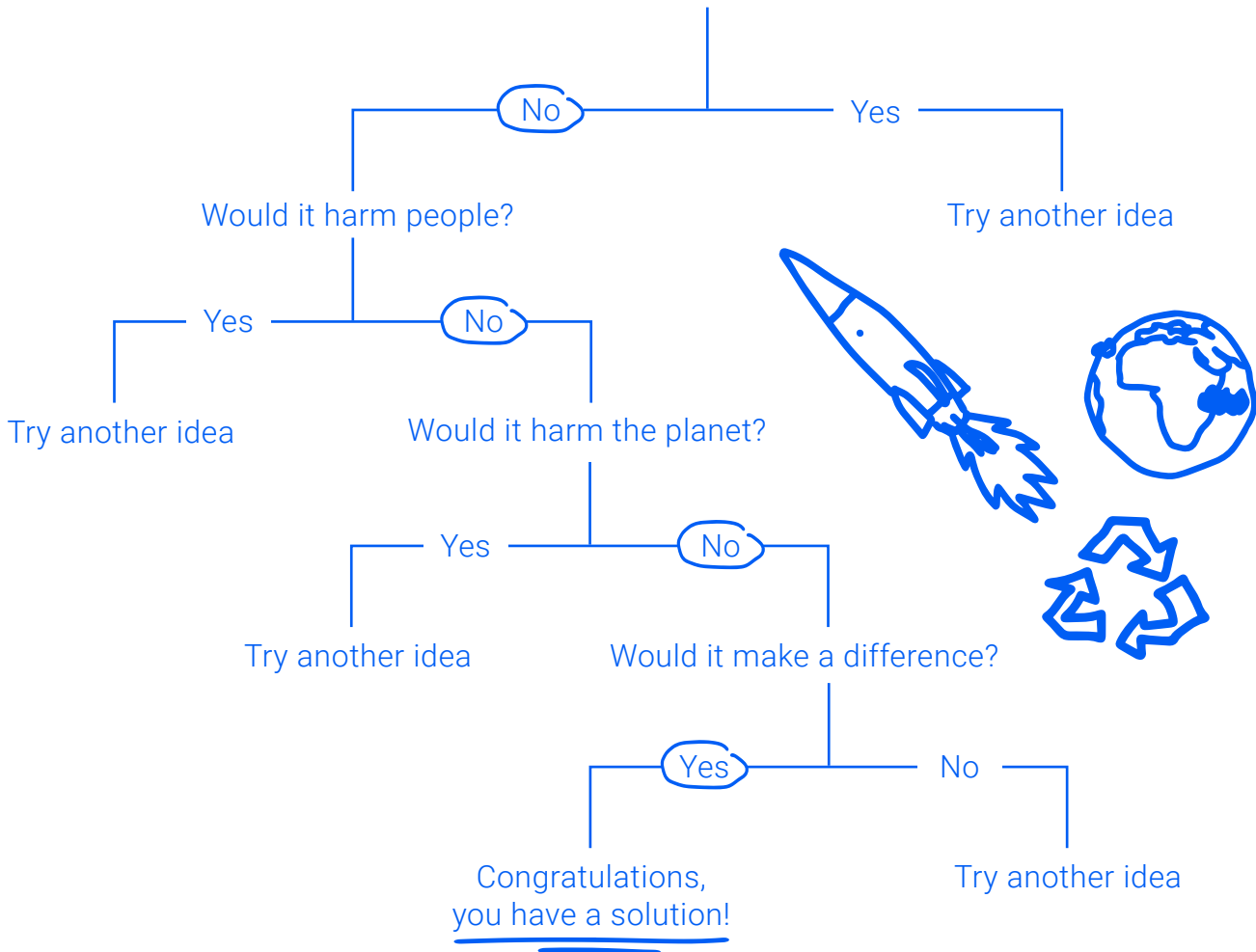
You might want to just pick a few of your favourite ideas to save time. The ideas that make it to the end of the tree will be the most original, practical and sustainable solutions.

Don't forget, your students might find ways to improve their ideas as you go through the Decision Tree. This is an important part of the process - taking big ideas and finding ways to make them a reality. If you hit a dead end, take time to discuss how your idea could be improved. For example, you might think of a way to make an impossible idea possible!

At the end of this process you should have at least one idea that works. If so, well done! If you have more than one you can go on to Strengths and Weaknesses below, or take a vote and skip straight to step 3.



Does it exist already?



If you don't have ideas that made it to the end of the tree, you could:

- Take one of the impossible ideas and think about how it could be made possible
- Take one that is harmful and see if it could be made harmless
- Take one of the ideas that won't make a difference and see how you could increase the impact
- Take one of the ideas that does exist, but use it in a new situation.

Strengths and weaknesses

To help identify which idea will work best, you can discuss their strengths and weaknesses. Write two headings:

- **Strengths:** What is good about this idea? Why do you like it? Would it be impactful?
- **Weaknesses:** What is bad about this idea? Do you have any worries?



For more confident students you could add two more headings.

- **Opportunities:** Can you think of exciting ways to make this idea happen?
- **Threats:** What could stop this idea from happening?

Take one idea and discuss each heading. Then repeat this with your other ideas. At the end of the process, you can vote on your favourite, ready for the next step.



Strengths

What is good about this idea?
Why do you like it?
Would it be impactful?



Weaknesses

What is bad about this idea?
Do you have any worries?



Opportunities

Can you think of exciting ways
to make this idea happen?



Threats

What could stop this idea
from happening?



Step 3. Your solution

When you have chosen one idea, it's time to write your **Solution Summary**. Remind students that this one solution is the result of all their brilliant creative ideas.

The **Solution Summary** should explain to someone new exactly what your solution is, in just a few sentences. Ask students to imagine they only had 2 minutes to explain their solution to a stranger. How could they explain it as clearly and simply as possible?

What is your Problem Statement?

1. What is your solution?
2. What effect will this have?
3. Then in The Solution Stage you will choose a way to share your idea with others.

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SOLUTION SUMMARY

PROBLEM

What is your Problem Statement?

SOLUTION



What is your solution?



What effect will this have?



SOLUTION SUMMARY

PROBLEM

What is your Problem Statement?

- **What** is the problem? Traffic in our neighbourhood is creating lots of air pollution.
- **Where** is the problem occurring? On the main roads around our school.
- **Who** is it affecting? Everyone who is breathing the polluted air, including the school children, people who live nearby and animals.
- **Why** is it important to solve this problem? People are breathing polluted air, which could cause them to have serious health problems. The pollution is also releasing more carbon dioxide into the atmosphere, which is damaging our climate.

SOLUTION



What is your solution?

- Our solution is to reduce the amount of traffic in the neighbourhood by providing a 'Green Bus' to collect students on the way to school, reducing the number of cars that come to the school.
- The bus will be powered by renewable energy and will be painted bright green! We will pay for it by fundraising from local residents and asking the local government to match whatever money is raised by the community.
- We will invite local people to come together for the launch of the bus, to raise awareness of the issue of air pollution. In the future we would campaign for the government to provide more local buses that use renewable energy.



What effect will this have?

With fewer cars travelling to and from the school, the air pollution will be reduced. There will be less greenhouse gasses released into the atmosphere, which will help to reduce climate change, and it will make the neighbourhood safer and quieter for everyone who lives there.