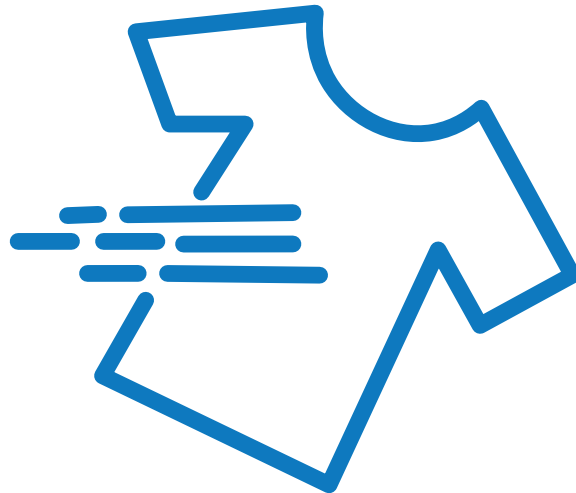


GREEN-SCHOOL PROJECTS



FAST FASHION





1. Fashion trends

To keep up with changing fashion trends, an enormous amount of clothes is produced every year – 100 billion items to be precise. That's almost 14 items for every human being on the planet. This results in a huge amount of textile waste. It is estimated that 85% of all textiles are thrown away every year, from clothes that lose their quality to clothes that are just not considered trendy anymore.



2. Water Use

Approximately 93 billion cubic metres of water is being used in the fast fashion industry every year. Every piece of clothing is made from some kind of fabric. Some clothes are made from natural fibres such as cotton or wool, which require an enormous amount of water to produce. For example, more than 20,000 litres of water are needed to harvest just one kilogram of cotton. Water is also used in other stages of clothing production, such as the dyeing of fabrics. It can take around 7,000 litres of water to produce one pair of denim jeans and 2,700 litres to produce a cotton shirt. The fashion industry is the second largest consumer of clean water (after agriculture) in the world.



3. Microplastics

Around 60% of clothes are made with plastic-based materials such as polyester or nylon. When we wash these types of clothes, they release microplastics which eventually make their way into rivers and seas. Some experts estimate that every year, 500,000 tons of tiny plastic particles are released into the ocean from our washing machines — the equivalent of 50 billion plastic bottles!



4. Poor working conditions

Fast fashion is made by factory workers in developing countries like China and India. Often, working conditions are poor – meaning that there are low wages, poor safety rules, and long working hours. Fast fashion companies prioritise making money over workers' health and well-being. A study by the Clean Clothes Campaign discovered that in countries such as China, India, Bangladesh and Malaysia, the minimum wage was sometimes as much as five times lower than the 'living wage' needed to be able to afford food, rent, healthcare and education. Many workers are forced to work 14 to 16 hours a day, seven days a week in order to meet their deadlines and they do not earn enough to be able to afford to refuse working overtime.



5. Fabric Waste

What happens to clothes in landfills? 100% cotton clothing can break down as quickly as a week. However, clothes made of plastic-based materials do not break down easily. They may take up to 200 years to decompose! For this reason, it is important to keep them out of our landfills.



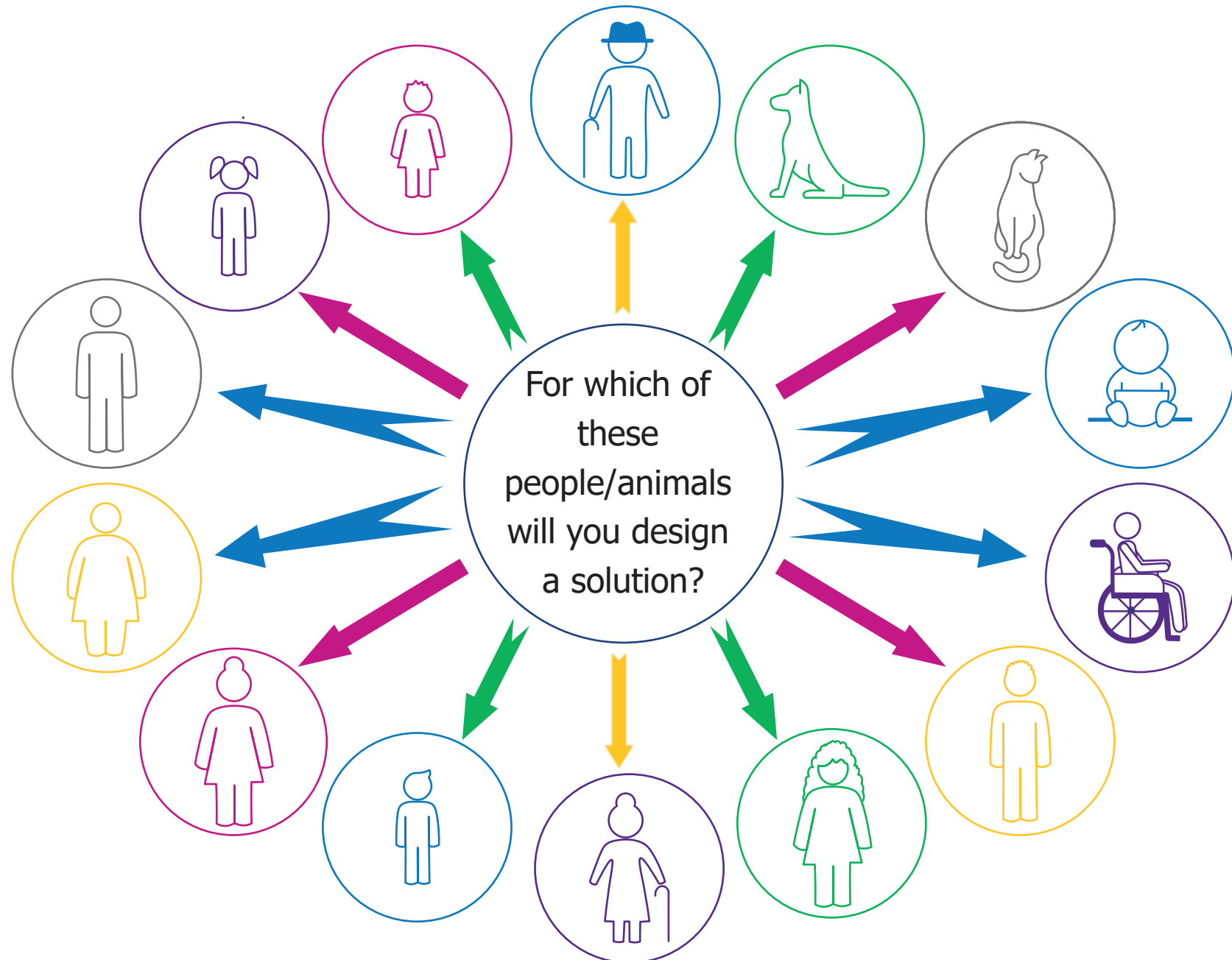
6. Environmental impacts

Clothing production also uses electricity and produces waste gases and chemicals, while transporting the clothes around the world creates still more pollution. Most of the 'fast fashion' brands sold around the world are made in China, India and Bangladesh, where labour is cheap. These countries still use coal to generate the electricity that powers their factories, meaning that huge amounts of carbon dioxide gets pumped into the atmosphere, contributing to climate change. If fast fashion were a country, its carbon emissions would rank almost as high as the entire European continent. The emissions come not only from the manufacturing process but also from the shipment of clothing around the world, as well as their disposal.

Which character are we solving the problem for?

Write down the problem
you have decided to fix

You and your team can
now have a look at all
the different people, and
possibly animals, that
you can solve a problem
for. Have a read over all
the different stories and
various problems and
decide amongst your
team which character
you are going to design
a solution for.
Have fun!



The characters stories



Hey,
I am Zofia! I am 12 years old. I grew up on a farm and I love being outside and getting mucky. My clothes need to be sturdy as I climb lots of trees and do lots of gardening. I need to wash my clothes A LOT! I do worry about water use!



Hello! I am Adaeze and I am 10, I love fashion! Me and my mum love clothes shopping. My wardrobe is too small for all my clothes, so I often send clothes to the charity bins, but I don't really know where they go then! Do you?



Hello dear, I am Seamus, I am 76 years old. I love dressing up in a nice woollen suit. I would love to find a suit that is made of lighter materials for summer. I worry about microplastics coming off my clothes when I wash them can the material be natural!



Woof! I am scruffy the German Sheppard. My mum and dad like dressing me up in fancy 'dog' clothes. Grrrumpss as if a dog needs clothes! Can you help me to make sure that they buy me sustainable clothes at least



Miaow, my name is Bella. I am a spoiled cat, I love cuddling in blankets, on my mum's bed and on the couch. As long as I am warm I am happy. My mum doesn't like me shedding my fur everywhere though. I don't care! But can you help her anyway? purrrrrrr



Hi I am Jim, I am 56 years old, and I have no interest in fashion at all. My wife buys my clothes for me mostly in dunnes stores or in penny's. I just want to keep warm in winter and cool in summer. I don't like to waste clothes!



Nǐ hǎo, my name is Keiko and I am 32 years old. We have a beautiful tradition in China of wearing a Kimono that we keep in our families for a very long time. I would love to teach our mending and embroidery techniques here in Ireland.



Hey I am Alex, I am 16 years old and as you can see I use a wheelchair. My clothes need to be comfortable and easy to put on but I also like to be trendy. I find it hard to find trendy comfy clothing, can you help me?



I am Poppy, and I am only little. My Mommy is super nice to me. She wants to be environmentally friendly as well and buy reusable nappies for me. But it is so much work to clean them, can you help my Mommy?



Hello, I am Jean and I am 25 years old. I feel very anxious about climate change and the problems of the fast fashion industry. It is so unfair! I feel so overwhelmed and think that my climate actions on fast fashion will have no impact, what do you think I should do?



Goodmorning, I am Bernice. As you see I have difficulty walking so I have to buy special shoes so I feel steady on my feet. However, all the shoes that are suitable are made from leather and I don't like it. I love animals and want to be sustainable too, can you help me?



Hi I am Adam, I am 8, and I love soccer! I love wearing the official soccer kits of my team, they are soooo cool. But they are also very expensive, and my team changes their kit so often! My Dad says he can't afford to buy me the kit this year! Now what?



Hello, I am Gloria, I am 45 years old. I have four children and they all go to the local primary school. The school is very strict on uniforms, but they are so expensive. I can hardly afford to buy the uniform for all my children. Can you come up with a solution for me?



Hi I am Artem, I am 12 years old. I had to flee my country because of the war and had to leave all my cool clothes behind! I am very happy here but I don't have any trendy clothes! And we can't really afford to buy them. Can you help me to get trendy clothes?

Who is your character?

Your character's name:

Their age is:

Colour of their

Hair :

Eyes :

What type of clothing
do they like to wear?

Where do they live?

Who do they live with?

Before you start thinking of a solution to the problem you need to know who you are designing your solution for! You and your team are now going to try and understand who your user is by deciding what their personality is, what they look like, what they like and dislike, where they live and even who they live with. Use your imagination to make your user as real as possible.

Your character's personality

outgoing

shy

funny

serious

creative

not at all creative

light-hearted

moody



Likes



Dislikes

Character Profile Sketch



What's your problem?

Tell your character's story and create your problem statement

Describe your character's appearance

I am

I look like

Describe your character's likes and dislikes

I like

I don't like

Describe a day in your character's life

My favorite part of the day is

My least favorite part is

Describe your character's problem

As.....(your character)
my problem is

Describe why the character can't
solve the problem

The barrier to solving my problem is

Describe how your character will feel
when there is a solution

I feel

This exercise will help you to come with as many different initial ideas for possible solutions to your problem. Work together as a team and write down a solution for each of the letters of the alphabet. Keep your problem statement in mind! You have 5 minutes to complete it! Ready...Set...Go....

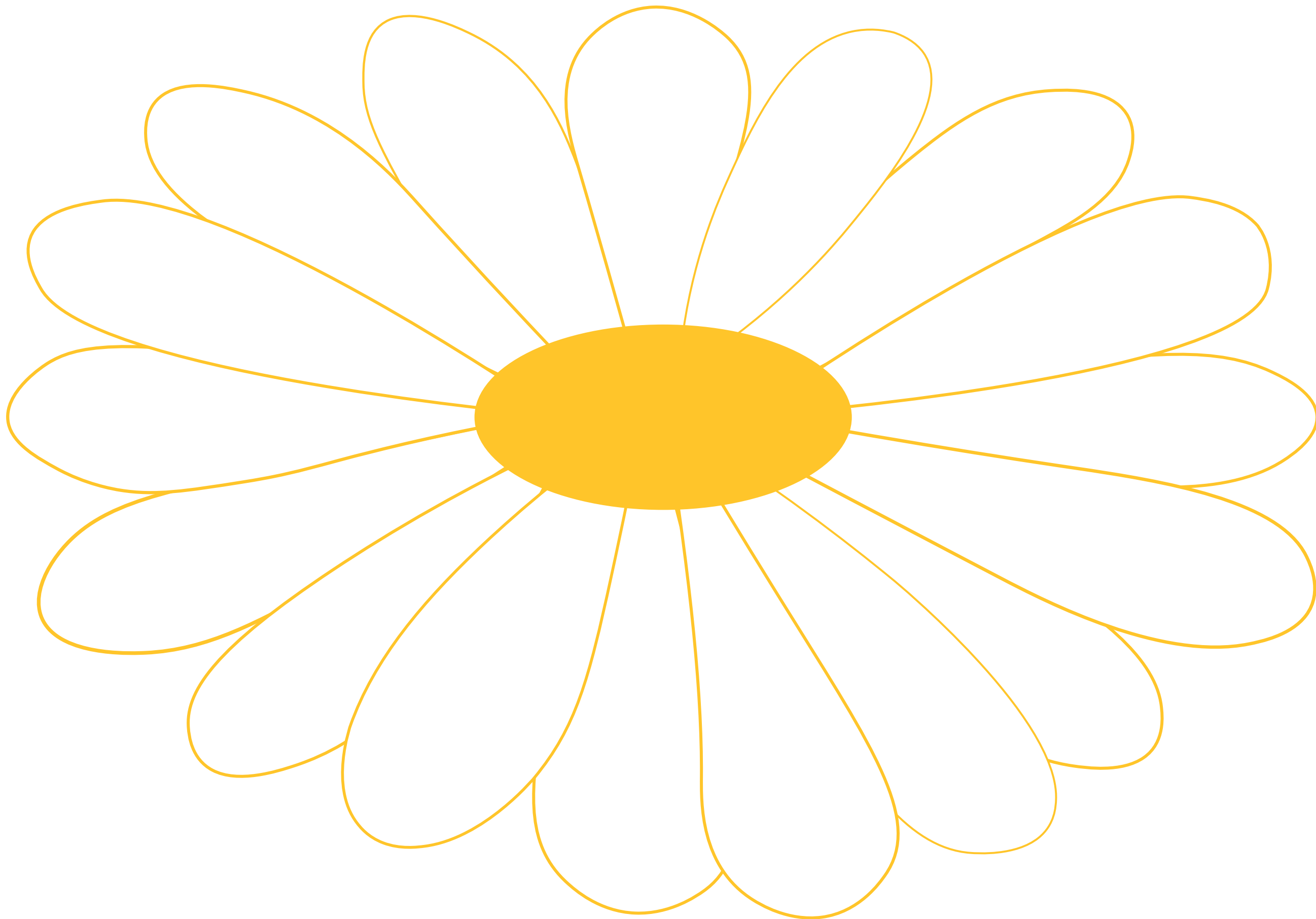
			
			
			
			
			
			
			
			
			

FLOWER POWER

Now that you have made a start to think of your solutions for your character through the alphabet activity you need to expand your brain a bit further and fill in the petals of the flower with more ideas.

Keep your problem statement in mind the whole time, so write it down at the top of the page.

Write down one idea in each of the petals and fill the flower as quickly as you can. You have ten minutes for this exercise.



All your ideas for solutions should be gathered and displayed on a wall, or a table, and your team now gets 10 minutes to look at, and read, all the individual ideas.

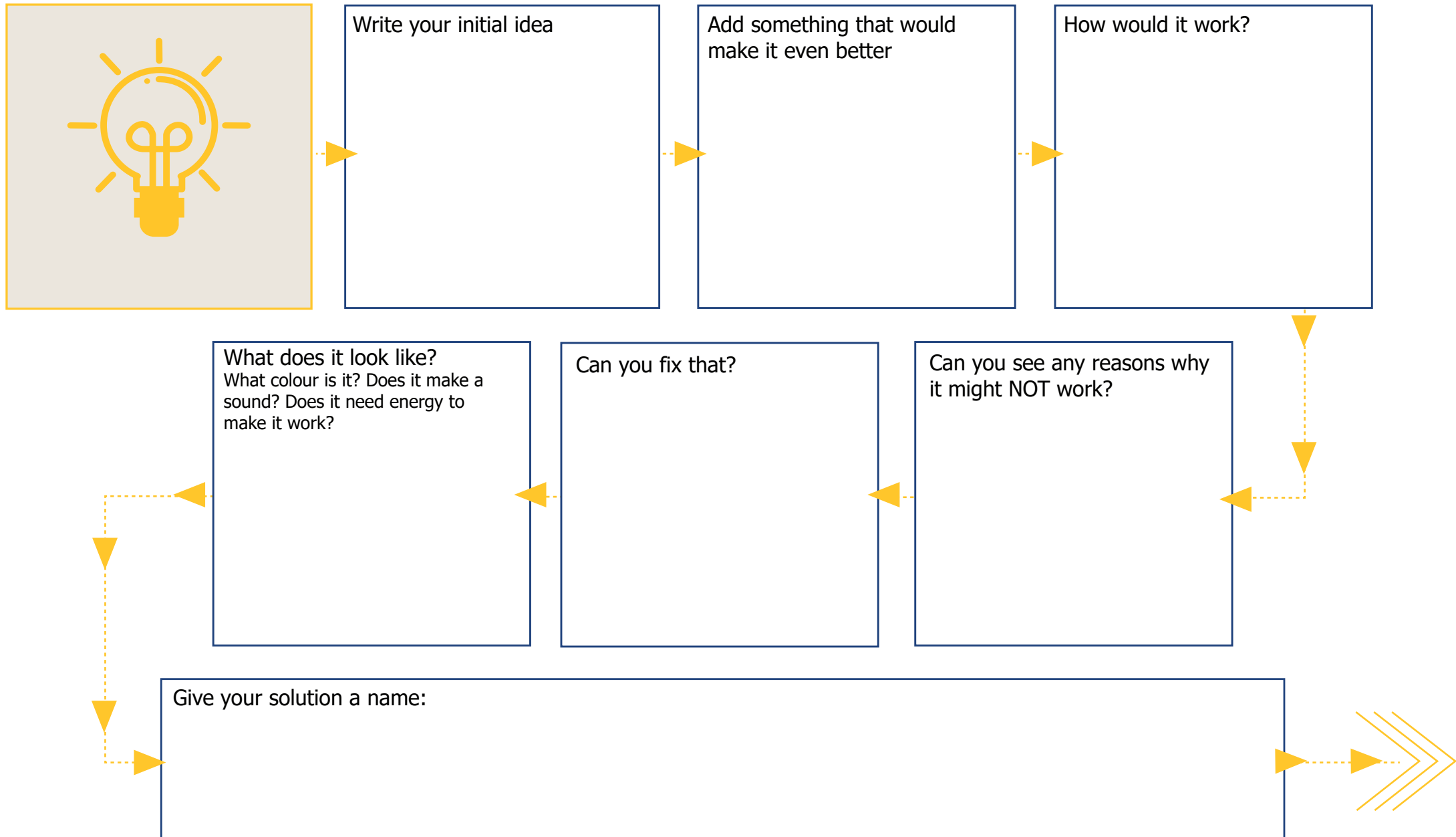
Pick your favorite, and decide as a team which idea you will bring forward to design your ultimate solution.

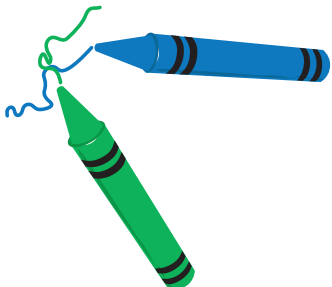
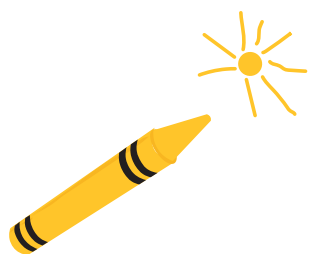
If it is difficult to pick one idea, you might be able to combine two or three different ideas.



Idea brainwriting

Co-create your final solution by following the steps







Sketching and Prototyping your invention

WHAT IS A PROTOTYPE

A prototype is an early version of a product or idea that is used to test if your idea will work and how effective it might be as a solution to the problem you decided to fix. By building and then testing different types of a new product or campaign, inventors can ensure that what they have invented will work in real life. Prototypes are used to see how your idea works and it helps you see if there are any problems that you didn't think of while you were coming up with your amazing idea. Prototypes are also a great way to let other people test out your idea before you spend lots of money making lots of them. At this stage in the process you can still go back and change things that you don't like or that don't work now you have the physical thing to play around with. See below for some examples of different type of prototypes that were built by students just like you.



An underground transport system for safer towns and cities



Robotic fish that go into the ocean to collect plastic pollution. The plastic waste is returned to a central collection system where it is recycled



A hover craft that identifies, through heat sensors, where there are forest fires. It carries large containers of water to out the fires.



A large scale awareness campaign about gender equality which includes information booklets, slogans and action examples, on the importance of equality for all.



Traffic lights with motion sensors to make them more efficient

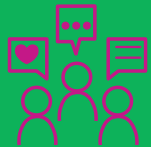


SKETCHING



You can use many different materials to build your prototype; you might use some of the contents from your recycling bin, or you could use old toys, lego bricks, old clothing, video and pictures or even just paper. The most important part is to start thinking about how your prototype might look in real life.

Sketching out your design is therefore the first step towards building your prototype. Use the sketching template to start your work and get ready to present your amazing solutions to the world!



STEP 1



Introduction

Very often forgotten, but make sure you introduce who you are and why you are here!

Tell the audience your names and, if you have a team name mention that too!

If you can do this part in a fun way you make even more of an impression.

Show off! It is allowed, and even helps to get the audience's attention.



STEP 2



The Problem

Every solution starts with a problem.

Try and explain your problem to the audience by giving real-life examples of why this is a problem.

Do try and use images, such as the drawing you created, or a picture you found on-line.

This will help your audience to understand why it is a problem.



STEP 3



The Solution

This is the most important part of the presentation.

You are trying to make the audience understand why you need their help and why this is the best solution possible to the problem you found.

Talk about your solution in such a way that they will find it easy to help you and pick your idea over anyone else's.