



Less plastic in the waste bin

Plastic is a huge problem for the whole world! It decomposes very slowly and accumulates in the seas, forests and on the landfills. For this reason, your aim is to reduce the amount of plastic you throw away. Using mathematics to calculate and prove your ideas. Talk about your ideas and then, if possible, try them out.



STAGE 1



Empathising & identifying needs

Think about your needs and the needs of the group, ask questions and work out guidelines for the next steps

At this stage:

What kind of waste do you put in the trash every day? How much plastic does it contain? Think about it and write down your ideas about how plastic ends up on the landfill. Is it mostly plastic packaging? Plastic bottles? Or maybe you use disposable plastic plates, cups, straws or cutlery? What do you use to wrap your lunch into?



STAGE 2



Analysing needs & resources

Think about the resources you have and what you need to finish your task

At this stage:

Try to think how to check how much plastic per day you throw away. Do you have a separate waste bin for plastic in your classroom? If so, decide how big it is. If not, estimate the amount of plastic using your observations from Stage 1. Make some preliminary assumptions for further work:

- we will estimate the amount of plastic based on: (e.g. the number of units, cubic centimetres, grams),
- we will reduce the amount of plastic by,
- within (a week, month).



STAGE 5



Testing

Test the selected ideas

At this stage:

Present your ideas to the whole class and jointly decide which of them best addresses your needs and assumptions. If possible, implement some of the ideas. After the trial period, check whether your estimates were accurate, i.e. whether you started to produce less plastic waste and how much of a change it was.

Maybe your ideas can be implemented at the level of the whole school? Calculate by how much you could reduce plastic waste per week or month if everyone from the school followed your method.

Congratulations! You have shown that you can reduce the amount of plastic waste you produce and that you truly care about the planet!



STAGE 4



Prototyping

With the use of the available resources prepare sample projects based on your ideas

At this stage:

Decide which ways of reducing plastic waste you would like to try out. Determine which of the ideas can be implemented and is in line with your assumptions at the same time. Make precise calculations to confirm that your goal can be achieved with the chosen method. Plan specific steps to be undertaken by the group.



STAGE 3



Generating ideas

Organise a brainstorming session and find solutions that meet the needs of the group

At this stage:

Think about the ways in which you can reduce plastic waste disposal in your class. For instance, you can calculate by how much the volume of plastic packaging (e.g. plastic bottles) will change if you squash them. Think about other ways of reducing, or even eliminating plastic from your life.

