



# MONTHLY CHALLENGE

## ENGINEERING - PRIMARY SCHOOL

'Every year about 10 million tons of plastic is dumped into our oceans. That's as much as a truckload of plastic waste every minute. Everything from plastic bottles and bags to microbeads end up in our oceans. This creates a swamp of large and small plastic pieces that is mistaken for food by marine animals. We can help put an end to plastic pollution by choosing not to use single use plastic items, such as plastic bags and straws. Single use plastic items are one of the biggest contributors to ocean pollution.

### ACCORDING TO PLASTIC OCEANS:

- Packaging accounts for just over 40% of total plastic usage.
- Annually approximately 500 billion plastic bags are used worldwide. More than 1 million bags are used every minute.
- Over the last 10 years we have produced more plastic than during the whole of the last century.
- Plastic takes 500 years to break down. Once it enters our environment, it stays there.'

[Taken from: [www.westerncape.gov.za/general-publication/plastic-pollution](http://www.westerncape.gov.za/general-publication/plastic-pollution)]

**QUESTION: DESIGN A PLASTIC BOTTLE RECYCLING BIN THAT CAN BE BUILT FOR YOUR SCHOOL.**

### You will need to:

1. Submit a labelled sketch of your design showing what each part is made of and label what each of the parts will be used for.
2. Show how many plastic bottles can be added to your bin, please add this to the sketch.
3. State what you are going to do with the plastic bottles afterwards - that should be part of the sketch as well.

### INSTRUCTIONS:

- Due date for you to submit your answer on the Google form is by latest 17 April 2023.
- We will announce the Provincial winner for each challenge later in April.
- Solutions will be published on our website at this link - [www.ctsc.org.za/stem-clubs/](http://www.ctsc.org.za/stem-clubs/)

Please type this link into your Google search bar to answer

**<https://forms.gle/sqGxNagpCroWcUBv7>**

(You will be asked for your name and surname, your grade and your school name.)