

## Landfill in a Box

Spend some time researching how long it takes different materials to decompose. Think about items like plastic, metal, glass, diapers, kitty litter... and include some ideas of your own as well.

Using your newly acquired knowledge of how quickly particular materials break down in landfills, create a prototype (a small model) of a new landfill for Charlotte. You must have a key/description to accompany your landfill (ex. if you are using a zip bag to represent a large plastic sheet, note that on your key). Be ready to pitch your plan and explain why this new design would benefit the city of Charlotte!

### Materials

- Scrap/recyclable materials from around your home

### Tools

- Scissors
- Tape
- Ruler

### ASK

What information do you need in order to solve the problem? What questions do you have so that you can be successful?

### IMAGINE

What ideas do you have for creating your landfill prototype?

### PLAN

Sketch out and label your plan on paper.

## **CREATE & TEST**

Create and test your design. Find people to pitch your ideas to and listen to their feedback.

## **IMPROVE & RETEST**

Take a moment to pause. What is going right? What is going wrong?

**Scientists study the world as it is; Engineers create the world that has never been.  
- Theodore von Kármán**