



Hello everyone. Today you are going to be scientists. You are going to investigate how to boost sound and make sounds louder.

Sound is made by anything that vibrates. These vibrations disturb the air around them and make the air vibrate too! These vibrations spread out in all directions as sound waves and when these sound waves hit our eardrums-we hear sound! Watch the video below to learn more: <https://www.bbc.co.uk/bitesize/topics/zgffr82/articles/zstr2nb>

We are going to look at 4 different ways to make a 'sound booster' for a phone. Most of the materials you will need, you probably already have in your home. Try and do as many as you can (if you can't do them all because you don't have all of the materials -don't worry!) To record, you are going to play music on the phone normally and note down how loud you think it sounds out of ten. Then, test each sound booster and note down how loud you think it is out of ten with the boosters.

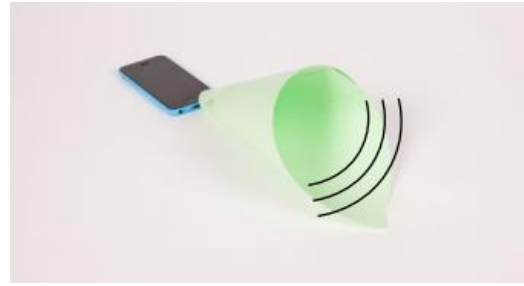
Method	Volume (out of 10)
No Booster	
Booster 1	
Booster 2	
Booster 3	
Booster 4	

Booster 1



Place your phone into a cup or bowl.

Booster 2



Make a horn out of paper and attach it over the speaker of the phone.

Booster 3



Cut a hole into a cardboard box or tube and place your phone in the hole.

Booster 4



Try combining different materials to make something more complicated.

Think

- Which items made the best sound boosters?
- How do you think the sound boosters are working?

The sound boosters are working because the phone is touching the sound booster and making the sound booster vibrate too. This is causing more air to vibrate than if it was just the phone by itself! More air vibrations = More soundwaves = Louder sound.