



GROOVY SOUND EFFECTS

1971 was a groovy year in the airline industry! Can you imagine how cool it would be if your favorite band were doing live entertainment on your next flight? Sound can be both a “blessing” and a “curse” when it comes to aircraft. Some sounds, such as alarms or communications coming through headphones need to be amplified, while others, such as jet engine noises, need to be dampened. Try the STEM challenges below.

Materials:



Cell phone

Empty box

Different types of paper products (such as paper tubes, newspaper, silk paper, paper towel, printer paper, tissues, coffee filters, paper cups, etc.)

Cling wrap or parchment paper

Recyclables

Tape, scissors, paper clips, rubber bands

CHALLENGE #1

Using only the materials on the list, can you invent a contraption that will amplify the sound coming from the speaker of a cell phone (without touching the buttons)?



CHALLENGE #2

Can you find a way to silence the music coming from the speaker of a cell phone by using only the materials on the list (and again, without touching the buttons, no cheating! 😊)?

Using a second cell phone or a tablet, download a free decibel measuring app to test the effectiveness of your ideas. Which of your solutions worked best? Can you explain why? How might that apply to aircraft?

