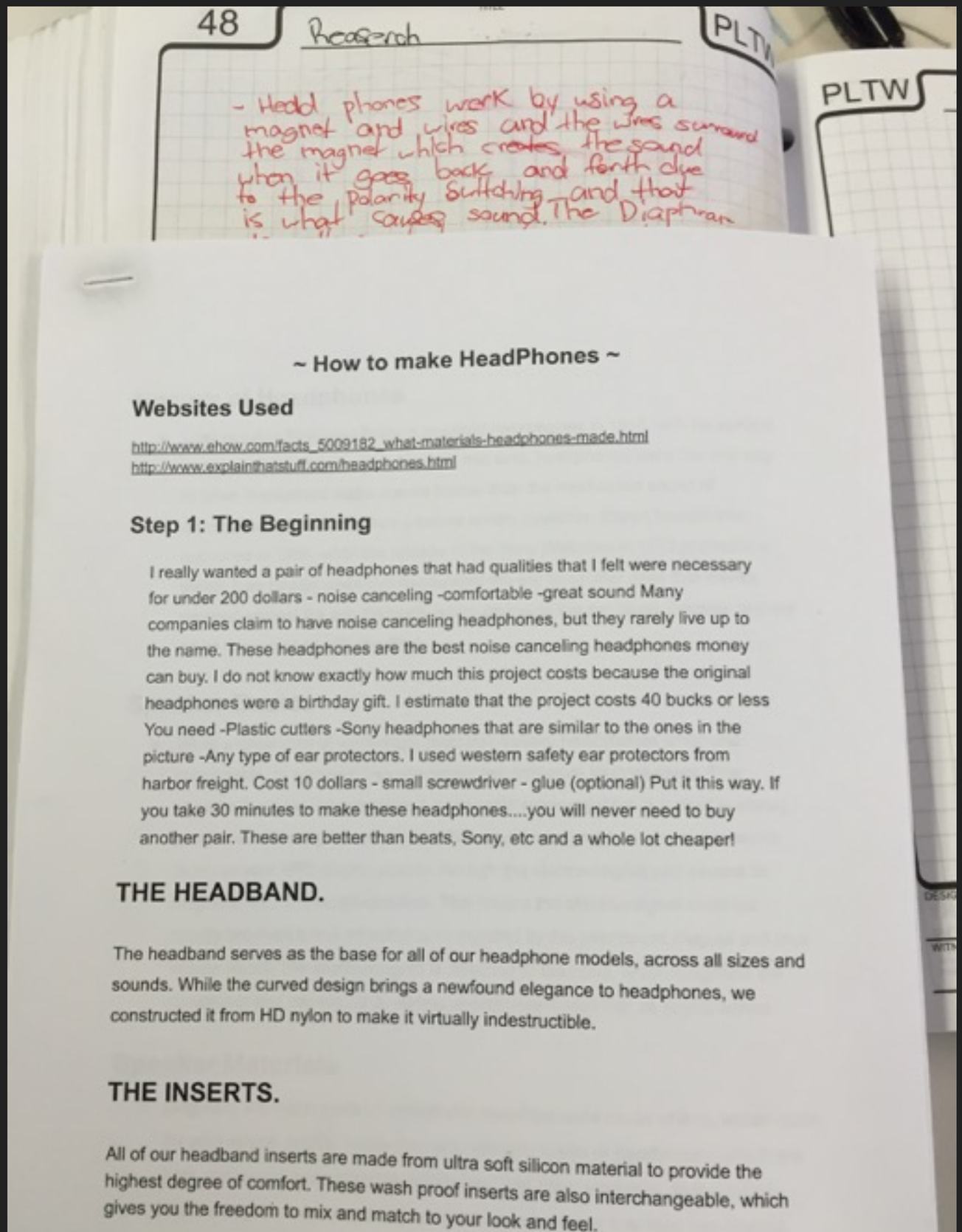
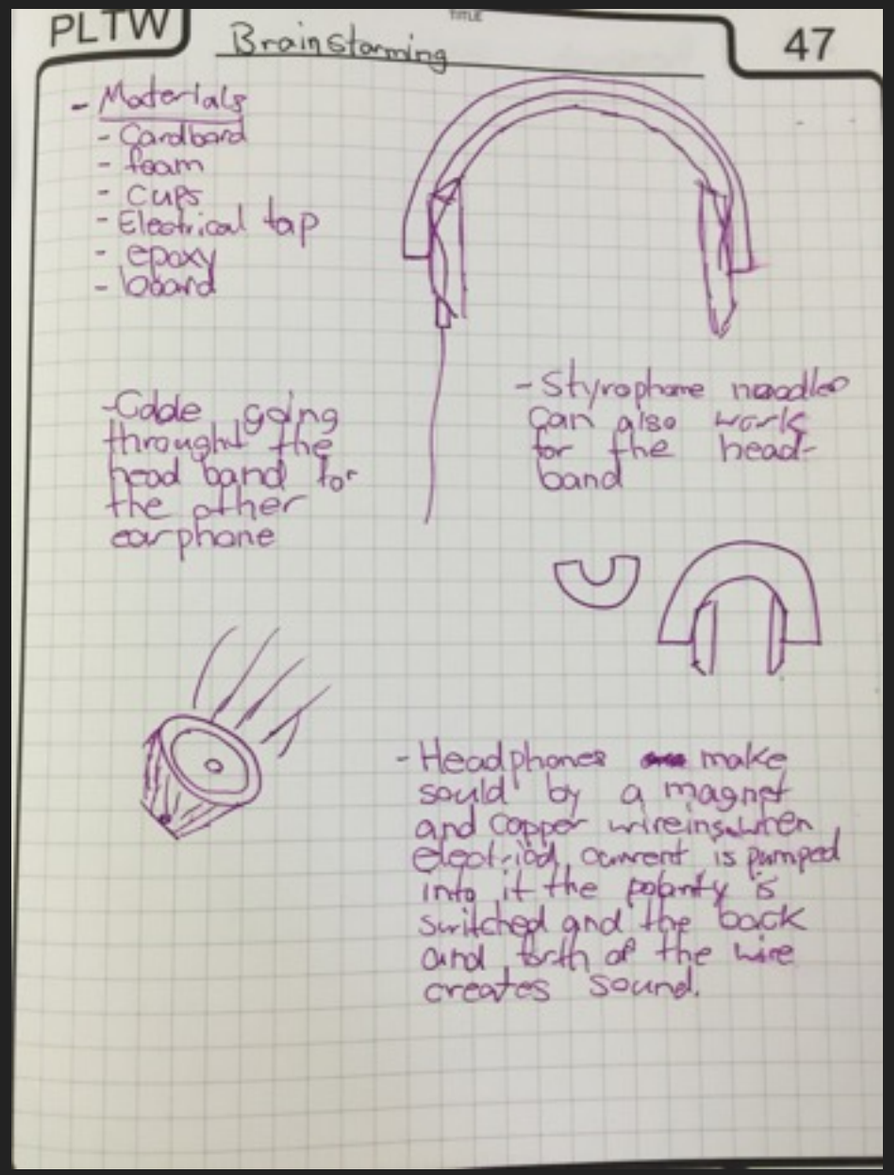
DAVID PENA

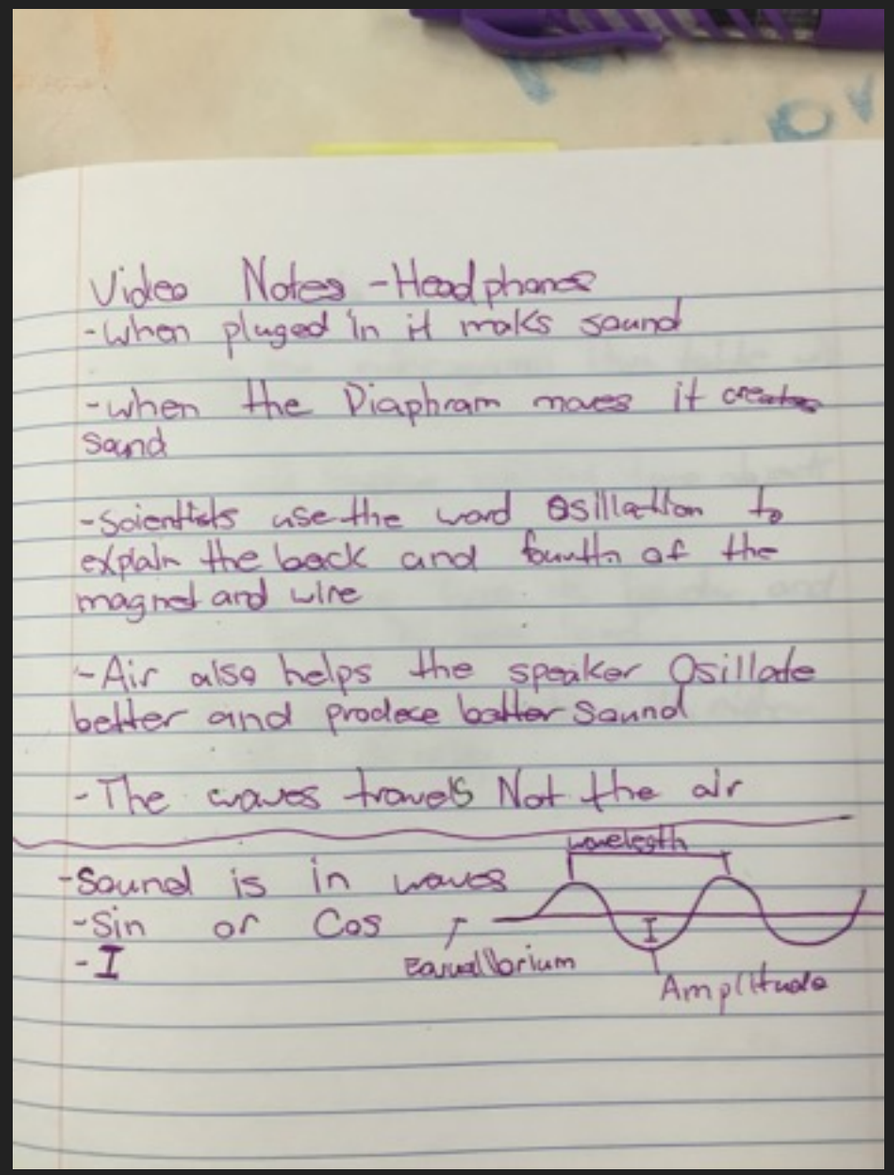
TECHNICAL PRESENTATION

RESEARCH

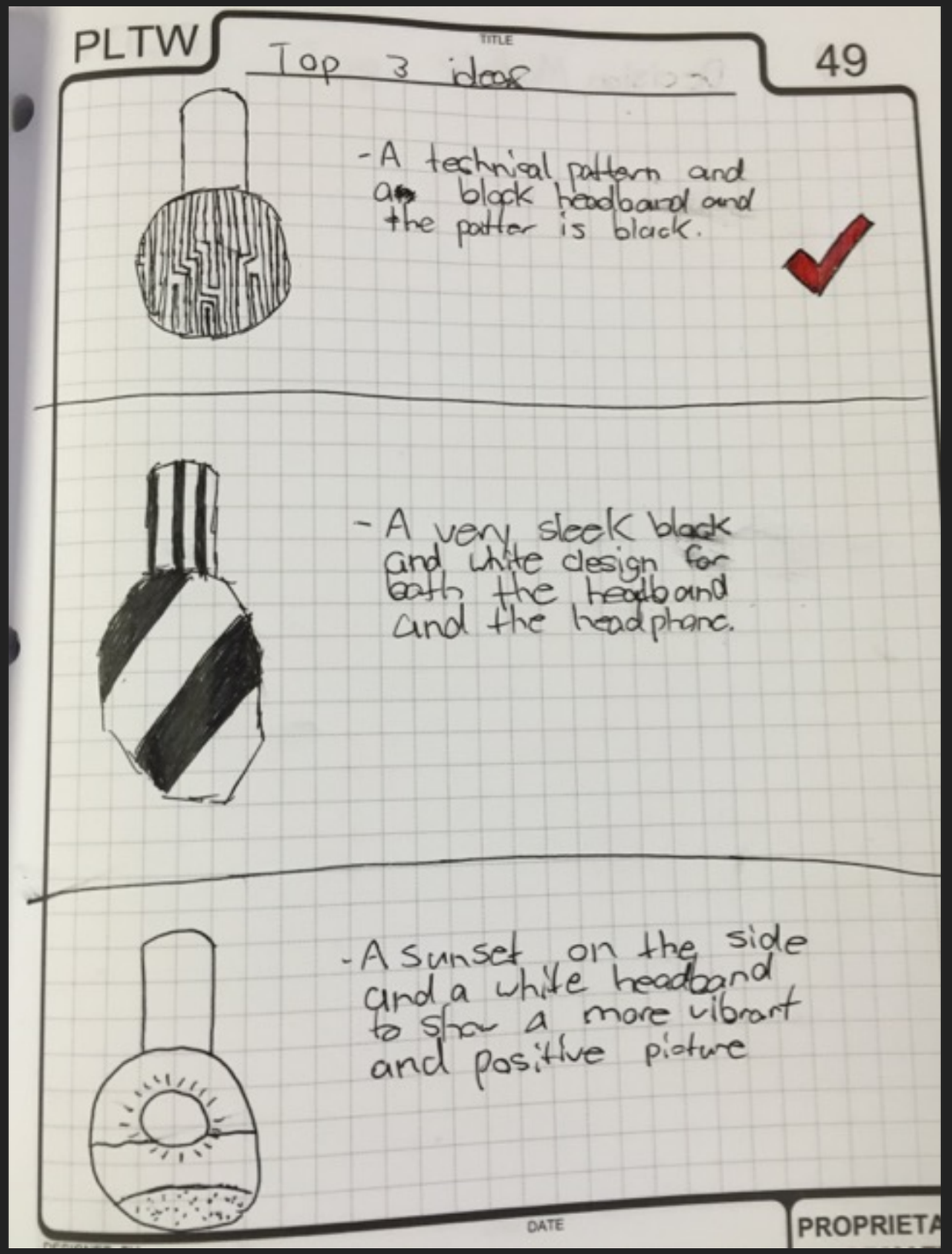

48
Research
PLTW
- Hedd phones work by using a magnet and wires and the wires surround the magnet which creates the sound when it goes back and forth due to the polarity switching and that is what causes sound. The Diaphram
PLTW
~ How to make HeadPhones ~
Websites Used
http://www.ehow.com/facts_5009182_what-materials-headphones-made.html
http://www.explainthatstuff.com/headphones.html
Step 1: The Beginning
I really wanted a pair of headphones that had qualities that I felt were necessary for under 200 dollars - noise canceling -comfortable -great sound Many companies claim to have noise canceling headphones, but they rarely live up to the name. These headphones are the best noise canceling headphones money can buy. I do not know exactly how much this project costs because the original headphones were a birthday gift. I estimate that the project costs 40 bucks or less You need -Plastic cutters -Sony headphones that are similar to the ones in the picture -Any type of ear protectors. I used western safety ear protectors from harbor freight. Cost 10 dollars - small screwdriver - glue (optional) Put it this way. If you take 30 minutes to make these headphones....you will never need to buy another pair. These are better than beats, Sony, etc and a whole lot cheaper!
THE HEADBAND.
The headband serves as the base for all of our headphone models, across all sizes and sounds. While the curved design brings a newfound elegance to headphones, we constructed it from HD nylon to make it virtually indestructible.
THE INSERTS.
All of our headband inserts are made from ultra soft silicon material to provide the highest degree of comfort. These wash proof inserts are also interchangeable, which gives you the freedom to mix and match to your look and feel.

BRAINSTORMING

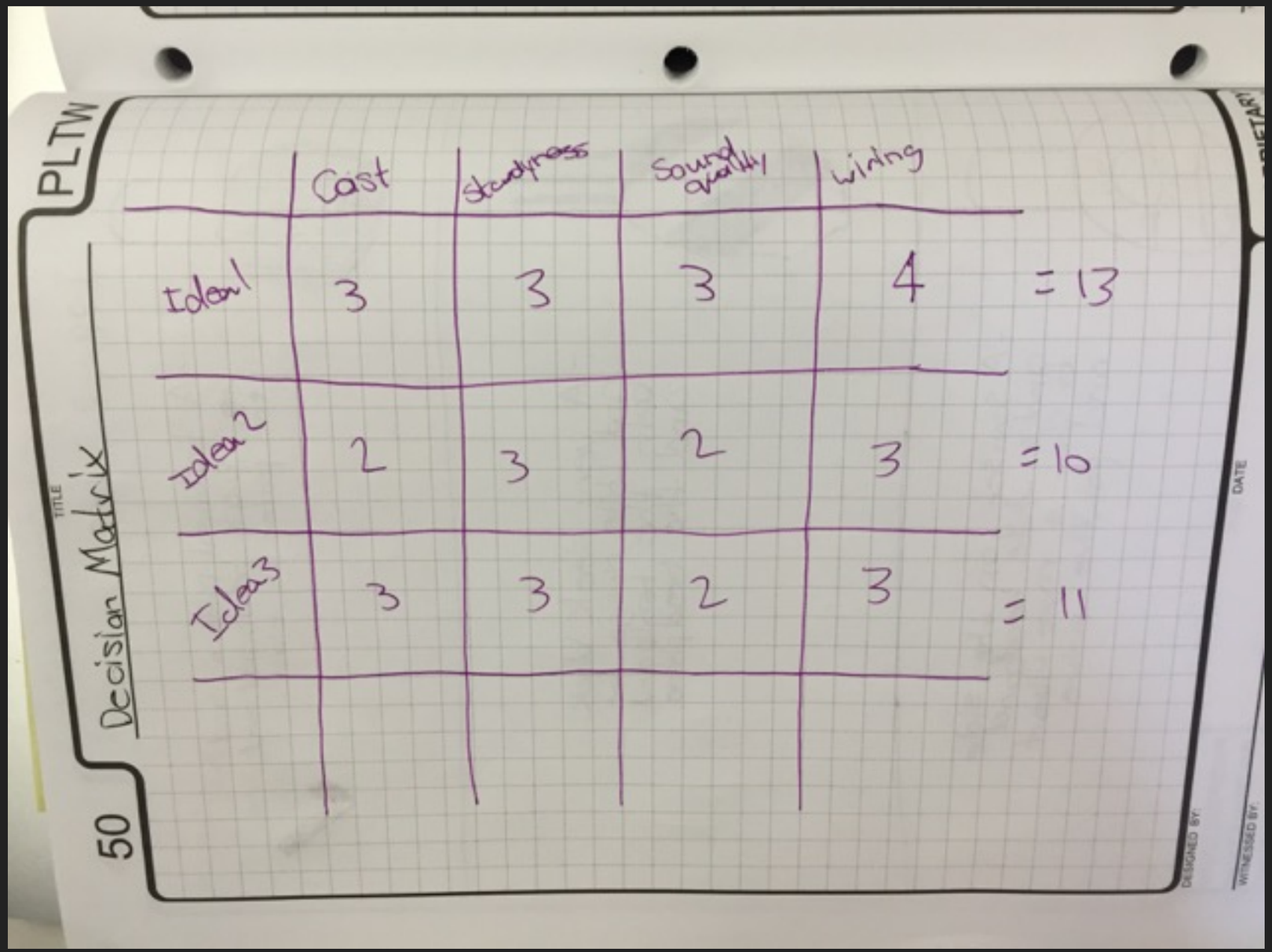




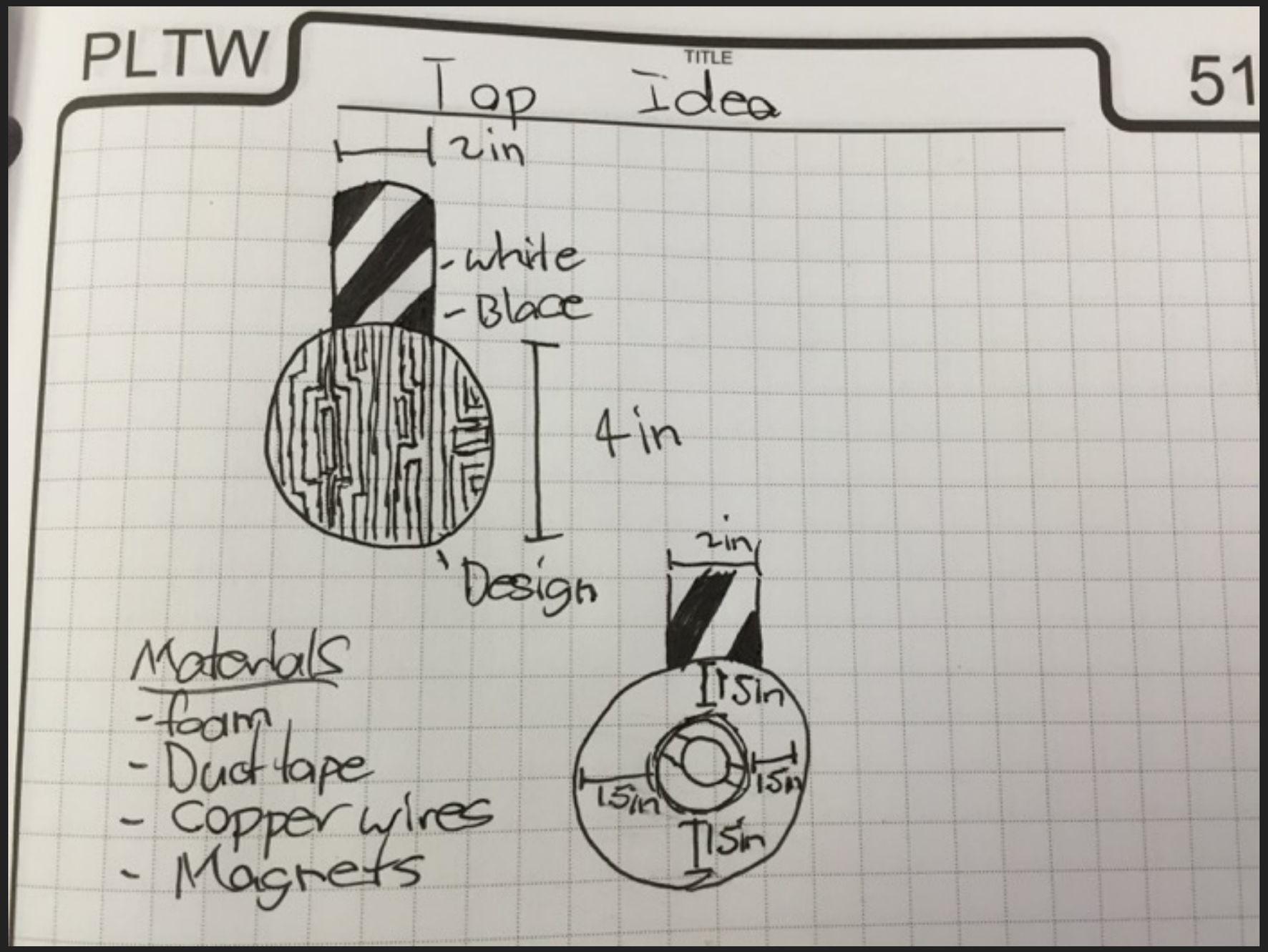
TOP 3 IDEAS


PLTW
TITLE
Top 3 ideas
49
- A technical pattern and a black headband and the patter is black.
- A very sleek black and white design for both the headband and the headphone.
- A sunset on the side and a white headband to show a more vibrant and positive picture
DATE
PROPRIETA

DECISION MATRIX



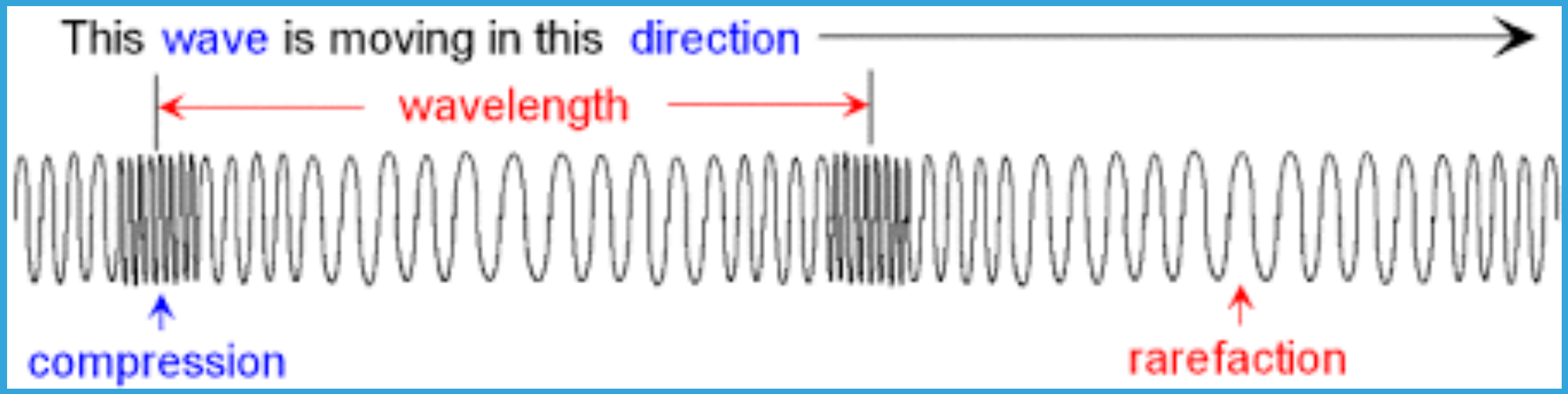
TOP IDEA


PLTW
TITLE
Top Idea
51
2in
-white
-Black
4in
Design
Materials
-foam
-Duct tape
-Copper wires
-Magnets
2in
1.5in
1.5in
1.5in
1.5in

BUILDING

Revisions

PHYSICS

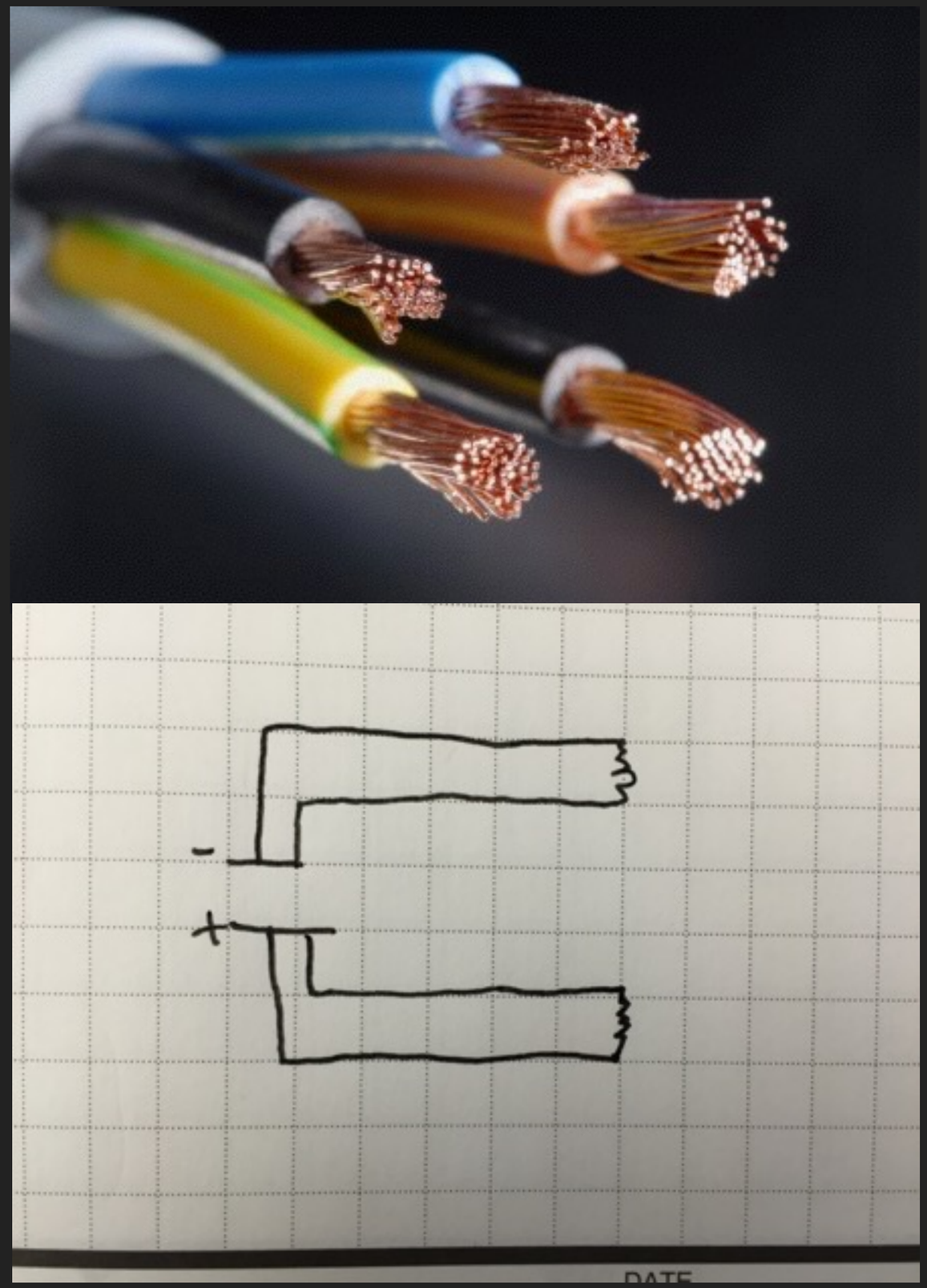


SOUND WAVES

All sound waves move in longitudinal waves. When the diaphragm vibrates the waves oscillate in the air to create sound.

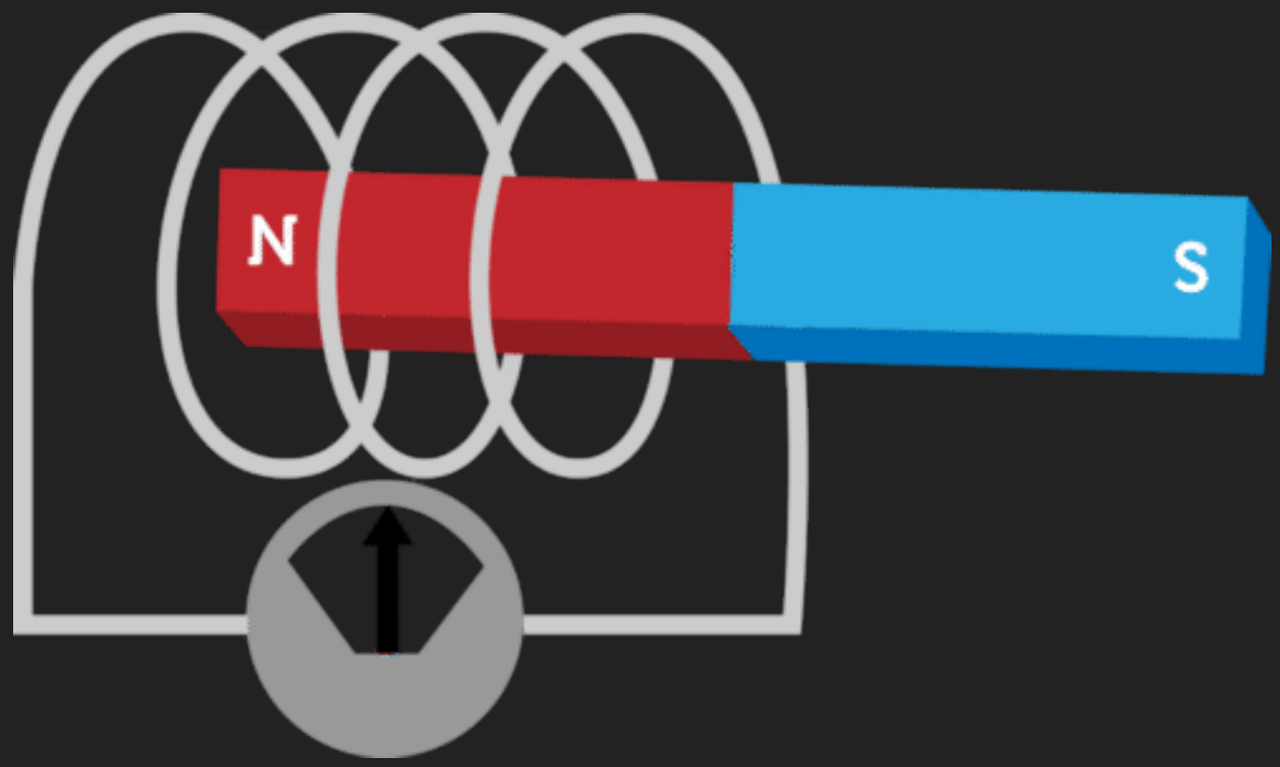
CIRCUITS

My headphones are a Parallel Circuit



ELECTROMAGNETIC INDUCTION

When an electromagnetic force is created in something that doesn't have an electromagnetic field; in this case it is the copper wire in my headphones.



GROUP DATA