12 Nov' 2024

→ Presenting at a science fair on 13 Nov '24 at Central Georgia Homeschool Science Fair

→ Some example projects we can present based on what we learnt so far:

(1) Waves & Music — using programming

(2) Scientific method to understand how the Sun rises and sets

(3) How we use AI in our classroom — where is it good or not

(4) Phonetic sounds & Chandassu (prosody)

→ Project we selected for tomorrow

— Waves & Music

→ Waves : Definition & example - water waves

Properties of waves : we will use images from our python code and show 2D & 1D images for small and large values for amplitude, wavelength, attenuation, frequency — velocity we can't show in poster, so we will show on laptop ; $V = \lambda \times \nu$

Music : show Flute & Piano (on tablet)

Show images with how wavelength

changes on flute as we close some holes — And how diff. properties like λ, ϱ, v, f, A control musical sounds.

How we did this: We used AI & python libraries — to create functions for waves and to produce sound from musical notes

def generateWaves(params)
...

def generateMusic(notes)
...

return

return

On the table we have poster, flute, piano/harmonium (tablet) and laptop showing diff. velocity waves & play music from notes

Scientific method:

(1) Question: How do waves work & their relation to musical sound?

(2) Experiment: Modeling (on computer)

(3) Data collection: With model - change amplitude, v, etc.

(4) Test: On flute, we increase 'A' and see how sound changes

(5) Conclusion: What did we learn

How to present:

→(1) Be confident and loud (don't be shy (left sided) don't be arrogant (right sided)

→(2) Describe everything in a way everyone can understand even if they don't know anything about your project before

→ (3) Present everything quickly but nicely
→ (4) Practice your presentation for several times
(5) Describe everything in your own words (don't just read what's on the poster/notes).

HW: (1) Make the poster, tablet (piano/harmonium, flute (check C&F#), laptop (velocity changes, play music notes) ready
(2) Practice presenting your project as a story and answering any questions

15th Nov '24

How to present :

(6) Prepare your presentation notes (before the presentation) describing everything you have to say

- one line summary (10 seconds)
- 4-5 line summary (1-2 minutes)
- whole presentation (~10 minutes)

(~ = about)

(7) Greet everyone that visits your poster and then ask them if you should describe your poster for them.

(8) Visit other posters, greet them, ask about their project and at the end thank them.

(9) Make everything ready few days before the event.

HW: (1) Create a word document with all the steps for a good presentation.

→ everything we need to remember next time we present.

→ save it in social skills/presentation folder.