

VLabs for Music Experiment List

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1 Experiments

1.1 Expt 1 Pitch discrimination

1.1.1 Description:

This experiment will focus on students being able to distinguish between two pitches that are played consecutively. The students will only to answer whether the two pitches played are the same or different.

1.1.2 Skills:

Before being able to train the ear for identifying pitches, this simple experiment will help students distinguish between pitches that are far apart and the ones that are spaced nearer to each other.

1.1.3 Levels:

1.2 Expt 2 Pitch Direction

1.2.1 Description:

This subsequent experiment focuses on being able to identify the direction of difference of the given pitches. After the student is comfortable telling two tones apart, this experiment will help them understand whether the subsequent tone is lower or higher than the first.

1.2.2 Levels:

1.3 Expt 2.5 What are notes?

1.3.1 Description:

This experiment will explain the concept of notes and octaves. Students will learn to identify octaves and figure out how notes played in a row sound. Different instruments can be used to elaborate this. For vocalists, this may include clicking on the names of svaras / intervals and then listening to them. Students will also be able to play notes as scales with note names to familiarize with the concept of naming notes.

1.3.2 Skills:

Before we move to interval identification, this experiment is a free exploration of musical hearing.

1.3.3 Levels:

- 1. Free exploration with instrument and note names
- 2. Free exploration hearing different scales and note sequences

1.4 Expt 3 Pitch identification from same tonic

1.4.1 Description:

Here we start to move to interval hearing and tone training.

1.4.2 Skills:

Before being able to train the ear for identifying pitches, this simple experiment will help students distinguish between

1.4.3 Levels:

1. Levels
 - (a) Level 1: Sa, Ma, Pa
 - (b) Level 2: + Ga, Ni
 - (c) Level 3: + Re, Dha
 - (d) Level 4: All Shuddha Notes
 - (e) Level 5: + Re Dha Komal
 - (f) Level 6: + Ga Ni Komal
 - (g) Level 7: + Tivra Ma
 - (h) Level 8: All notes
2. Number of Questions

1.5 Expt 4 Pitch identification from separate tonic

1.5.1 Description:

While the tanpura is playing in another key, a different reference note will be given to judge another pitch interval from.

1.5.2 Skills:

This experiment is to build hearing independence outside the tonic, as may be required in some forms of light classical singing.

1.6 Expt 5 Identifying a chain of pitches

1.6.1 Description:

In this experiment, the experimenter will have to name the notes in a row of pitches in a single tonic.

1.6.2 Skills:

This experiment will develop the knowledge of ‘svar-sthan’ in the users.

1.6.3 Levels:

1. Levels
2. Number of Questions per level

1.7 Expt 6 Tabla Simulation

1.7.1 Description:

The goal of this experiment is to simulate a tabla skin on a computer, and choose and handshape, and simulate the sounds that a tabla makes if it is struck at different points.

1.7.2 Skills:

Understanding tabla bols also requires an understanding of how it is played on the skin membrane. This experiment will help people who don't have access to tablas to explore the instrument in detail.

1.7.3 Levels:

1. Hearing bol and location of playing
2. Composing new taals

1.8 Expt 7 Khali and Taali

1.8.1 Description:

This experiment is to explain the polarity between these two events in Taal. The rhythmic and motional feeling of a downbeat and an upbeat will be explained. Participants will get to freely explore and listen to tabla sounds, and figure out the presence of khali and tali in the taals.

1.8.2 Skills:

1.8.3 Levels:

1. Analyzing khali and taali in visual form
2. Building larger metrical structures for khali and tali
3. Splitting These structures into different laya combinations - aad, kuaad, bayaad

1.9 Expt 8 Phrase hearing

1.9.1 Description:

In this experiment, students will be able to distinguish between different phrases. There are 4 kinds of basic phrases in HCM. The participants will be expected to categorize each phrase in any of these four types, and in the next level compose phrases belonging to these types.

1.9.2 Levels:

1. Differentiating between different types of phrases
2. Creating phrases having different envelopes

1.10 Expt 9 Intonation

1.10.1 Description:

1. Hearing different kinds of intonation

1.11 Expt 10 Tuning a Tanpura

1.11.1 Description:

1. Two tanpuras, one fixed, cranking the other one up / down

1.11.2 Levels:

Tuning to the same tone Tuning to an Octave Tuning to a Fifth

1.12 Expt 11 Singing and melograph plotting

1.12.1 Description:

Dynamic capture of musical voice and generation of melographs dynamically with

1.12.2 Skills:

Melographs are a visual representation of the sung music. This experiment will help people familiarize themselves with a visual scheme to understand music. This scheme will be taken forwards

1.12.3 Levels:

1. Matching own melograph with template melographs
2. Difference measure for melographs

2 Appendix

2.1 Export drones for 6 seconds in all 12 keys

2.2 Instruments:

1. Flute
2. Sitar
3. Sarod
4. Santoor
5. Sarangi
6. Violin
7. Shehnaï
8. Veena
9. Voice-Male
10. Voice-Female