

2020 MIT Science Olympiad Invitational Tournament

Sounds of Music: Event Guide

January 25th, 2020

Exam Supervisor: Christopher Wang (Acton-Boxborough RHS '19, christopher.wang@wustl.edu)

Build Supervisor: Stefan Quaadgras (Acton-Boxborough RHS '19, stefanquaadgras@gatech.edu)

Head Volunteer: Kevin Tan (Arcadia High School '19, kevintan@college.harvard.edu)

Competitor Names: _____

School Name: _____ Team #: _____

EVENT INSTRUCTIONS:

- There are three stations for you to complete: the Written Exam, the Aural Exam, and the Build Test.
- The volunteer who gives you this handout has indicated which schedule you will follow.
- When on standby, please wait SILENTLY outside the Build Test rooms with your instrument and your log (the log will be scored during the Build Test). Do NOT play your instrument in the hallway.
- Take this handout with you to all stations. The build scoring sheet is located on the back. Leave this handout with a supervisor or volunteer at the final station you complete.

Time	Schedule 1	Schedule 2	Schedule 3
10 min.	Build Test (Rms. 5-231 & 5-232)	Standby (Hallway)	Aural Exam (Rm. 5-217)
10 min.	Aural Exam (Rm. 5-217)	Build Test (Rms. 5-231 & 5-232)	Standby (Hallway)
10 min.	Standby (Hallway)	Aural Exam (Rm. 5-217)	Build Test (Rms. 5-231 & 5-232)
30 min.	Written Exam (Rm. 5-233)	Written Exam (Rm. 5-233)	Written Exam (Rm. 5-233)

Time	Schedule 4	Schedule 5	Schedule 6
30 min.	Written Exam (Rm. 5-233)	Written Exam (Rm. 5-233)	Written Exam (Rm. 5-233)
10 min.	Build Test (Rms. 5-231 & 5-232)	Standby (Hallway)	Aural Exam (Rm. 5-217)
10 min.	Aural Exam (Rm. 5-217)	Build Test (Rms. 5-231 & 5-232)	Standby (Hallway)
10 min.	N/A (free to leave)	Aural Exam (Rm. 5-217)	Build Test (Rms. 5-231 & 5-232)

SCORING (for supervisor use only):

Written Exam: ____/100 (raw) ____/36 (scaled) Aural Exam: ____/30 (raw) ____/9 (scaled)

Test Score: ____/45 Log Score: ____/10 Pitch Score: ____/36 Song Score: ____/9 Bonus: ____/5

FINAL SCORE: / 105

RANKING:

Science Olympiad 2019-2020 Season Sounds of Music Checklist / Data Sheet

Version 1.2

Event and Construction Requirements

- ☐ 1. Competitors construct only 1 device
- ☐ 2.a. Reference materials secured in 3 ring binder
- ☐ 2.e. Log submitted
- ☐ 2.f. Competitors must be able to answer questions about the device per the Building Policy
- ☐ 3.a. No electrics, electronics, toy or professional instruments or components except strings in device
- ☐ 3.b. Device plays an ascending major scale with octave jump
- ☐ 3.c. Device plays pitches for Twinkle, Twinkle
- ☐ 3.e. Energy must come from competitors, who may not hum or sing
- ☐ 3.f. Device fits in 60.0 x 60.0 x 100.0 cm box
- ☐ 4.d. Students put tuner away after 2 mins

Pitch Score Tests

Major Scale _____

Pitch #1: Target Note _____ or Skipped Y N

Measured Freq _____ or Cents off _____

Pitch #2: Target Note _____ or Skipped Y N

Measured Freq _____ or Cents off _____

Pitch #3: Target Note _____ or Skipped Y N

Measured Freq _____ or Cents off _____

Pitch #4: Target Note _____ or Skipped Y N

Measured Freq _____ or Cents off _____

Pitch #5: Target Note _____ or Skipped Y N

Measured Freq _____ or Cents off _____

Pitch #6: Target Note _____ or Skipped Y N

Measured Freq _____ or Cents off _____

Pitch #7: Target Note _____ or Skipped Y N

Measured Freq _____ or Cents off _____

Pitch #8: Target Note _____ or Skipped Y N

Measured Freq _____ or Cents off _____

Team Information

Team #: _____ Team Name: _____

Competitor Names: _____

Log (each item can get 0 – 2 points)

List of materials in device _____

Data on pitch accuracy vs. design change _____

Includes at least 5 data points _____

Proper labeling (e.g. title, name, units) _____

Labeled device picture/diagram _____

Song Score Test

Rhythmic accuracy (max 3) _____

Pitch accuracy (max 3) _____

Played within 15 secs (max 3) _____

Part I: Written Test

Exam Score _____

Bonus Pitch

Target Note _____ or Skipped Y N

Measured Freq _____ or Cents off _____

Penalties

Competition violations(s) Y N

Team didn't bring a device Y N

DQed for unsafe operation Y N

Construction violations corrected Y N

Team Verification

4.h. I verify the event supervisor has reviewed with me my team's recorded device testing data.

Signature _____