

## **MIDDLE SCHOOL MUSIC**

### **New Construction**

#### **I. PROGRAM PHILOSOPHY**

Music is a part of the world around us. Music has served as the voice of praise, thankfulness, suffering, hate, joy, and pride. There is no phase of man's struggle for existence that has not been accompanied, communicated, and extended by music. Since one function of education is to acquaint the individual with his environment, music should be a part of the middle school curriculum.

#### **II. PROGRAM GOALS**

1. To help a child discover and develop musical talent and ability by providing opportunities for musical growth.
2. To develop an increasing awareness of the beauty in music.
3. To help the child understand the basic concepts and fundamentals of music such as notation and rhythm.
4. To help the child be more creative and expressive through singing, playing an instrument, composing, reading and writing music.
5. To increase the student's awareness of his/her musical heritage and its relation to man's development both past and present.
6. To help create self-confidence and pride through performance alone and with others.
7. To encourage discriminative listening skills which will be transferable to other areas.
8. To provide an enjoyment and satisfaction in all musical experiences.

#### **III. PROGRAM ACTIVITIES**

In instrumental music each student will participate in small group and large group instruction in the fundamentals of technique and musicianship. In addition to playing instruments, students will listen and observe performance, use technology to enhance the instrumental program will attend and participate in concerts, will participate in and observe demonstrations, make simple instrument repair and participate in rhythmic exercises.

In vocal and general music each student will participate in small and large ensembles in the study of vocal technique, literature, sight reading and movement to rhythm. Students will listen and observe performances, use technology, participate in discussions, piano and guitar lab, individual assignments, demonstrations, presentations, concerts, and listen to lectures.

In digital music classes, students will work on music literacy and composition projects as well as recording projects.

#### **IV. ORGANIZATIONAL NOMENCLATURE**

Teacher - Student Ratio:	1:10 - 1:110
Student Capacity per Period:	Variable
Total Number of Teachers:	2
Total Number of Aides:	0 (If applicable)

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Grade Levels or Age Levels for Which  
Program is intended: 6, 7 and 8

Hours per Day Space Will Be Used: 7

V. INNOVATIONS, EXPERIMENTAL IDEAS, OTHER PLANNED USES

VI. SQUARE FOOTAGE CHANGES EXPLANATION THAT VARIES FROM APPROVED FACILITIES LIST

Some storage may be used as teacher planning (teacher planning no larger than 105 NSF).

VIII. PROGRAM FURNITURE AND EQUIPMENT REQUEST FORM

\*Shown on drawing

# purchased and installed by contractor

The Performing Arts Specialist is to be contacted for approval of items to be purchased.

Space or Area	Number of Items	Description of Furniture/Equipment Needed
<b>BAND</b>	*1	Studio Upright Piano with dolly, bench, cover, and humidity control system.
	100	Wenger Music Posture Chairs Nota or Equivalent <a href="https://www.wengercorp.com/chairs/index.php">https://www.wengercorp.com/chairs/index.php</a>
	*1	Conductor's System Wenger or equivalent <a href="https://www.wengercorp.com/conductors-equipment/conductors-system.php">https://www.wengercorp.com/conductors-equipment/conductors-system.php</a>
	*80	Heavy Duty Music Stands Wenger Roughneck or equivalent.
	1	Percussion Center Wenger or equivalent
	2	Bandfolio Cabinets Wenger #146D42 or equivalent
	*#1	Full Length Mirror, 22" x 60"
		Interactive Flat TV Panel and Stand – on PCSB bid list
		Mixer (Alesis MultiMix 10)
		Amplifier (min 4000 W)
		Speakers (QSC E112 12" Two-Way Passive Loudspeaker (Black))
		Wireless headset microphone (1) Shure BLX14/CVL)
		Locking Sound Cabinet (Atlas Sound 607-15)
		Mounting hardware
		Microphones for classroom recording (Samson CO2 Pencil Mics)
		Cables/Stands
		Connections to Smart Board/TV
		¼" mini jack for computer playback

*\*Placement of equipment as well as exact specifications should be made with the teacher and /or the district performing arts technology staff. Note: ideally the sound design for these rooms would involve an acoustic engineer who makes recommendations on equipment and placement of equipment.*

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*General Recommendation – Take square footage from band ensemble room and vocal ensemble room to make a larger multi purpose digital classroom space.*

#### **FLEXIBLE USE TECHNOLOGY CLASSROOM**

15 MacBook Pro Laptops  
3+ GHz dual-core  
16+ GB RAM  
500 GB Solid State Drive  
Audio Interface (Focusrite Scarlett 2Pre)  
Audio Microphones (RODE NT-1A, Audio-Technica AT2050)  
Instrument Microphones (Shure SM57)  
Audio Headphones (Sennheiser HD280)  
Studio Speakers (JBL LSR305)  
DAW (Digital Audio Workstations)  
Ex. Pro Tools, Logic, Ableton Live, SONAR, Cubase  
CABLES  
XLR, 1/4", RCA  
MIC STANDS  
POP FILTER  
15 MIDI KEYBOARDS AKAI MPK249 (WITH SUSTAIN PEDAL)  
15 Essential Lab Workstations  
<https://www.wengercorp.com/teaching-tools/music-lab-workstations.php> or something comparable  
30 chairs

#### **1 PRACTICE ROOMS (BAND INSTRUMENTAL)**

\*1 Studio Upright Pianos with dolly, bench, covers, and humidity control systems

Recommendation – use one practice room for recording studio.

1 RECORDING ROOM (This room will need acoustic treatment to deaden the sound completely)

1 iMac Work Stations  
3+ GHz dual-core  
16+ GB RAM  
500 GB Solid State Drive  
Audio Interface ( Focusrite Scarlett 2Pre)  
Audio Microphones ( RODE NT-1A, Audio-Technica AT2050)  
Instrument Microphones (Shure SM57)  
Audio Headphones (Sennheiser HD280)  
Studio Speakers (JBL LSR305)  
1DAW (Digital Audio Workstation)  
Ex. Pro Tools, Logic, Ableton Live, SONAR, Cubase

## **MIDDLE SCHOOL MUSIC**

### **New Construction**

CABLES

XLR, ¼", RCA

MIC STANDS

POP FILTER

1 MIDI KEYBOARDS AKAI MPK249 (WITH SUSTAIN  
PEDAL)

### **REFERENCE (BAND)**

\*2

Tables (36"L x 24"W)

\*4

File cabinets or music storage units or

1

<https://www.wengercorp.com/storage/sheet-music-storage.php>

### **INSTRUMENT STORAGE**

Built-in Recommended Wenger Cabinets

<https://www.wengercorp.com/storage/instrument-storage.php>

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#### VIII. PROGRAM FURNITURE AND EQUIPMENT REQUEST FORM

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# purchased and installed by contractor

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<u>Space or Area</u>	<u>Number of Items</u>	<u>Description of Furniture/Equipment Needed</u>
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#### **TEACHER PLANNING**

*1	Teacher's Desk and Chair with Casters
*2	Four-Drawer, Letter Size, Filing Cabinets
2	Office Chairs

#### **MATERIALS AND UNIFORM STORAGE**

Built-in.

Example: <https://www.wengercorp.com/storage/garment-storage.php>

#### **VOCAL REHEARSAL**

*1	Studio Upright Piano with dolly, bench, cover, and humidity control system
1	Conductor's System Wenger or equivalent
100	Wenger Music Posture Chairs Nota or Equivalent <a href="https://www.wengercorp.com/chairs/index.php">https://www.wengercorp.com/chairs/index.php</a>
7	7 Sections of 3-Step Risers Wenger equivalent with 7 back rails or equivalent
#1	Full Length Mirror, 22" x 60"
2	Choral Folio Cabinets with doors Wenger equivalent
*2	Small Tables 36"L x 24"W
	Interactive Flat TV Panel and Stand – on PCSB bid list
	Mixer (Alesis MultiMix 10)
	Amplifier (min 4000 W)
	Speakers (QSC E112 12" Two-Way Passive Loudspeaker (Black))
	Wireless headset microphone (1) Shure BLX14/CVL)
	Locking Sound Cabinet (Atlas Sound 607-15)
	Mounting hardware
	Microphones for classroom recording (Samson CO2 Pencil Mics)
	Cables/Stands
	Connections to Smart Board/TV

General Recommendation – Take square footage from band ensemble room and vocal ensemble room to make a larger multi purpose digital classroom space. See description of Flexible Use Technology Classroom Above

#### **1 PRACTICE ROOM (VOCAL)**

*2	Studio Pianos with dolly, bench, cover, and humidity control system
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#### VIII. PROGRAM FURNITURE AND EQUIPMENT REQUEST FORM

\*Shown on drawing

# purchased and installed by contractor

Space or Area	Number of Items	Description of Furniture/Equipment Needed
<b>VOCAL TEACHER'S PLANNING</b>		
	*1	Teacher's Desk and Chair with Casters
	*2	Four-Drawer, Letter Size, Filing Cabinets
	2	Office Chairs
<b>MATERIALS/ROBE STORAGE</b>		
		Built-in Example: <a href="https://www.wengercorp.com/storage/garment-storage.php">https://www.wengercorp.com/storage/garment-storage.php</a>
<b>REFERENCE</b>		
	*1	Table 36"L x 24"W
	*2	Four-Drawer, Letter Size, Filing Cabinets
<b>BAND (BASIC LIST OF INSTRUMENTS)</b>		
	2	C-Piccolos
	2	Flutes
	3	Oboes
	2	Bassoons
	2	Bass Clarinets
	1	Ebb Alto Saxophone
	2	Bb Tenor Saxophones
	2	Baritone Saxophones
	6	French Horns (Double)
	4	French Horns (Single)
	4	Baritone Horns
	4	Tenor Trombones W/F Attachment
	4	BB-Flat Tubas (3/4 Size)
	4	Trumpets
	4	Bb Clarinets
	2	String Bases (3/4)
	1 set	3-Tympani (23", 26", and 29")
	1	Concert Bass Drum with Stand
	2	Concert Snare Drums with Stands
	1	Orchestra Bells with Stand
	1 pair	Cymbals, 17"
	1 pair	Crash Cymbals, 20"
	1	Trap Drum Set
	1 set	Small Percussion
	1	Concert Gong
	1	Electric Tuner Chromatic
	1	Portable Tuner
	1 set	Chimes
	1	Concert Xylophone
	1	3 Unit Double Bass Rack Wenger #1240226
	4	Microphones with Stands
	1	Portable Bose PA System
	1	Lead Guitar with Case and Amplifier

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25	Acoustic Guitars
2	Electronic Drum Sets

#### VIII. PROGRAM FURNITURE AND EQUIPMENT REQUEST FORM

<u>Space or Area</u>	<u>Number of Items</u>	<u>Description of Furniture/Equipment Needed</u>
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#### **BAND (BASIC LIST OF INSTRUMENTS) (continued)**

1	Bass Guitar with Case and Amplifier
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#### IX. SPECIAL CONSIDERATIONS

- Heating/Cooling/Ventilation

The duct system should be so designed that a separate duct system services each large rehearsal room. For other rooms in the area, an off-set insulated, baffled duct system should be used to minimize the problem.

HVAC should be designed to accommodate use during evening classes and/or performances without the necessity for operating the entire system.

Thermostats need to be located in the band and vocal rehearsal room.

- Acoustics

This topic is of primary importance and the acoustical design must be very carefully designed to provide the optimum rehearsal and teaching conditions.

It is absolutely necessary that sound is not able to carry through heating or cooling duct work from any one room to another.

Overall campus planning must allow for no sound transmission from areas into the music facility.

Building must be located and/or acoustically designed so that transmission of sound is contained within the separate sections of the music building, so as not to interfere with other music rehearsals or other school areas.

Some considerations follow:

- a. Two main acoustical factors must exist: optimum acoustical environment, and optimum hearing conditions.
- b. Acoustical environment: the maximum background noise level is 25 decibels with the optimum much lower.
- c. Acoustical treatment of recording room should be very "dead."

## MIDDLE SCHOOL MUSIC

### **New Construction**

#### IX. SPECIAL CONSIDERATIONS (continued)

- Acoustics (continued)

- c. Hearing Conditions:

1. Reverberation time to allow for the separation of successive sounds is a critical problem in designing rehearsal facilities. What would be optimum for a concert hall, for example, would not be all satisfactory for a music room. The optimum reverberation time for a large rehearsal room is 1.1 seconds. If the time falls below .8 seconds for the band area, or 1.0 seconds for the vocal area, the room becomes too dead for effective use. If the time is much greater than 1.1 seconds for band or 1.2 seconds for chorus, then boom, echo and over loudness will result, causing severe distortion of sound and producing an impossible rehearsal situation. It should be noted that the reverberation times for band and vocal rehearsal rooms are different and should not be planned in the same way.
2. Proper distribution of sound depends upon the uniform diffusion of all sounds throughout the room.
3. Frequency levels throughout the full spectrum of audible sound must be allowed to be diffused equally. If certain types of acoustical treatment are used, they may cut down the high frequencies much more than the low frequencies or vice-versa. A proper balancing of materials is essential to eliminate the obvious distortion caused by lack of attention to this detail.
4. Since the field of acoustics is so complicated and because the acoustics of a room depend on so many factors, it is not feasible to go into greater detail in this report. However, it is absolutely essential that only the most expert advice be sought in designing a music room. This special advice must function from the very first conception of the shape and size of the room to the very last detail of the final plans.
5. The use of soft materials for acoustical treatment should be limited in all areas of the building to locations higher than students can bump into or reach.

- Walls

All walls acoustically treated, rehearsal and practice rooms, to prevent sound transfer to adjacent spaces used for instruction. No demountable walls.

All walls should be fully to roof deck. Non-paralleled walls in rehearsal areas and Practice Rooms.



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#### IX. SPECIAL CONSIDERATIONS (continued)

- Ceiling

Band and Vocal - Acoustical treatment, minimum of 14 foot ceilings for rehearsal areas. This would include the height from the highest riser.

- Lighting

Per District Design Guidelines

- Windows

Large view windows between teacher planning room and rehearsal areas (band and vocal). Teacher planning room window needs to be wide enough to view entire rehearsal room (height from floor to window is 36"). Small windows in practice room's doors.

- Doors

Doors should have a continuous rubber sound seal. Doors leading from the rehearsal area to the outside should be double doors with a removable center mullion so that large instruments can be moved. All doors are to be lockable. Doors on Practice and Ensemble Rooms are to be constructed to prevent sound transfer from adjacent spaces used for instruction.

- Plumbing

Single sink with hot and cold water, base cabinet, in Reference Room with countertop (Band and Vocal Rehearsal).

Electric water-coolers providing chilled water in rehearsal areas (Band and Vocal).

Stainless steel sink (5' long x 24" wide x 14" deep) with hot and cold water and hand wand in Instrument Storage Room to accommodate tuba.

- Electrical

Many electrical outlets must be provided because of the use of audiovisual equipment, amplified instruments, and other general needs. Each side wall should have three duplex outlets. The front wall should have at least four duplex outlets, spaced at convenient intervals. The back wall should have at least three. In addition, duplex floor outlets should be provided as follows: One at the director's podium location and four more at equal intervals. Microphone plug-ins should be provided in the front of the room, and at the three locations on the second terrace, one-third the distance from each wall. Also, two permanent microphone plug-ins should be installed in the front ceiling for professional recordings.

Permanent microphones that are 8' apart should be suspended 2' below the ceiling.

Four communications outlets in each Rehearsal Room.

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#### **IX. SPECIAL CONSIDERATIONS (continued)**

- **Electrical** (continued)

Four communications outlets in Ensemble Rooms.

One communications outlet in each Practice Room.

One communications outlet in each Teacher Planning.

- **Built-in Cabinetry**

- A. Built-in work counter/Storage Space

1. The Instrumental Storage Room cabinet is to have a counter with a large sink. The counter is to be continuous along end wall; minimum length 8' x 36" high x 24" deep with cabinets above and below with doors and adjustable shelves below. Finish to be plastic laminate.
2. Reference Rooms (Band and Vocal): Counter height cabinet 48" long x 36" high x 24" deep with stainless steel sink. Counter surface: plastic laminate to include base cabinet with doors and adjustable shelves. Above counter cabinet 48" long x 24" high x 12" deep (inside) with adjustable shelving and doors 18" above base.
3. Rehearsal Rooms (Band and Vocal): Open bookcases near entrance for students' books (for 80 students).

- B. Built-in cabinets/shelving

Material Storage: Adjustable shelves 48" long x 72" high x 18" deep except for space for four-drawer file cabinets.

- C. Built-in Instructional Aids

A 4' x 8' tackboard should be located near the main entrance. At least one 4' x 4' tackboard should be provided in another location in the rehearsal rooms where it can be easily observed.

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#### IX. SPECIAL CONSIDERATIONS (continued)

- Built-in Cabinetry (continued)

##### D. Other Built-Ins

##### Instrument Storage - Open Shelving

1. No instrumental group maintains a set instrumentation every year, but recommendations below will indicate the size of space necessary to store each type of instrument, with a rough estimate of how many of each type might be expected in a large program.

Space needs for band instruments:

Wenger locking cabinets or equivalent with grill doors or built-ins:

NOTE: Any substitutes for Wenger cabinets or equivalents must be approved by the Performing Arts Specialist.

Instrument	# Spaces for Each Instrument	Space Needed		
		W	H	D
B-Flat Clarinet	25	8"	14"	16"
Flute (incl. room for piccolo)	15	6"	6"	18"
Alto Sax, Alto Clarinet and Bass Clarinet	16	8"	12"	28"
Tenor Sax and Contra Bass Clarinet	6	8"	12"	28"
Baritone Sax	2	10"	14"	36"
Bassoon	4	6"	14"	32"
Oboe	4	6"	10"	16"
Cornet or Trumpet	15	8"	16"	24"
Trombone	10	12"	16"	40"
Baritone	8	12"	22"	40"
Alto Horn	8	12"	16"	28"
French horn	12	32"	20"	24"
Tuba	4	48"	28"	40"
1 storage rack for 3 string basses				

NOTE: Width and height could be interchangeable. It is suggested that where measurements are close to each other in size, the larger size compartment be made for both types of instruments. The number estimate is only approximation.

2. Reference Band

Built-in wall shelves ceiling to file cabinet height with adjustable shelving.

3. Reference Vocal

Built-in wall shelves ceiling to file cabinet height with adjustable shelving.

## **MIDDLE SCHOOL MUSIC**

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#### **IX. SPECIAL CONSIDERATIONS (continued)**

- Other Considerations
  - A. Size and Shape - Band and Vocal
    1. Provision 20 feet in front of the players to allow for proper diffusion of sound, and also to serve as an area for observers, recording equipment, piano and portable equipment, and rehearsal activity.
    2. Ceiling height should be a minimum of 14', optimum of 16', depending upon the acoustical treatment and architectural shape of the room. Minimum ceiling height of highest riser to be 14'.
    3. Non-parallel walls are necessary. Ceiling should also be non-parallel to floor. Moderately splayed (zig-zag) walls may be utilized.
    4. All practice rooms must have soundproofing and acoustical treatment (including doors).
    5. Band and vocal rehearsal should face diagonally (corner to corner) facing opposite directions.
  - B. Adjacent to auditorium (or concert state facility)
  - C. Covered walkways near the buildings and between the buildings and the auditorium should be well lighted for night use.
  - D. Adjacent restrooms which may be opened at night for workshops and rehearsals without entering rest of building.
  - E. Any substitutes for listed Wenger instrumental storage cabinets with locking grill doors must be approved by the Performing Arts Specialist