PRESENTATION 4:
Mix the brown bells on a table. (see Fig. 22) Listen for the lowest bell as you play all of them. Take the lowest bell and place it on the lowest white space on the bell cabinet. (see Fig. 23) Do not check it with the corresponding white bell.

Listen for the lowest bell as you play the remaining brown bells. Take that bell and place it on the next white space on the bell cabinet. Do not check it with the corresponding white bell.

Continue in this manner until all of the brown bells are on the bell cabinet.

Play up the brown bells to see if they have been correctly graded.

NOTES:
Children may think of other ways to grade from lower to higher.

"You will observe that certain children will repeat this exercise an almost incredible number of times. Perhaps you will hardly believe me when I say that children have performed this exercise a hundred times; I myself would have found it difficult to believe if I had not seen it. If the child repeats the exercise so often, it is because, if you will allow me the expression, he is hungry for it - almost insatiable. If the child is hungry for it, it is because he is in this sensitive period in which he requires it, a period which ends by his knowing all these notes. Then there is no longer any need for him to begin the exercise by finding the lowest note; he will be able to recognize at once the correct place for each note in the scale."

(Maria Montessori, unpublished lectures, London, 1925)

Demonstrate lowest to highest because that is the way we think in music theory. When children are secure with lower to higher, they may try higher to lower - IF, and only IF THEY THINK OF IT.

GAMES:
1. Mix the brown bells on a far table. Choose a white bell and pull it slightly forward. (see Fig. 24)
   "Can you find a brown bell that is just higher (or just lower) than this bell?"

2. Play the first 3 bells. The children sing the next bell.
3. Eight children - grade themselves into a scale. Each child holds one brown bell. A ninth child plays those bells as they all figure out how to get into the order of the scale.
4. After the sharps and flats have been introduced - do all of the above with the white, black and brown bells.
THE MAJOR SCALE PATTERN

MATERIAL:
- Regular bell setup
- Major scale pattern cards with control strip

PREREQUISITE: Ability to match and grade

PURPOSE/AIM: To acquaint child with whole steps, half steps and tetrachord.

PRESENTATION:
Check the bells.
Sort the cards into two piles: one for whole steps (five cards) and one for half steps (two cards).
Pick two adjacent bells that have a space between them. (i.e., the second and third bells)
Play and sing the bells.
"These bells have a space between them. This is called a whole step."
Place the appropriate card.
Pick two adjacent bells that have no space between them. (i.e., the seventh and eighth bells)
Play and sing the bells.
"These bells have no space between them. This is called a half step. Their sounds are closer together."
Place the appropriate card.
Continue in this manner until all the whole step and half step possibilities have been named and labeled. (see Fig. 25)
Remove the cards and mix them.
Invite the child to label the intervals.
The work may be checked with the control strip.
Remove the labels.
Take one keyboard on which the bells are placed and move it in front of the other keyboard. (see Fig. 26)
"Look at the whole steps and half steps. They are the same on each board."

NOTES:
Whole steps and half steps are referred to as tones and semi-tones in Montessori’s books.
An understanding of whole steps, half steps and the tetrachord are concepts which prepare children for work with the tone bars during the years from six to twelve.
This is the only time a keyboard on which the bells are placed is moved. (see Fig. 26)

GAME:
Invite each of eight children to take a brown bell and stand in order in a line. Space them in the whole step - half step pattern of the bells. Use giant steps and baby steps (in the whole step - half step pattern) while walking along the line and striking the bells.

Cards Identifying Half Step and Whole Step

Half Step and Whole Step Control Strip

Fig. 25 Card Material Showing The Whole Step - Half Step Pattern Of The Major Scale With Control Strip In Place.

Fig. 26 The Two Tetrachords Of The Major Scale Have The Same Pattern (Whole Step, Whole Step, Half Step).
NAME LESSONS WITH THE BELLS

MATERIAL:
- Regular bell setup
- White discs with note names (c, d, e, f, g, a, b, c)

PREREQUISITE: Ability to match the bells (This shows that the child can hear the pitches and can distinguish one from another.)

PURPOSE/AIM: To introduce the names of the pitches

NOTE: Use names in use by the country for the serious study of music theory and musical instruments. If using letter names - use lower case letters. There are two reasons for using lower case letters. First, these are the letter forms with which the children are familiar. Second, using lower case letters for names of notes and upper case letters for names of keys avoids confusion later when the child works with the tone bars.

PRESENTATION: For one child or a small group.
Select 2 bells such as c and g (the first and fifth bells). Set them in front of their places. (see Fig. 27)
Strike the first bell.
Say (or sing): "This is c."
Strike the other bell.
Say (or sing): "This is g."
Use a three period lesson as necessary.
On another day, check to see if the children remember c and g. If they remember, add one or two more bells and do the three period lesson with all three or four bells. If the children do not remember c and g, repeat the lesson with just those two pitches.

GAME: Children are assigned different pitches. They raise their hand when they hear their pitch

NOTES: Two kinds of pitch:
Perfect pitch - a child with this kind of pitch remembers the names of the pitches.
Relative pitch - a child with this kind of pitch does not remember the names of the sounds of the pitches. If it is obvious the child is not remembering the sounds in relation to their names, show this child that the names of the bells use the first seven letters of the alphabet in order. Place the white discs with the appropriate note names in front of the bells. (see Fig. 28) At some point this should also be done with children who have perfect pitch.

If offered at the right age, more people would develop perfect pitch.

After a child has mastered one system of naming, other systems may be of interest.
For example: do, re, mi, fa, sol, la, ti, do

Fig. 27 Bells Selected For Naming.

Fig. 28 Laying Out The Note Names Of The Bells In Order.
(c, d, e, f, g, a, b, c)
"Musical notation is the art of representing musical tones by means of written characters." Theo Baker, Ph.D

SECTION 2: NOTATION - INTRODUCTION

The musical experiences in section two begin with an introduction to the background (musical staff) on which musical notation is placed. The importance of the G-clef is emphasized because notes on a staff have no meaning without a clef. A clef tells the placement of a particular note on a staff. All of the other notes on that staff are placed in relationship to the note designated by the clef. The C-clef shows the placement of the note for "middle c." The G-clef shows the placement of the note for "g" above middle c and the F clef shows placement of the note for "f" below middle c.

At this point only the G-clef is introduced because it is the only clef needed to show the notation of the Montessori bells.

The first introduction to the note names on the staff is provided with materials that have an exact control for the placement of the notes on the staff. Placing a set of white discs with the note names in front of the bells (c, d, e, f, g, a, b, c) provides a control of error for matching the written notation with the sounds of the bells. As the name of each note on the board is turned over, the corresponding bell is played. It is important to attach the reality of the sound to the notation in order for children to perceive that the notation has meaning.

The matching set of cards for the notes of the C-major scale has two purposes. It trains the eye to distinguish the placement of a note on the lines and spaces of the staff. It also aids in the memorization of the names of the notes on the staff.

Lower case letters have been used for the note names. These are the letters the children learn first in the Montessori Children’s House. Upper case letters are used for the names of keys when the children work with the tone bars in the elementary class. (i.e., the notes in the key of C major are c, d, e, f, g, a, b, c).
INTRODUCTION TO THE STAFF

MATERIAL:
- regular bell setup
- green board with five horizontal black lines and one ledger line
- parts of the staff nomenclature cards showing staff, lines, spaces, ledger lines and G-clef
- chalk board
- staff marker
- chalk

PREREQUISITE: Name lessons with the bells

PURPOSE/AIM: Introduction of the written aspects of music. As children need to attach meaning to the different configurations (symbols) of the letters of the alphabet in order to read, they need to attach meaning to the configurations of musical symbols and the background (staff) on which they are placed.

Follow the same procedure for introducing the four spaces.

<table>
<thead>
<tr>
<th>5th</th>
<th>4th</th>
<th>3rd</th>
<th>2nd</th>
<th>1st</th>
</tr>
</thead>
</table>

Name the ledger line on the green staff board. (see Fig. 29).

Use the staff marker and make a staff and ledger lines on the chalk board. Talk about the need for ledger lines both above and below the staff when notes are used that are higher or lower than those which may be represented on the staff. It is important that the children know that ledger lines occur anywhere they are needed, rather than only in the one position on the green staff board. Give a verbal way to describe the lines and spaces created by the use of ledger lines. (see Fig. 30)

Fig. 29 The Staff.

Fig. 30 White Board or Chalk Board. (As many ledger lines as needed may be shown above or below the staff).

NOTE:
The following is the way to describe the lines and spaces above and below the staff as seen in Fig. 30.

3rd ledger line above the staff
3rd space above the staff
2nd ledger line above the staff
2nd space above the staff
1st ledger line above the staff
1st space above the staff
1st space below the staff
1st ledger line below the staff
2nd space below the staff
2nd ledger line below the staff
3rd space below the staff
3rd ledger line below the staff

NOTE:
Always count from the bottom up. That is the way one thinks in music theory.
Introduce the G-clef. Place the clef so the curved part of the bottom rests on the first line of the staff and the end of the curve rests on the second line of the staff. (see Fig. 31) This shows that g is on the second line of the staff. Notes on a staff have no meaning without a clef. Relate parts of the staff nomenclature cards to the wooden material so the children will have a means to isolate and name the staff, lines, spaces, ledger lines and G-clef. (see Fig’s. 31, 32) These cards are used in the same manner as other nomenclature cards. The labels are read and matched to the pictures. The control cards are then used to check the matching of the labels and pictures.

CONTROL OF ERROR:
Proper number of lines and spaces on the staff board
Child’s previous knowledge of counting
The parts of the staff control cards

LANGUAGE:
staff, lines, spaces, ledger lines, above the staff, below the staff, G-clef, staff marker

NOTES:
Always count lines and spaces of the staff from lower to higher.
Pitch or note names are written in lower case letters.
Key names use upper case letters.
Example:
The notes of the scale in the key of C-major are c, d, e, f, g, a, b, c.
clef: A sign placed at the beginning of each musical staff to indicate the pitches of the notes. Without a clef, a note on a staff has no meaning. The clef is the key that opens the way to the reading of music.

The placement of note stems depends upon the relationship of the notes to the staff. Notes below the 3rd line of the staff should have their stems going up. Notes above the 3rd line should have their stems going down. Notes on the 3rd line may have their stems going in either direction.

Fig. 31 The G-clef Placed On The Staff Board With The End “Tail” Indicating That g Is On The Second Line.

Fig. 32 The Parts Of The Staff Nomenclature Cards.
NOTE NAMES ON THE NUMBERED STAFF BOARD

MATERIAL:
• regular bell setup
• 8 white discs with note names (c, d, e, f, g, a, b, c)
• staff board with numbered black spaces
• G-clef
• 8 black discs with letters on one side and numbers on the other:
  c d e f g a b c
  1 2 3 4 5 6 7 8

PREREQUISITE: Introduction to the staff

PURPOSE/AIM: Association of the note names with their proper places on the staff that uses the G-clef.

PRESENTATION:
Have the child check the bells by playing up the brown bells and down the white bells.

Then the child sets the white discs with the note names in front of their appropriate bells, (see Fig. 33) and places the G-clef on the green staff board. (Notes have no meaning without it.) (see Fig. 34)

The adult now proceeds to place the eight black discs with their number sides up in a cluster near the staff board. (see Fig. 35)

Pick a numbered disc. Place it on its corresponding number on the staff. (see Fig. 36)
NOTE NAMES ON THE UNMARKED GREEN STAFF

MATERIAL:
- regular bell setup
- 8 white discs with note names (c, d, e, f, g, a, b, c) placed in front of bells
- 32 white discs (4 each of c, d, e, f, g, a, b, c)
- G-clef
- 2 green staff boards
- ledger lines
- C-major scale control strip (see Fig. 53 on page 25)
  (So the children do not guess.)

PREREQUISITE: Note names on the marked green staff board.

PURPOSE/AIM: Memorization of note names on the staff which uses a G-clef.

PRESENTATION:
Have the child check the bells by playing up the brown bells and down the white bells.

Then the child sets the white discs with the note names in front of their appropriate bells, and places the G-clef on the green staff board.

Pick a white disc. Say the name of the note it represents. Look it up on the control strip. Place it upside down on its proper line or space on the green staff boards. (see Fig. 39) Use only the places on the staff that are used by the notes on the control strip. Play the corresponding bell. Do a few more. Be sure one of the notes is a "c". Show the ledger line below the staff and place the note on top of it. (see Fig. 40)

Invite the children to put the rest of the discs on the board. (see Fig. 41)

Pick a particular line or space. Turn all of the discs on that line or space over. They should all have the same name. (see Fig. 42) Play them on the bells. (If there are 4 "g’s", play the corresponding bell 4 times.)

CONTROL OF ERROR: C-major scale control strip
PARALLEL EXERCISES FOR NOTE NAMES OF THE C-MAJOR SCALE - MATCHING

MATERIALS:

- regular bell setup
- C-major scale matching cards (names of the notes are written on the backs of the cards) (see Fig. 43.1)
- 8 white discs with note names (c, d, e, f, g, a, b, c) placed in front of bells
- C-major scale control strip
- box of plain black discs
- green staff boards
- G-clef
- ledger lines

PREREQUISITE: Note names on the unmarked green staff board.

PURPOSE/AIM: To memorize the placement of the notes of the C-major scale on the staff with the G-clef.

PRESENTATION:

Have the child check the bells by playing up the brown bells and down the white bells.

Then the child sets the white discs with the note names in front of their appropriate bells.

Take each matching card, look it up on the control strip, and place it in front of its corresponding bell. Play the bell. (There will be 2 cards for each bell.) (see Fig. 43) This attaches the reality of their sound to their graphic representation.
Take one card from each pair, mix them and place in a vertical column. (see Fig. 44)

Take the remaining cards and compare them one at a time with the cards in the vertical column. When the match is found leave the card next to it's match. Do this carefully and precisely so that the staff lines on the two cards being compared match perfectly. (see Fig's. 45 & 46) This is eye training to see the notes in relationship to the lines and spaces of the staff.

**FURTHER STEPS:**

Look at the side of the card which has the note on the staff. (see Fig. 47) Think of the name of the note. Check the note name on the back of the card. (see Fig. 48) Play the corresponding bell.

Look at the side of the card with the note name. Place a black disc on the staff board with the G-clef in place. Check the side of the card with the note on the staff. Play the corresponding bell. (see Fig's 49 & 50)

**NOTE:** Use lower case letters for note names.

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**Fig. 44** Half Of Matching Cards Ready To Match.

**Fig. 45** Not Matched.

**Fig. 46** Matched.

**Fig. 47** Note on Staff.

**Fig. 48** Name of Note.

**Fig. 49** A Black Disc Is Placed On The Staff In The Position For The Note "a".

**Fig. 50** The Reverse Side Of The Card Is Used As The Control.
PARALLEL EXERCISES FOR NOTE NAMES OF THE C-MAJOR SCALE - NOMENCLATURE CARDS

MATERIAL:
• C-major scale nomenclature cards

PREREQUISITE: C-major scale matching cards

PURPOSE/AIM: To memorize the placement of the notes of the C-major scale on the staff with the G-clef

PRESENTATION:
These cards are used in the same manner as other nomenclature cards. The labels are read and matched to the pictures. (see Fig. 51) The control cards are then used to check the matching of the labels and pictures.

Fig. 51: C-major Scale Nomenclature Cards.

PARALLEL EXERCISES FOR NOTE NAMES OF THE C-MAJOR SCALE - GRADING

MATERIAL:
• C-major scale grading cards
• C-major scale grading control strip

PREREQUISITE: C-major scale nomenclature cards

PURPOSE/AIM: To memorize the sequence of the placement of the notes of the C-major scale on the staff with the G-clef

PRESENTATION:
Place the eight note cards in order from lowest to highest. (see Fig. 52)

Check with the control strip (see Fig. 53)
Mix up the eight cards and invite the child(ren) to place them in order.

Fig. 52: The Grading Cards Are Placed In Order From Lower To Higher.

Fig. 53: The Names Of The Notes On The Reverse Side Of The Grading Cards Are Checked With The C-major Scale Grading Control Strip.
PARALLEL EXERCISES FOR NOTE NAMES OF THE C-MAJOR SCALE - DESCRIPTION CARDS

MATERIAL:
- C-major scale description cards
  - Set 1 - picture with matching description cards and control booklet (see Fig. 57)
  - Set 2 - description cards with separate labels and control booklet
  - Set 3 - description cut into strips and control booklet

PREREQUISITE:
C-major scale matching, nomenclature and grading cards

PURPOSE/AIM:
To read and reinforce the placement of the notes of the C-major scale on the staff with the G-clef.

USE:
Set 1 - Read a description. Find its matching picture. (see Fig. 54) Check with the control booklet.
Set 2 - Read a label and find its description. (see Fig. 55) When the labels have been matched to the cards, use the control booklet to check.
Set 3 - Read the strips and arrange them to form the note descriptions. (see Fig. 56) When all descriptions are complete, check with the control booklet.

Fig. 54 Set 1 Picture With Matching Description
Fig. 55 Set 2 Description Cards With Separate Labels
Fig. 56 Set 3 Descriptions Cut Into Strips
Fig. 57 Control Booklet