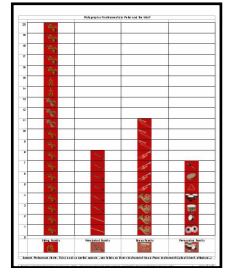
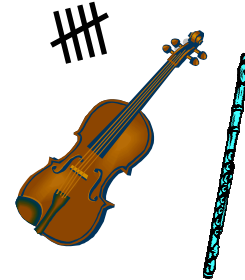


Grade Level(s): One and Two

Lesson Title: Every Instrument Has a Place

Focus: (Concept or skills to be emphasized)

Graphing, pictographs, tally marks, classifying objects, data analysis



Objectives: See end of lesson for objectives and standards achieved.

Background Information:

Symphony orchestras vary in size according to the needs of specific pieces of music. The composer determines the instrumentation, although the conductor may alter the number of musicians used, depending upon the performance hall.

In the *Peter and the Wolf* Young People's Concert, under the direction of Maestro Grant Cooper, the orchestra will include many, but not all of the instruments mentioned in *Orchestral Instruments* section of the *Peter and the Wolf* CD ROM. Instruments that will be used in the WVSO's performance of *Peter and the Wolf* will be:

String Family

- Violin
- Viola
- Cello
- Double bass

Woodwind Family

- Flute
- Oboe
- Clarinet
- Bassoon

Brass Family

- French horn
- Trumpet
- Trombone

Percussion Family

- Crash cymbals
- Bass drum
- Snare drum
- Timpani
- Triangle
- Tambourine
- Castanets

PLEASE NOTE: For the purposes of this lesson, the numbers of instruments are within the usual range of each family. Please tell your students that the actual number of musicians playing each instrument in the concert will probably differ slightly from the examples provided in this lesson.

Activities (Procedures):

1. Using the *Peter and the Wolf* CD ROM, read about the instruments of the orchestra with your students, found under *Instruments in The Orchestra Pit* section. Allow students to listen to each of the instruments on the CD ROM so that they become familiar with how they sound. List the families of instruments (string, woodwind, brass, and percussion)

played by symphony orchestras on a flip-chart, chalkboard or overhead, and give examples of the instruments that fall within each family (see sample chart format). *GM.1.2.4, GM.2.2.6, MA.1.5.1*

2. Ask each student to name the instrument in the orchestra they would most like to play if they performed in a symphony orchestra. Help each student to identify in which instrument family his or her choice belongs. Tally the choices on the chart by instrument families. Once all of the students have made their choices, ask students to add the total number of tally marks for each family. Construct a bar graph showing each of the families and the number of marks each family received. Ask students to come up with a suitable title for the graph (e.g., *Instrument Families We Like Best*), and to help you properly label the graph. *MA.1.5.5, MA.2.5.4* From this bar graph, ask students questions such as:

String Family	Woodwind Family	Brass Family	Percussion Family

Sample Chart Format

- How many people would most like to play an instrument from the _____ instrument family?
- Which instrument family received the most/least votes?
- Did more/less people like instruments from the _____ (e.g., *string*) instrument family than the _____ (e.g., *brass*) instrument family?
- How many more/less people chose instruments from the _____ (e.g., *woodwind*) instrument family than from the _____ (e.g., *percussion*) instrument family? How did you find your answer?
- Was there another type of graph we could use to show this information? (e.g., pictograph) *MA.1.5.5, MA.2.5.3*

3. Using pictures of instruments on the *Peter and the Wolf* Instrument Cutout Sheet (found at the end of this lesson), place the pictures of the instrument families on a chalkboard or wall, aligned so that students can help create a pictograph (Note: The pictures of instruments on the Instrument Cutout Sheet are not proportionally accurate; i.e., the double bass is the largest instrument in the string family). *MA.1.5.2, MA.2.5.1* Cut out pictures of the individual instruments on the *Peter and the Wolf* Instrument Cutout Sheet and randomly distribute them among your students (students will each receive several instruments). Ask students to place the pictures of their instruments into the proper instrument families (see sample pictograph). Upon completion of the pictograph, ask students questions about the graph, such as:

- How many instruments are in the _____ (e.g., *woodwind*) instrument family?
- Which instrument family has the most/least number of instruments?

- How many more/less instruments are in the _____ (e.g., *percussion*) instrument family than the _____ (e.g., *brass*) instrument family? How did you find your answer?
4. Conclude this lesson by reviewing the location of the instruments on the Structure of the Orchestra chart on the *Peter and the Wolf* CD ROM and play the audio examples (found under Instruments in The Orchestra Pit section) for each instrument. Play audio examples at random and ask students to identify which instrument was used to create the sound.

Assessment/Evaluation:

1. Student completed pictograph.

Supplemental Materials and Equipment Needed:

Every Instrument Has a Place Instrument Cutout Sheet
Masking tape or non-marking adhesive

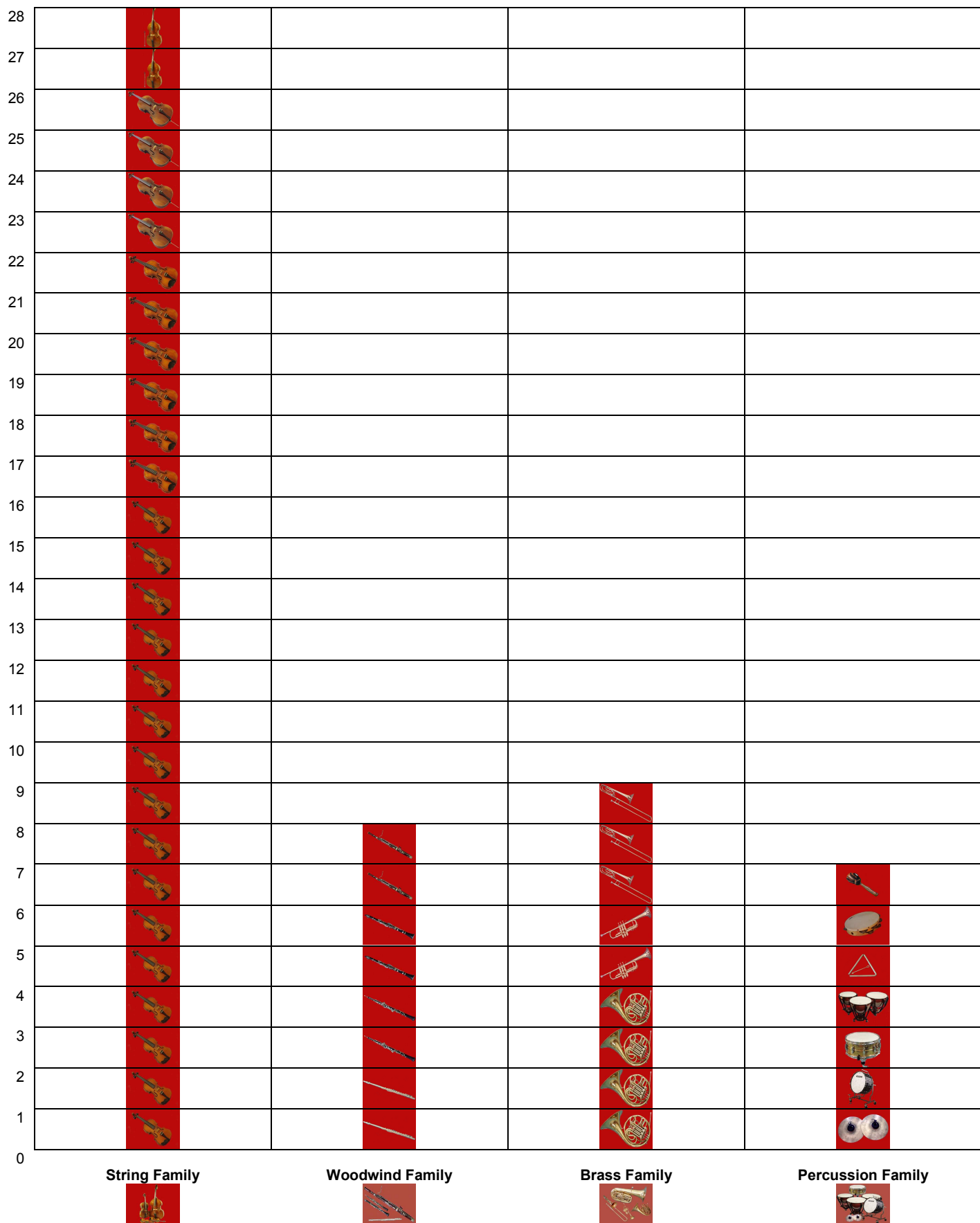
Resources:

WVSO *Peter and the Wolf* CD ROM - Instruments section

References:

Van de Walle, John. (2004). Elementary School Mathematics (5th ed.). Allyn and Bacon: Boston, MA.

Sample Pictograph of Instruments in *Peter and the Wolf*



National Standards:

Music

Listening to, analyzing, and describing music.

Mathematics

Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them:

- Sort and classify objects according to their attributes and organize data about the objects

Understand numbers, ways of representing numbers, relationships among numbers, and number systems:

- Count with understanding and recognize "how many" in sets of objects

Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them:

- Pose questions and gather data about themselves and their surroundings
- Sort and classify objects according to their attributes and organize data about the objects
- Represent data using concrete objects, pictures, and graphs.

WV Content Standard Objectives:

First-Grade

MA.1.5.1 identify and investigate various forms of data collection.

MA.1.5.2 read and interpret a pictograph with each picture representing a single unit.

MA.1.5.5 tally by ones, organize the data in a chart/table, and construct a bar graph; read and interpret tally charts and tables.

MA.1.5.5 analyze data represented on a graph using grade level appropriate questions.

GM.1.2.4 recognize the four families of the symphony orchestra.

Second-Grade

MA.2.5.1 create, read, and interpret a pictograph with each picture representing greater than or equal to a single unit.

MA.2.5.3 analyze data represented on a graph using grade level appropriate questions.

MA.2.5.4 formulate questions, collect data, organize and display as a chart/graph.

GM.2.2.6 identify instrumental families by hearing and seeing a representative instrument from each family.

Kentucky Program of Studies:

M-P-NC-2

Students will order groups of objects according to quantity.

M-P-NC-5

Students will order and compare numbers from 0-10, using physical models.

M-P-GM-15

Students will compare and order by size (e.g., large/small).

M-P-PS-1

Students will make a graph using manipulatives.

M-P-PS-2

Students will read data displayed on concrete graph.

M-P-PS-3

Students will display data on a pictograph.

M-P-PS-4

Students will read data displayed on pictographs (a display of information using symbols or pictures).

M-P-PS-5

Students will display data on a bar graph.

M-P-PS-6

Students will read and compare data on bar graph.

Ohio Academic Content Standards*First-Grade*

Y2003.CMA.S05.GPK-02.BB.L01.I01

Data Collection /

01. Identify multiple categories for sorting data.

Y2003.CMA.S05.GPK-02.BB.L01.I02

Data Collection /

02. Collect and organize data into charts using tally marks.

Y2003.CMA.S05.GPK-02.BC.L01.I03

Data Collection /

03. Display data in picture graphs with units of 1 and bar graphs with intervals of 1.

Y2003.CMA.S05.GPK-02.BB.L01.I07

Statistical Methods /

07. Answer questions about the number of objects represented in a picture graph, bar graph or table graph; e.g., category with most, how many more in a category compared to another, how many altogether in two categories.

Second-Grade

Y2003.CMA.S05.GPK-02.BA.L02.I01

Data Collection /

01. Pose questions, use observations, interviews and surveys to collect data, and organize data in charts, picture graphs and bar graphs.

Y2003.CAM.S03.GKG-04.BB.L02.I03

Analyzing and Responding /

03. Identify selected music instruments (e.g., flute, trumpet, guitar, violin, sitar, congas, bagpipes, synthesizer).

*All Assessments are to be at the expected state assessment standard; in West Virginia this is mastery level; in Ohio this is benchmark level; and, in Kentucky, this is academic expectations level.

PLEASE NOTE: For the purposes of this lesson, the numbers of instruments are within the usual range of each family. Please tell your students that the actual number of each instrument used in the concert will probably differ slightly from the examples provided in this lesson.

The number of instruments from each instrument family used in this lesson are as follows:

Percussion Family

1 Crash cymbals
1 Bass drum
1 Snare drum
1 Timpani
1 Triangle
1 Tambourine
1 Castanets

Total: 7

String Family

16 Violins
6 Violas
4 Cellos
2 Double basses

Total: 28

Woodwind Family

2 Flutes
2 Oboes
2 Clarinets
2 Bassoons

Total: 8

Brass Family

4 French horns
2 Trumpets
3 Trombones

Total: 9



Percussion Family



Crash Cymbals



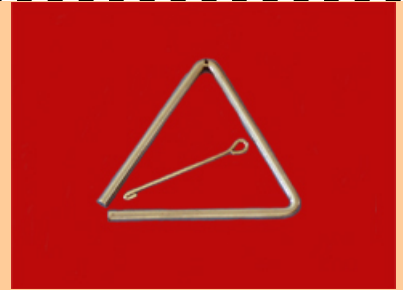
Bass Drum



Snare Drum



Timpani



Triangle



Tambourine



Castanets



String Family



Violin



Violin



Violin



Violin



Violin



Violin



Violin



Violin



Violin



Violin



Violin



Violin



Violin



Violin



Violin



Violin



Viola



Viola



Viola



Viola



Viola



Viola



Cello



Cello



Cello



Cello



Double Bass



Double Bass



Woodwind Family



Flute



Flute



Oboe



Oboe



Clarinet



Clarinet



Bassoon



Bassoon



Brass Family



French Horn



French Horn



French Horn



French Horn



Trumpet



Trumpet



Trombone



Trombone



Trombone