

Integrated Subject Areas:

- English Language Arts
- Mathematics
- Fine Arts

Grade(s): 4–6

Lesson Length: 40 minutes

Instructional objectives:

- Students will listen to *Bolero* by Ravel.
- Students will understand how music has a pulse.
- Students will draw connections between music and other subjects.

“I can” statements

- I can find the pulse in music.
- I can describe the sounds that I hear.
- I can identify the difference between fast and slow tempos in music.

**Chicago Reading Initiative
Integration**

- Comprehension
- Word Knowledge
- Fluency

Say: “Rah-VELL”
Say: “Bowl-AIR-oh”

Find the Pulse

DESCRIPTION

In this lesson, students will learn how every piece of music has a pulse, a steady beat that keeps the music going and that helps the musicians stay together.

Students will identify the pulse in a variety of musical examples and play along with classroom instruments. Students will discuss and critique their performances and become aware of some of the skills used by professional musicians.

Students will learn about French composer Maurice **Ravel** and listen to his piece **Bolero** to further their understanding of the musical pulse.

Students will transfer what they have learned about rhythm and pulse to other subject areas.



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Music Activity Partnership

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Materials

- A stopwatch or clock with a second hand
- A selection of musical instruments
- A recording of Maurice Ravel's *Bolero*
- CD Player

Supplemental Resources:

- For more information about Maurice Ravel, please visit <http://en.wikipedia.org/wiki/Ravel>

PROCEDURE

1. Have students find their pulse by placing their fingers on their neck, under the jaw. Observe the speed, regularity and quality of the pulse. Is it steady? Is it continuous?
2. Explain that music has a pulse just like the human body. It is the silent, steady, underlying count within the music. It is the reference point for all rhythms within the piece. Musicians must pay attention to this pulse; they depend on it to stay together.
3. Take a simple musical example and demonstrate how to identify and feel the pulse. For example, sing *Row, Row, Row Your Boat*:

Note: "X" indicates where the pulse occurs.

X	X	X	X	X	X	X	X
Row,	row,	row your	boat,	gent-ly	down the	stream,	_____
X	X	X	X	X	X	X	X
Mer-ri-ly,	mer-ri-ly,	mer-ri-ly,	mer-ri-ly,	life is	but a	dream.	_____

4. Demonstrate that the pulse can be *felt*, even if it is not heard. Repeat *Row, Row, Row Your Boat*, but only singing every fourth pulse. For example:

X	X	X	X	X	X	X	X
Row,				gent-ly			
X	X	X	X	X	X	X	X
Mer-ri-ly,				life is			

5. Distribute classroom instruments and invite three to five students at a time to play along with the pulse. Use an instrument with a different **timbre** to demonstrate pulse along with the students.
6. Explain that the students will now listen to a famous piece of orchestral music: *Bolero* by French composer Maurice Ravel. Play a short section of *Bolero* and demonstrate how the pulse would be played along with the music.
7. Pause the music and invite three to five students up to the front of the class to play along with the piece using classroom instruments. Their job is to match the pulse of the music. After a minute or two, as the music keeps playing, substitute one player at a time with another student from the class. Even though the student performers will rotate, there should be a continuous pulse for the entirety of the piece. Students should play soft enough that they can always hear the pulse.

When the players drift off the pulse, guide them back by playing it on your instrument. Another way to demonstrate the pulse is by using body language, the same way a conductor would indicate the pulse to musicians.

When the piece reaches the end, you should have given most of the class the opportunity to play the pulse.

8. After the end of the piece, lead the students in reflecting on what they heard. Prompting questions may include:
 - How did we do as a class in maintaining a steady pulse? Could you do it by yourself for the whole piece? Do musicians need to do this? Did the pulse of the music change at all? (The snare drum in *Bolero* plays from the very beginning to the very end!)
 - What did you notice changed during the musical piece? (Point out the long gradual **crescendo**, the entrance of different musical instruments, etc.)
 - What stayed constant during the piece besides the pulse? (A rhythmic **ostinato** continues throughout the piece and the melody occurs repeatedly.)
9. Share more information about Maurice Ravel, including information about the culture and history that influenced his music.

Variations

- Select another musical example and repeat the activity. For a piece with a very different tempo, try *Buckaroo Holiday* or *Hoe-Down*, by Aaron Copland.
- What is the "pulse rate," or **tempo** (in beats per minute), of Ravel's *Bolero*? Play a section and count the number of beats that occur in 15 seconds. Multiply by four to determine the tempo or number of beats per minute. Associate that rate with one of the musical tempo markings below.

Largo (or Lento): 40–60 beats per minute (BPM)

Larghetto: 60–66 BPM

Adagio: 66–76 BPM

Andante: 76–108 BPM

Moderato: 108–120 BPM

Allegro: 120–168 BPM

Presto: 168–200 BPM

Prestissimo: 200+ BPM

Extensions:

- Relate the idea of a musical pulse to the students' pulse rate.
 - Have students determine their pulse. What activities will change its rate?
 - Ask students to express the formula for finding their pulse rate in a math equation.
- How is a pulse used in science?

NOTES

VOCABULARY

Crescendo – Sound getting progressively louder; from Italian literally meaning *growing*.

Ostinato – A rhythmic pattern that repeats over and over again.

Tempo – The fastness or slowness of a piece of music. Tempo is measured in beats per minute (BPM).

Timbre – The distinctive quality of a sound. For example, the timbre of a violin may be described as brighter than that of a viola.

ILLINOIS LEARNING STANDARDS

FINE ARTS

Learning Benchmark 25.A: Know the language of the arts—understand organizational principles of the arts.

Learning Benchmark 26.B.2c: Sing or play acoustic or electronic instruments demonstrating technical skill.

ENGLISH LANGUAGE ARTS

Learning Benchmark 1.C.3c: Compare, contrast and evaluate ideas and information.

MATHEMATICS

Learning Benchmark 6.B: Solve one and two-step problems involving whole numbers using addition, subtraction, multiplication and division.



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