

Music and Math Lesson Plan



Grade Level(s): Kindergarten, First, and Second

Lesson Title: Patterns in Music

Focus: (Concept or skills to be emphasized) Rhythm, melody, theory, listening, recognition of repeating patterns

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

Background Information: Patterns of many kinds can be found in music. Examples of patterns: the rhythm you might hear from a drum, the repeating chorus you might sing in a song, or a repeating melody or rhythm you might hear in an orchestral performance. Repeating patterns can be seen in the written score of the music and can be heard during a performance. Notes can go up or down in pitch and change value in duration to form a musical pattern that can be seen in printed music and heard when it is performed. Of the attributes that can change in musical patterns, this lesson will focus primarily on rhythm. This lesson uses the two main tunes found in "Tubby the Tuba," the original *Pretty Tune* and *Tubby's Tune* that he learns from the Bullfrog.

Activities (Procedures):

1. Prior to this lesson, cut around the hash marks of the "Sample Notes and Rests" and "Sample Rhythm Patterns" found at the end of this lesson. Enlarge and reproduce each one on a single sheet of 8.5 x 11 paper. (Make 6 copies of each of the individual "Sample Notes and Rests.") Show students the half, quarter, and beamed eighth notes. Explain/review their values. Show students several examples of repeating musical patterns from the "Sample Rhythm Patterns." Have the class clap a quarter note pulse while they verbalize

each pattern using Kodály syllables (ta (); ti ti (); ta-a (); etc.)

2. Tell students they will be using notes to make patterns. Ask for six volunteers to stand at the front of the class. Provide five of the students with large musical notes in a simple repeating pattern. Ask students to help identify what note(s) would come next in the pattern.



Once the pattern is complete, have students verbalize the rhythm. For example:

3. Ask for a new set of volunteers and repeat several times with different patterns, perhaps longer or more difficult.
4. Divide the class into several groups. Ask each group to create a different pattern and then present it at the front of the class. Tell two (or more) groups with different patterns to

5. Tell students that there are repeating patterns in most music. Explain that patterns can be *seen* in written music and *heard* when it is played. Have students open their Student Study Guides to the "Pretty Tune and Tubby's Tune - Patterns Worksheet." Notice that both of these tunes are all Ta and Ti Ti patterns. Have students look for the repeating rhythm patterns in the written music of the *Pretty Tune* and *Tubby's Tune*. (See the end of this lesson plan for the Answer Key.) After they have found the patterns, play Track 2, *Pretty Tune*, and Track 1, *Tubby's Tune*, found on the enclosed Audio CD. Ask students to **listen** for the patterns they have found on the worksheet.

Modifications (Special Needs):

1. Visual and auditory impaired students will need special consideration during this lesson with seating and materials adaptations.
2. Learning disabled students may benefit by abbreviating this lesson's content and length.
3. Varying learning styles will be addressed with the variety of activities in this lesson - tactile, visual and sensory learning styles are utilized.
4. Gifted student needs are provided through the creative aspect of the pattern development.

Assessment/Evaluation*:

1. Formative Evaluation Plan: The teacher will facilitate discussion and observe student participation. During the completion of the "Pretty Tune and Tubby's Tune - Patterns Worksheet", the teacher will address the understanding of the assignment.
2. Summative Evaluation Plan: The teacher will assess the understanding of the pattern sequencing through observation notes. The teacher will evaluate the accuracy of the completion of the "Pretty Tune and Tubby's Tune - Patterns Worksheet."

Supplemental Materials and Equipment Needed: A copy of the WVSO Audio CD; Player able to play CD; Reproduce copies of notes found at end of lesson - at least 6 of each; Copies of Student Study Guides for each student; and red and blue colored pencils or fine markers for each student

Resources:

General information on music and music notation, geared toward young children:

<http://www.sfskids.org/templates/home.asp?pageid=1>

General information on music and music notation, geared toward adults:

<http://library.thinkquest.org/15413/theory/theory.htm>

References:

Organization of American Kodály Educators. (Last updated: May 26, 2004). Moorhead, MN. Retrieved from <http://www.oake.org/>.

Winslow, R. W., Dallin, L. & Wiest, S. B. (2001). Music Skills for Classroom Teachers (9th edition). New York: McGraw Hill.

National Standards:

Music

- Reading and notating music.
- Listening to, analyzing and describing music.
- Evaluating music and music performances.

Mathematics

Understand patterns, relations, and functions

- Sort, classify, and order objects by size, number, and other properties
- Recognize, describe, and extend patterns such as sequences of sounds and shapes or simple numeric patterns and translate from one representation to another
- Analyze how both repeating and growing patterns are generated

WV Content Standard Objectives: 21st Century standards are distributed separately.

Kindergarten

- GM.K.2.3 read notation for quarter notes, quarter rests, and beamed eighth notes.
GM.K.2.6 distinguish between same and different musical phrases.
MA.K.2.2 identify, describe, and extend a repeating pattern found in common objects, sound, and movement.

First-Grade

- GM.1.2.1 read beamed eighth notes, quarter notes and rests.
GM.1.2.3 identify same and different sections of music.
MA.1.2.2 analyze and create a repeating pattern using common objects and numbers.

Second-Grade

- GM.2.2.3 read rhythmic notation in 2/4 and 4/4 meter.
MA.2.2.1 analyze, describe, extend and create a growing pattern.
MA.2.2.4 given the rule, complete the pattern.

*All Assessments are to be at the expected state assessment standard at the mastery level.

Sample Notes and Rests



ta - a



ta



ta ta



ti ti

Sample Notes and Rests



ti

ti

ti

ti



sh - h



sh

(One clap)

Sample Rhythm Patterns

ta~a ta ta

A dashed yellow box containing three musical notes. The first is a half note with a white oval, labeled 'ta~a'. The second and third are quarter notes with black ovals, labeled 'ta' and 'ta'.

ta~a ta~a

A dashed yellow box containing two musical notes. Both are half notes with white ovals, labeled 'ta~a' and 'ta~a'.

ti ti ta ti ti ta

A dashed yellow box containing six musical notes. The first three are quarter notes with black ovals, labeled 'ti', 'ti', and 'ta'. The next three are quarter notes with black ovals, labeled 'ti', 'ti', and 'ta'.

ta ti ti ta ti ti

A dashed yellow box containing six musical notes. The first is a quarter note with a black oval labeled 'ta'. The next two are eighth notes with black ovals, labeled 'ti' and 'ti'. The next two are eighth notes with black ovals, labeled 'ta' and 'ti'. The last is a quarter note with a black oval labeled 'ti'.

ti ti ta~a sh

A dashed yellow box containing four musical symbols. The first two are quarter notes with black ovals labeled 'ti' and 'ti'. The third is a half note with a white oval labeled 'ta~a'. The fourth is a stylized black symbol labeled 'sh'.

ta~a sh~h

A dashed yellow box containing two musical symbols. The first is a half note with a white oval labeled 'ta~a'. The second is a stylized black symbol labeled 'sh~h'.

ti ti ti ti ti ti ti ti

A dashed yellow box containing eight musical notes. All are quarter notes with black ovals, labeled 'ti', 'ti', 'ti', 'ti', 'ti', 'ti', 'ti', and 'ti'.