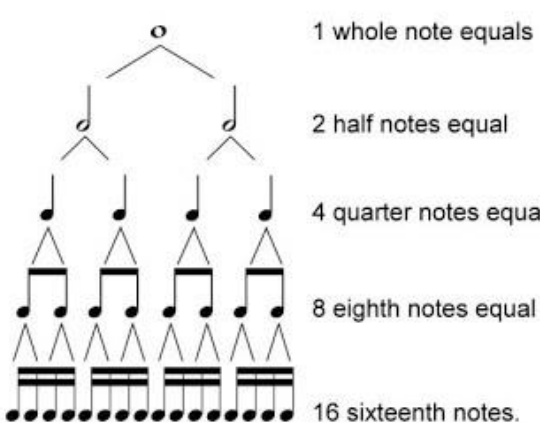


Arts with Numeracy: Music

Name of Lesson/Unit: Factor trees/Note strips/Pie notes	Subject and Grade: Music – Grades 1-6
Arts Expectations: Fundamental Concept - Duration	Math Strand Connections: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Number Sense & Numeration <input type="checkbox"/> Measurement <input type="checkbox"/> Patterning & Algebra <input type="checkbox"/> Geometry & Spatial Sense <input type="checkbox"/> Data Management & Probability
<input checked="" type="checkbox"/> Warm-up (minds on) <input checked="" type="checkbox"/> Activity (one class) <input type="checkbox"/> Mini-unit (several classes)	
Terminology Quarter, eighth, half, whole, dotted half, sixteenth, note, rest, relationship, attribute	Materials FACTOR TREES: Paper and pencil NOTE STRIPS: Note Template worksheet with notes precut for students, glue PIE NOTES: Pie chart template, scissors, pin for the centre of the pie chart to hold two pieces of paper together
Learning Goal (<i>student-friendly language that can be shared with the students</i>): I can represent the number of beats in a note using FACTOR TREES/PIE CHARTS/NOTE STRIPS. I can talk about the relationship between notes and find common attributes between them.	
Factor trees, pie charts and note strips can all be used to help students understand the number of beats in a particular note and allow them to see the relationship between different notes.	
RHYTHMIC FACTOR TREES: <ul style="list-style-type: none"> • Students create a factor tree of notes. This could be a 20min activity led by the teacher with students copying with pencil and paper, or a quick 5min review on individual whiteboards at the start/end of a lesson. The “trees” will look different depending on the grade level: 	
	
Extension Activity: <ul style="list-style-type: none"> • Students use the information on the factor tree to create a pie chart. 	

NOTE STRIPS:

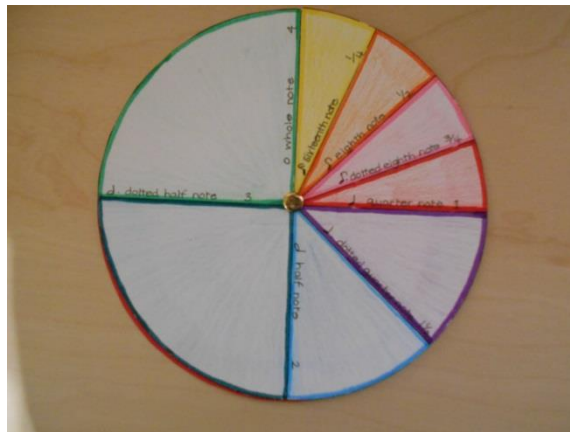
- Students use pre-chosen and pre-cut notes to write four-beat rhythms.
- The student worksheet has four “strips” which fit the pre-cut notes into a four-beat pattern. For example, a whole note is the full length of the strip, a half note is half the length of the strip, and so on.
- Again, the note strips will look different depending on the grade level. See attached worksheet and template for use with students.

Extension Activities:

- Students perform their 4-beat rhythms using body percussion/classroom percussion and perform to the class.
- Students pair up and create an A-B-A (ternary form) composition using their two sets of 4-bar rhythms.

RHYTHMIC PIE CHART:

- Students create a pie chart to represent notes of different lengths.
- Templates: The attached file has 2 templates, the pie chart and its “cover.” Once the pie chart is finished and cut out, students make an additional cut along 1 radial line to the centre. Do the same with the ‘cover’. Place the two circles on top of each other and attach a pin to the centre so they can rotate. The two pies will move in front and/or behind each other at the point of the cuts students have made as the circles are turned to allow students to demonstrate $1/2$, $1/4$, $3/4$ etc.
- Again, the pie charts will look different depending on the grade level. See attached template for use with students.



→ Math Strand Connections:

- Students divide whole objects into parts and identify, describe equal-sized parts of the whole using fractional names.
- Compare fractions using concrete materials without using standard fractional notation.
- Compare and order fractions by considering the size.