

MATH & MUSIC | Lesson 10: The Note Tree and Fractions

2-6

Introduce the “note tree,” a visual map of how various notes can fit within one another, to illustrate simple fractions. Use a paper plate to demonstrate halves and quarters, then find the corresponding notes for each fraction.

Standards listed on next page

Supplies:

- Paper and writing utensil

Objective

Practice division and fractions by creating a note tree with music notation.

Outline & Procedure *using the video*

1. Learn about the basics of fractions, or dividing a value into equal parts. The denominator represents how many equal parts the whole has been divided into, and the top number is how many of those parts are being considered.
 2. What’s a word to describe dividing something into 4 equal parts?(1:18)?
 3. What is something in music that has a “quarter” (1:40)?
4. Use a paper and writing utensil to begin drawing a note tree:
 5. At the top, center, draw a whole note, with a 4 beside it (2:21).
 6. Below and on either side of the whole note, draw 2 half notes with value (3:27).
 7. Below and across the bottom draw 4 quarter notes with value (3:58).
8. Look at the tree and determine how many half notes fit inside a whole note (5:34).
9. Take a new piece of paper and fold in half (hamburger) (6:09).
 10. Trace down the middle fold and draw a half note on one side with value (6:32).
 11. Fold the paper in half a second time to create a fold going horizontal to the last fold. Trace on the new line on the blank half of the paper to create two boxes opposite the half note (7:12). In the smaller boxes, draw a quarter note with written value (7:35).
 12. Cut each section out (8:15).
13. Lay the sections out so it is half, quarter, quarter and practice clapping (8:39).
14. Rearrange to quarter, half, quarter, clapping the rhythm (9:16).
15. Rearrange to quarter, quarter, half, clapping the rhythm (9:55).
16. Consider, what kind of note would have the same value as a half note plus a quarter note? (10:39).

DIY after the lesson: as you go through your day, try and find fractions used in your environment. Take note of these instances and share with your class! (11:18)

Kentucky Standards:

KY.K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations.

KY.3.NF.1 Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.

KY.4.NF.1 Understand and generate equivalent fractions. Use visual fraction models to recognize and generate equivalent fractions that have different numerators/denominators even though they are the same size.

Ohio Standards:

K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds such as claps, acting out situations, verbal explanations, expressions, or equations.

3.NF.1 Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.

4.NF.1 Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.