

Grade 5
Trailblazers Unit 5

“Investigating Fractions”

North Carolina Standard Course of Study

<http://www.ncpublicschools.org/curriculum/mathematics/scos/2003/k-8/27grade5>

MTB Correlation to NCSCOS

<http://www.kendallhunt.com/uploads/2/CORR-NC-MTB2.pdf>

Unit Activities

- Students build rectangles on geoboards and draw rectangles on dot paper. They use the rectangles to model fractions and mixed numbers.
- Students work in pairs to model fractions using both pattern blocks and rectangles on dot paper.
- Students write fraction sentences using dot paper rectangles in the game *Fraction Cover-All*. Students then model equivalent fractions using dot paper rectangles.
- Using rectangles on dot paper, students compare fractions with unlike denominators by rewriting the fractions with common denominators.
- In an experiment on speed, students compare ratios using both graphs and symbols.
- Students estimate sums of fractions using 0, $\frac{1}{2}$, and 1 as benchmarks. Then, they draw rectangles on dot paper to develop and use procedures for adding fractions.
- Students use rectangles on dot paper to subtract fractions. Then, they develop pencil-and-paper procedures for adding and subtracting fractions.
- Students complete a set of word problems using fractions.

Unit Vocabulary

denominator	fraction	numerator	equivalent fractions	common denominator
speed	velocity			

Fifth grade glossary link: http://www.kendallhut.com/uploads/2/MTB_Gr5_Glossary.pdf

Unit Manipulatives/Supplies

geoboards	rubber bands	pattern blocks	1-2 stopwatches per group	1-2 meter sticks per group
tape	crayons or markers	calculators		

Unit Assessment Indicators

- Can students represent fractions using pattern blocks and rectangles on dot paper?
- Can students find equivalent fractions?
- Can students compare and order fractions?
- Can students collect, organize, graph, and analyze data?
- Can students draw and interpret best-fit lines?
- Can students use ratios to solve problems?
- Can students measure length in yards and feet?
- Can students add and subtract fractions using manipulatives, pictures, or symbols?
- Do students demonstrate fluency with the multiplication and division facts for the 9s?

Unit Literature – None recommended

Unit Software

Fraction Attraction develops understanding of fractions using fraction bars, pie charts, hundreds blocks, and other materials.

Websites

Gamequarium Fractions

<http://www.gamequarium.com/fractions.html>

National Library of Virtual Manipulatives allows students to work with manipulatives including geoboards, base-ten pieces and many others to explore fractions and graphing.

http://nlvm.usu.edu/en/nav/category_g_2_t_1.html

King's List of On-line Math Activities – Fractions – *What is a Fraction? Equivalent Fractions?*

<http://www.k111.k12.il.us/king/math.htm#Fractions>

Rainforest Math – Click on Level E or F and choose “fractions” located on the top row of the menu.

<http://www.rainforestmaths.com/>

You Can Help Your Child:

- Ask your child to share the game *Fraction Cover-All*.
- Review the multiplication and division facts for the nines. Use the *Triangle Flash Cards* to work on these facts with your child.
- Use fractions to divide up meals so everyone gets a fair share of the food.
- Add and subtract fractions using measuring cups.
- Use a measuring tape to measure things in fraction form around the house.