

Course Name: Grade 3 Mathematics
Course Codes: E2302, E2307, E2309

Course Description:

The third grade mathematics program encourages students to be actively involved in using and exploring mathematics through measuring, observing, data handling, sorting, counting, and graphing. These experiences can be linked to reading, language arts, science, and social studies when appropriate. There is a strong emphasis on problem solving, estimating, using calculators, recognizing and creating patterns. Students are encouraged to develop and communicate their mathematical understanding and problem solving strategies.

The program supports learning through the use of a wide variety of materials including: rulers, tape measures, geometry templates, money, and calculators. When appropriate, students use pattern blocks, weighting scales, or base ten blocks.

Students are supported in learning basic number facts through a variety of practice activities with the goal of achieving “Fact Power.” Number facts are used to develop and reinforce concepts through activities that include learning games and explorations.

The program is planned with the expectation that children will grow in their ability to take responsibility for their own learning and use of mathematics.

Course Proficiencies: The following is a list of the proficiencies that describe what students are expected to know and be able to do as a result of successfully completing this course. The proficiencies are the basis of the assessment of student achievement. The learner will demonstrate the ability to:

1. Recognize and apply place value for whole numbers through millions and decimals through hundredths. **4.NBT.1, 2, & 3**
2. Read, write, compare, and order whole numbers through millions and decimals through hundredths. **4.NBT.1, 2, & 3**
3. Understand and use a variety of strategies for addition and subtraction of whole numbers within 1000. **3.NBT.2**
4. Add/Subtract time, solve problems involving elapsed time. **3.MD.1**
5. Understand and use a variety of strategies for multiplication and division of whole numbers, within 100, as equal grouping operations (i.e. skip counting, repeated subtraction). **3.OA.1-3, 6, 7**
6. Recognize and use the properties of addition and multiplication (i.e. commutative, associative, identity). **3.OA.5**
7. Apply place value to multiplication with multiples of 10, 100, and 1000. **3.NBT.3**
8. Use fractions so as to name parts of regions, collections, and sets. **3.NF.1**
9. Use equivalent names to compare and order fractions. **3.NF.3**
10. Determine the location of unit fractions on the number line between 0 and 1. **3.NF.2**

Grade 3 Proficiencies – *cont'd.*

11. Explore addition and subtraction of fractions through separating or joining parts of a whole. **4.NF.3**
12. Use number sentences and models with variables to solve problems. **3.OA.4, 6, 8**
13. Interpret and construct a variety of graphs, including picture graphs and scaled bar graphs; describe the advantage of presenting data in graph form. **3.MD.3**
14. Use a line plot to display fractional measurement data. **3.MD.4**
15. Find the perimeter of polygons and use it to solve real-world problems. **3.MD.8**
16. Relate the circumference of a circle to its diameter. **3.MD.8**
17. Understand the concept of area. **3.MD.5**
18. Use the concept of area to add/subtract area of rectangles and identify fractions. **3.MD.5, 6, 7; 3.G.2**
19. Identify a right angle and angles greater or less than 90 degrees. **4.G.2**
20. Understand and use the concepts of line, line segment, and end point. **3.MD.4**
21. Use properties of 3-D and 2-D shapes to identify, classify, and describe them. **3.G.1**
22. Identify and use congruence and symmetry. **4.G.3**
23. Use US customary and metric units to measure length, weight, and volume/capacity. **3.MD.2**
24. Use tables to recognize number patterns and solve problems. **3.OA.9**
25. Count, compute, and solve problems with money. **3.NBT.1, 2, & 3**
26. Solve multi-step word problems. **3.OA.8**
27. Apply mathematics in practical situations and in other disciplines.
28. Use critical thinking skills to make sense of problems, solve them, and communicate processes. **CRP 2, 4 & 8.**
29. Use technology to gather, analyze, and communicate mathematical information. **8.1.5.A.1, 8.1.5.F.1**

Assessment: At grade three, student growth in mathematics is assessed in a variety of ways. These may include teacher observation of individual and small group activities as well as formal evaluations of independent student work. Observation of individual work and independent classroom activities provides on-going information to guide instruction and to quickly provide information to children and parents regarding student progress. Observation of collaborative activities enables the teacher to assess students as they apply skills and abilities through a variety of strategies. Formal evaluations are made using end of unit assessments, independent journal activities, and “math boxes.” Teacher made quizzes and tests are included in the overall assessment of student skill proficiency. Math “explorations” and long term projects help provide additional information regarding individual growth. Results are shared through written progress reports, parent conferences, and occasional/informal communication. In addition to annual state testing, the NWEA MAP Growth assessment will be administered three times a year in mathematics. The purpose of MAP Growth is to determine what students know and are ready to learn next. It is designed to measure student achievement in the moment and growth over time.

Board Adopted Materials:

Teaching Resources and Related Student Materials:

Title: Everyday Mathematics
Author: University of Chicago School Mathematics Project
Publisher: McGraw-Hill Companies, Inc.
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