

Sample ASSESSMENT QUESTION(S) in this grade:

Math

In Ms. Guzman's class there are 15 kids who have brown eyes, 6 kids who have green eyes, and 5 kids have blue eyes, 4 kids have hazel eyes.

- What fraction of the kids have brown eyes?
- What fraction of the kids have blue eyes?
- What percentage of kids have brown eyes?
- What percentage of kids have blue eyes?

Explain how you can use the fractions to determine the percentages. Collect the data on the students in your class or in your family. Organize the data in a graph or table and answer the questions above using your data.

Science

Some examples of simple machines include wheels and axles, levers, wedges, inclined planes, screws and pulleys.

Pick two simple machines and describe how they work and what they can be used for. Where do you find these machines in your every day life?

Note: *Students are expected to be able to explain their thinking verbally and in writing.*

You and your child may want to try these problems together. If you are interested in additional problems or the answers, please see the <http://mc2.nmsu.edu> website!

What are standards?

Standards are expectations for students and teachers. They are statements that tell what your child should know and be able to do.

Who should I contact to find out more about standards and our schools?

Talk to your child's teacher or principal to learn more about standards based learning. You can also contact the subject area specialists at the New Mexico Public Education Department, Santa Fe, NM.

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What should
**Fifth grade
mathematics
and science**
look like
in your school?



Based on New Mexico
Standards and Benchmarks

What should I see happening in my child's classroom?

Every day, students should be:

- relating math and science to their everyday lives
- asking and answering questions about their surroundings
- solving math and science problems in different ways
- working with other students to solve problems
- explaining and justifying their own ideas in math and science
- DOING activities! ... using tools and objects to learn and to show what they know
- using diagrams, graphs, and numbers to show relationships in math and science
- learning that everyone can do math and science

This is called Standards Based Instruction!



Big ideas in Fifth Grade SCIENCE

Scientific Thinking

- Conduct investigations using appropriate scientific tools (e.g., calculators, microscopes, computers) and communicate findings using graphs and tables
- Use appropriate measurements and units in investigations and analysis of data
- Describe the process of peer and public review in science

Physical Science

- Learn about the pure elements of matter and the three different states of matter
- Investigate heat and other forms of energy, and how these forms of energy can be converted
- Investigate forces and how they produce changes in the motion of objects
- Describe how simple machines give advantages to their users

Life Science

- Learn about food webs and environments, and how changes in environments have different effects on different organisms
- Describe the process of heredity and how some characteristics are inherited from parents and others are influenced by environment
- Investigate cells in living organisms
- Understand the connections between cells, living things, and ecosystems

Earth and Space Science

- Learn about scales and distances in the universe
- Investigate human space exploration
- Describe how water and air interact to form earth's weather
- Learn about the causes of the Earth's seasons

Science and Society

- Describe how science can help us understand local community issues
- Investigate how science and technology help us individually

Big ideas in Fifth Grade MATHEMATICS

Number and Operations:

- Demonstrate an understanding of place value and be able to compare and order whole numbers, fractions, and decimals using concrete models or pictures (blocks, number lines)
- Understand that fractions, percents and decimals are equivalent representations of the same value and be able to add and subtract decimals and fractions
- Simplify expressions using order of operations and be able to add, subtract, multiply, divide, and find factors and multiples of whole numbers
- Identify prime and composite numbers up to 50

Algebra:

- Identify, describe, represent, continue and analyze patterns presented in different ways (numeric, visual, oral, written, pictorial etc.)
- Recognize and use letters for unknown numbers and understand the different symbols used to compare two numbers (greater than, less than, etc.)
- Use mathematical models (number lines, pictures, manipulatives, diagrams etc.) to explain mathematical concepts and procedures
- Generalize patterns of change and recognize these patterns in tables, graphs, charts, diagrams and pictures

Geometry:

- Identify, describe, and classify two-dimensional shapes and three-dimensional figures by their properties
- Recognize and describe parallel and perpendicular lines, lines of symmetry, radius, diameter, circumference, faces, edges and bases
- Be able to identify and describe regular polygons containing up to 10 sides and be able to calculate the perimeter of such polygons

Measurement:

- Solve length, area, weight, capacity, time, and temperature problems using the appropriate tools and units to ensure accuracy in a given situation
- Select and use strategies and tools to measure and estimate length, distance, capacity, time and the perimeter of regular and irregular shapes

Data Analysis and Probability:

- Construct, read, analyze and interpret charts, graphs (bar, line and circle), data plots, frequency tables, stem and leaf plots, and Venn diagrams
- Use data to make inferences and predictions and be able to determine if inferences and predictions made by others are valid
- Conduct simple experiments (rolling dice) and describe the probability of outcomes using fractions and mathematical expressions