

Sample ASSESSMENT QUESTION(S) in this grade:

Math

Name	Ann	Bart	Lucy	Luis	Pam	Lupe	Juan
school days							
absent last year	3	11	2	3	2	19	2

- Figure out the mean, median and mode of the data in the table.
- What measure is the best way to describe the data in the table? Why?
- If you add the number of days you were absent from school last year, how does this impact the mean, median, and mode?

Science

Imagine sitting around a campfire. Explain the transfers in energy from the fire through conduction, radiation, and convection.

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
**Sixth 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 Sixth Grade SCIENCE

Scientific Thinking

- Conduct experiments to collect, organize and analyze data
- Use graphs, charts and pictures to explore probabilities and patterns in data
- Understand that scientific knowledge and investigations are constantly changing based on the data collected

Physical Science

- Learn about the properties of elements and substances and how they interact
- Explore different types of energy, how energy is transferred, and that energy is neither created nor destroyed
- Understand that every object exerts gravitational force on every other object

Life Science

- Understand how living things interact with and adapt to their environment
- Learn about fossils and fossil fuels

Earth and Space Science

- Learn about different objects in the universe, including galaxies, stars, and planetary systems
- Learn about what stars, including our sun, are made of and how they vary in size and color
- Understand the effects of the motions of the earth, moon, and sun (tides, eclipses, seasons, weather, etc.)
- Learn about the earth's layers, rocks, and weather patterns, including the geology of local areas

Science and Society

- Learn how scientific discoveries and inventions impact space exploration, communication devices, and medicine

Big ideas in Sixth Grade MATHEMATICS

Number and Operations:

- Understand the relationship between decimals, fractions, and percents
- Add, subtract, multiply and divide decimals, fractions, percents, and positive and negative numbers
- Understand number relationships including factors and multiples

Algebra:

- Use ratios and proportions in problem solving
- Use different math models, including coordinate graphs, charts, diagrams, and equations
- Generate formulas and equations using numbers and variables to describe patterns

Geometry:

- Understand the properties of angles, triangles, quadrilaterals, and circles
- Use appropriate tools to explore the properties and relationships of various 2- and 3-dimensional shapes
- Use coordinate geometry to describe locations on a plane

Measurement:

- Be able to use and convert between the U.S. and metric systems
- Make accurate measurements using 16ths of an inch and millimeters
- Choose and use appropriate tools to measure length, volume, weight, time, etc.

Data Analysis and Probability:

- Collect, organize, display and interpret data using charts, tables, and graphs
- Make decisions about how best to explain and represent data
- Learn the concepts of mean, median and mode and when each one is used
- Understand probability through conducting experiments and by comparing expected results with actual results
- Represent probabilities as ratios, proportions, and decimals