

## Sample ASSESSMENT QUESTION(S) in this grade:

### Math

Juan and Jack saw some ducks and goats at the petting zoo. Jack said, "There are 18 ducks and goats." Juan said, "Altogether they have 52 legs!" How many ducks and how many goats did they see? Explain how you solve this problem and give your answer.

### Science

Compare and contrast the characteristics of the sun and the moon.

**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.

The content and design of this brochure was created by New Mexico educators, including staff from the New Mexico Public Education Department and the Southwest Educational Development Laboratory (SEDL) during the 2004-2005 school year.



What should  
**Third 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 Third Grade SCIENCE

### Scientific Thinking

- Explore the difference between data and opinion
- Collect and study numerical data in an investigation to draw conclusions
- Use various methods to show findings from investigations (tables, charts, graphs, etc.)

### Physical Science

- Explore the differences between pure substances and mixtures (juice)
- Study the properties of light
- Explore properties of magnets

### Life Science

- Classify plants and animals based on characteristics
- Investigate how environments can change living things and living things can change environments
- Learn how germs and nutrients affect the human body

### Earth and Space Science

- Learn about the characteristics of objects in the solar system and how they appear to move in the sky
- Investigate the water cycle
- Explore the effects of natural forces of the Earth (weather, volcanoes, earthquakes, etc.)
- Learn that fossils tell about plants and animals that once lived

### Science and Society

- Learn about food safety and pesticides
- Learn about recycling

## Big ideas in Third Grade MATHEMATICS

### Number and Operations:

- Read, write, model, compare, order and interpret whole numbers up to 10,000
- Explore factors and multiples
- Use models and real life situations (measurement, money) to represent equivalent and common fractions
- Select and use appropriate operations to solve problems (addition, subtraction, multiplication, division)
- Know multiplication pairs up to  $10 \times 10$
- Develop estimation strategies for measurement, computation, and problem solving

### Algebra:

- Use simple unit conversion (feet to inches)
- Create, describe and extend numeric and geometric patterns
- Solve problems involving proportional relationships
- Explore the ways that the commutative, distributive, identity, and zero properties are useful in computing with numbers
- Use symbols and variables to represent mathematical situations

### Geometry:

- Identify, describe, classify, and explore attributes of plane and solid geometric figures
- Use ordered pairs to graph, locate specific points, create paths and measure distances
- Identify and build three-dimensional objects from two dimensional representations

### Measurement:

- Explore standard units of measurement and use appropriate tools to measure, estimate, and solve problems (length, area, weight, elapsed time, mass, volume)
- Recognize a 90-degree angle and use it to estimate other angles

### Data Analysis and Probability:

- Collect, organize, represent and analyze data using observations, measurements, surveys and experiments
- Conduct simple experiments to determine the outcomes of events and make simple predictions