

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

### Math

1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

- What are all of the numbers you can use to skip count and land on 100?
- What are all of the factors of 100?

### Science

Describe how severe weather can affect the food web of an ecosystem. Think of an example from where you live.

**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  
**Fourth 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 Fourth Grade SCIENCE

### Scientific Thinking

- Interpret, draw conclusions, and present findings based on scientific investigations
- Use scientific tools such as timers, balances, and thermometers
- Use different techniques like multiple trials and control groups to test predictions and draw conclusions from experiments

### Physical Science

- Investigate chemical and physical changes when substances are mixed
- Investigate how energy moves, is stored, and changes
- Learn about mass and particles of matter

### Life Science

- Learn about food chains
- Describe how living things are made of cells
- Learn how environment, structure, and behavior affect survival
- Describe the building blocks of the human body (cells, systems, organs)
- Describe the functions of human body systems and how they interact

### Earth and Space Science

- Research different types of telescopes, and how each one changes what you see in the sky
- Learn about constellations and earth's rotation
- Classify rocks and minerals by their properties
- Describe how weather patterns may change over time

### Science and Society

- Investigate the effects of pollution on living things
- Learn about the use of science in information technology and manufactured materials
- Explore science careers

## Big ideas in Fourth Grade MATHEMATICS

### Number and Operations:

- Understand and use numbers up to 100,000
- Identify, add, subtract and understand fractions including ratio, equivalence and ordering of fractions
- Use and identify negative numbers in real life applications
- Recognize classes of numbers: odd, even, factors, multiples, etc.
- Use a variety of strategies to estimate and judge the reasonableness of answers
- Use commutative, associative and distributive properties in whole number operations

### Algebra:

- Express mathematical relationships using equations
- Determine the value of an unknown in simple equations ( $x+32=53$ )
- Develop simple formulas in exploring mathematical relationships
- Find, analyze and show patterns of change (growth of a plant), using graphs, tables, pictures, and equations

### Geometry:

- Know and understand the properties of geometric shapes
- Compare and analyze the properties of two and three dimensional objects
- Use ordered pairs to graph and locate points on a coordinate plane
- Explore relationships involving perimeter and area

### Measurement:

- Choose and use appropriate tools for measuring length, area, mass, time, and angle
- Determine the perimeter and area of rectangles, triangles, and irregular shapes

### Data Analysis and Probability:

- Design investigations and show findings using tables and graphs
- Use concepts of median, mode, maximum, minimum and range to draw conclusions about data
- Use data to communicate and justify conclusions
- Investigate probability and represent possible outcomes for a situation verbally, numerically, and graphically