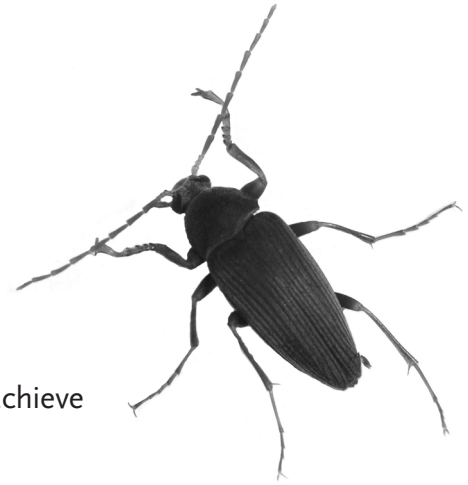


AMAZING BUGS®

Beetle Races for Fifth-grade Classrooms



Performance Standards Summary

Activities in the Amazing Bugs Beetle Races kit help students achieve the following performance standards at the fifth-grade level.

SCIENCE

Scientific Thinking and Practice

- Plan and conduct investigations, including formulating testable questions, making systematic observations, developing logical conclusions, and communicating findings.
- Use appropriate technologies to perform scientific tests and to collect and display data.
- Use graphic representations (e.g., charts, graphs, tables, labeled diagrams) to present data and produce explanations for investigations.
- Describe how credible scientific investigations use reproducible elements including single variables, controls, and appropriate sample sizes to produce valid scientific results.
- Communicate the steps and results of a scientific investigation.
- Understand that different kinds of investigations are used to answer different kinds of questions (e.g., observations, data collection, controlled experiments).

- Use appropriate units to make precise and varied measurements.
- Use mathematical skills to analyze data.
- Make predictions based on analyses of data, observations, and explanations.
- Understand the attributes to be measured in a scientific investigation and describe the units, systems, and processes for making the measurements.

Life Science

- Identify the components of habitats and ecosystems.
- Understand how food webs depict relationships between different organisms.
- Know that changes in environment can have different effects on different organisms.
- Know that plants and animals have life cycles that include birth, growth and development, reproduction, and death and that these cycles differ for different organisms.

MATH

Number and Operations

- Compare and order using concrete or illustrated models: whole numbers, common fractions, decimals.
- Demonstrate understanding of the magnitude

of the value of numbers from thousandths to millions.

- Interpret percents as part of a hundred.
- Add and subtract decimals.

MATH *continued*

- Add and subtract fractions and mixed numbers...and express answers in simplest form.
- Use arithmetic operations and inverse relationships to represent and solve real-world problems.
- Represent and use fractions and decimals in equivalent forms.

Measurement

- Solve problems involving linear measurement, weight, and capacity to the appropriate degree of accuracy.
- Solve measurement problems using appropriate tools involving length, perimeter, weight, capacity, time, and temperature.
- Select and use strategies to estimate measurements including length, distance, capacity, and time.

Data Analysis and Probability

- Construct, read, analyze and interpret tables, charts, graphs, and data plots.
- Display, analyze, compare, and interpret different data sets, including data sets of different sizes.
- Formulate questions and identify data to be collected to correctly answer a question.
- Use fractions and percentages to compare data sets of different sizes.
- Correctly rank the values of a numerical data set containing simple fractions and decimals, identify maximum and minimum data values, and calculate the range for a data set.
- Compare a given prediction with the results of an investigation.

LANGUAGE ARTS

Reading and Listening for Comprehension

- Follow oral instructions that provide information about a task or assignment.
- Increase vocabulary through reading, listening, interacting.
- Expand and refine vocabulary through...content study, use of the writing process...discussion....

Writing and Speaking for Expression

- Use language to formulate hypotheses, evaluate information and ideas, present and support arguments, influence the thinking of others.
- Answer open-ended questions.

Source: *Reference Guide: New Mexico Content Standards, Benchmarks, and Performance Standards, Grades K–8*, Center for the Education and Study of Diverse Populations at New Mexico Highlands University, 2005.