DOCUMENT RESUME

ED 428 940 SE 062 006

TITLE	Skills-Based Scope and Sequence Guide: Science Grades K-6. Target Skills and Sample Assessment Methods.
INSTITUTION	Idaho State Dept. of Education, Boise.
PUB DATE	1997-00-00
NOTE	91p.
AVAILABLE FROM	Idaho State Dept. of Education, Len B. Jordan Office Building, P.O. Box 83720, Boise, ID 83720-0027.
PUB TYPE	Guides - Classroom - Teacher (052)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*Biological Sciences; Check Lists; Earth Science; Educational Assessment; Elementary Education; *Elementary School Science; *Physical Sciences; *Science Process Skills; Scientific Methodology
IDENTIFIERS	Idaho; *Scope and Sequence

ABSTRACT

This guide is organized around a list of skills that all students should know and be able to do at each grade level from kindergarten through sixth grade. It provides parents, teachers, and students with knowledge of what is being taught in a logical scope and sequence by grade level. The purpose of this guide is to help build a basis for curriculum development, instructional strategy, and assessment practices and provide consistency across the state in what is being taught and learned. Schools may wish to use the guide as a resource for developing and writing curriculum at the local level. The listed skills are to be learned at a factual, applied/analysis, or synthesis/evaluation level. Sample assessment methods are included for teacher use. (ASK)

ED 428 940

Skills-Based Scope and Sequence Guide

Science
Grades K-6

Target Skills
&
Sample Assessment Methods

DR. ANNE C. FOX
STATE SUPERINTENDENT OF PUBLIC INSTRUCTION
BOISE, IDAHO

Developed by:

T. LaRon Smith, Idaho Department of Education
Zan Payne, Idaho Department of Education
Beverly Hopp, Teacher
Jamie Seeger, Teacher
Carol Fulton, Teacher
Sandra Calkins, Teacher
Peggy Hess, Teacher
Shirley Wright, Teacher
Marlys McCurdy, Teacher
Kara Kral, Parent
School Board Members
Community Members
Patrons

Compiled
1997

State Department of Education
Len B. Jordan Office Building
P.O. Box 83720
Boise, ID 83720-0027
(208) 332-6800
Fax (208) 334-4664

TABLE OF CONTENTS

INTRODUCTION i

Kindergarten 1

First Grade 5

Second Grade 10

Third Grade 14

Fourth Grade 20

Fifth Grade 26

Sixth Grade 33

INTRODUCTION

The State Department of Education's Skills-Based Scope and Sequence Guide is organized around a suggested list of skills that all students should know and be able to do at each grade level from kindergarten through sixth grade. This guide will help provide parents, teachers, and students with knowledge of what is being taught in a logical scope and sequence by grade level. The purpose of this guide is to help build a basis for curriculum development, instructional strategy, and assessment practices, and provide consistency across the state in what is being taught and learned. Schools may wish to use the guide as a resource in developing and writing curriculum at the local level.

The guide has been developed as a scope and sequence by a team of teachers, parents, school board members, community representatives, patrons, and State Department of Education specialists. The listed set of skills are to be learned at a factual, applied/analysis, or synthesis/evaluation level. There are sample assessment methods included for teacher use.

How to Use the Skills Based Scope and Sequence Guide

The skills are identified by grade level starting at kindergarten then progressing through the sixth grade. The skills were selected based on knowledge of many classroom teachers, skills identified in scope and sequence charts of the textbooks on the State of Idaho textbook adoption list, skills measured on the Iowa Test of Basic Skills, skills measured on Idaho's direct assessments, and input from educators, patrons, and parents.

There are three processes that a teacher takes the student through for each skill. You will see an **X** placed in the column next to a skill where it is expected to be introduced, reinforced, and/or finally placed in long term memory. This helps the teacher determine the lesson and amount of repeated practices that will help achieve mastery of the skill.

Once the student achieves the skill the question is how to use it. We have identified three thinking levels for this ability. They are called factual, applied/analysis, and synthesis. The teacher can now develop an assessment to measure the skill. The same three thinking levels may be applied to the assessment chosen by the teacher.

It is our desire that students will be taken through the skills in a logical consistent format. Some students will be able to master the information much faster and should be allowed to progress as fast as possible through the grade levels.

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Earth and Space Science										
The Dynamic Earth										
1. Observe the major features of the Earth's surface.	X			X			Assessment of a group project; teacher observation; free verbal response (open ended questions)	X		
2. Observe seasons and weather.	X			X			Assessment of a group project; teacher observation; free verbal response (open ended questions)	X		
Physical Science										
Matter										
1. Observe physical changes of matter (melting, freezing, bending, tearing).	X			X			Assessment of a group project; teacher observation; free verbal response (open ended questions)	X		
2. Recognize states of matter (solid, liquid, gas).	X			X			Assessment of a group project; teacher observation; free verbal response (open ended questions)	X		

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Energy										
3. Investigate sounds.	X			X	X		Assessment of a group project; teacher observation; free verbal response (open ended questions)	X	X	
Force and Motion										
4. Investigate motion of various objects.	X			X	X		Assessment of a group project; teacher observation; free verbal response (open ended questions)	X	X	
5. Describe the motion of objects in their world.	X			X			Assessment of a group project; teacher observation; free verbal response (open ended questions)	X		
Scientific Method										
1. Apply scientific method informally.	X			X			Teacher observation; free verbal response (open ended questions)	X		
Life Science										
1. Describe a variety of things found in the environment.	X			X			Assessment of a group project; teacher observation; free verbal response (open ended questions)	X		

Target Skills	Introduced	Reinforced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
2. Compare size, shape, and structure of living things.	X			X	X		Assessment of a group project; teacher observation; free verbal response (open ended questions)	X	X	
Heredity										
3. Observe changes that are part of simple life cycles.	X			X			Assessment of a group project; teacher observation; free verbal response (open ended questions)	X		
4. Observe similarities and differences in offspring of plants and animals.	X			X	X		Assessment of a group project; teacher observation; free verbal response (open ended questions)	X	X	
Human Body										
5. Name and understand how the senses help people interact with the world.	X			X			Assessment of a group project; teacher observation; free verbal response (open ended questions)	X		
6. Identify and name body parts.	X			X			Assessment of a group project; teacher observation; free verbal response (open ended questions)	X		
7. Recognize the changes that take place during growth.	X			X	X		Assessment of a group project; teacher observation; free verbal response (open ended questions)	X	X	
Interdependence										

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
8. Explore ways in which organisms and objects react to changing conditions.	X			X	X		Assessment of a group project; teacher observation; free verbal response (open ended questions)	X	X	
9. Explore the survival needs of plants and animals.	X			X	X		Assessment of a group project; teacher observation; free verbal response (open ended questions)	X	X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Earth and Space Science										
The Earth in Space										
1. Describe what can be observed in the sky by the unaided eye in the day and at night.	X			X			Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X		
2. Identify the basic components of the solar system.	X			X			Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X		
The Dynamic Earth										
3. Observe the effects of weather.	X			X	X		Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X	X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Physical Science										
Matter										
1. Observe that objects in the world vary greatly in their properties (size, shape, color, texture, taste, odor).	X			X			Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X		
2. Describe findings from investigating solids and liquids.		X		X			Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X		
3. Investigate physical changes of matter.		X		X	X		Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X	X	
Energy										
4. Investigate sources of energy.	X			X	X		Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X	X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
5. Identify sounds made by vibrating objects.	X			X			Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X		
Force and Motion										
6. Observe how movement of objects influences other objects.	X			X			Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X		
7. Describe the motions of common objects in terms of speed and direction.	X			X			Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X		
8. Observe and describe motion as change of position.	X						Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X		
Scientific Method										
1. Apply scientific method informally.	X			X			Teacher observation; free verbal response (open ended questions)	X		
2. Recognize that scientists use the scientific method.	X			X			Teacher observation; free verbal response (open ended questions)	X		

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Life Science										
Diversity										
1. Describe how plants and animals survive in environment.	X			X			Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X		
2. Observe a variety of habits.	X			X			Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X		
3. Classify plants and animals according to their characteristics (color, shape, size, texture, covering).	X			X	X		Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X	X	
4. Describe evidences of prehistoric animals and their habitats.	X			X			Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X		
Heredity										

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
5. Describe physical similarities and differences between traits of parents and their offspring.	X			X			Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X		
Human Body										
6. Explain the importance of nutrition and good hygiene.	X			X			Assessment of a group project; assessment of individual project; free verbal response (open ended questions)	X		
7. Understand individuality and differences.	X			X	X		Work-sample evaluation; teacher observation	X	X	
Interdependence										
8. Understand that living things share characteristics.	X						Free verbal response (open ended questions); teacher observation	X		
9. Observe how organisms are dependent upon each other for survival.	X			X			Free verbal response (open ended questions); teacher observation	X		
10. Describe the life cycles and needs of familiar organisms.	X			X			Teacher observation; paper and pencil task; work-sample evaluation	X		

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Earth and Space Science										
The Earth in Space										
1. Observe stars in relation to the Earth and the Universe.	X			X			Free verbal response (open ended questions); work-sample evaluation	X		
2. Describe the seasons of the year.	X			X			Free verbal response (open ended questions); paper and pencil task; work-sample evaluation	X		
The Dynamic Earth										
3. Make informed decisions about weather and describe it's effect on their lives.	X				X		Free verbal response (open ended questions); teacher observation		X	
Physical Science										
Matter										
1. Classify objects by physical properties (hardness, softness, buoyancy, color, ...).	X				X		Assessment of a group project; paper and pencil task; teacher observation		X	
2. Classify matter by its state (solid, liquid, gas).		X			X		Paper and pencil task		X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
3. Recognize that some changes to objects can be reversed and some cannot.	X			X			Free verbal response (open ended questions)	X		
Energy										
4. Understand ways that the sun supports plant and animal life on Earth.	X			X			Free verbal response (open ended questions)	X		
5. Investigate sources of energy.		X			X		Assessment of individual project		X	
Force and Motion										
6. Make predictions about moving things.	X				X		Free verbal response (open ended questions); paper and pencil task; free written response (essay, detail, or explanation)		X	
7. Describe how things move or can be made to move.	X				X		Free verbal response (open ended questions); paper and pencil task; free written response (essay, detail, or explanation)		X	
8. Explore the forces that move objects.	X				X		Explore the forces that move objects		X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Scientific Method										
1. Apply scientific method informally.		X		X			Teacher observation; free verbal response (open ended questions)	X		
2. Recognize that scientists use the scientific method.		X		X			Teacher observation; free verbal response (open ended questions)	X		
Life Science										
Diversity										
1. Recognize that the behavioral and physical characteristics of plants and animals help them survive in their habitat.	X			X			Paper and pencil task; free verbal response (open ended questions); free written response (essay, detail, or explanation)	X		
2. Compare plants and animals in their immediate surrounding with those in other habitats.	X			X			Work-sample evaluation; free written response (essay, detail, or explanation); assessment of a group project	X		
3. Compare animals that are extinct with those that exist today.	X				X		Work-sample evaluation; assessment of individual project		X	
4. Compare likenesses and differences in plants and animals.		X			X		Work-sample evaluation; assessment of individual project		X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Heredity										
5. Observe that offspring produced by plants or animals are similar to the parent at some stage of their development.	X			X			Free verbal response (open ended questions); teacher observation	X		
Human Body										
6. Identify the body parts and give their function (hear, lung, brain, stomach).	X			X			Assessment of individual project; work-sample evaluation; free written response (essay, detail, or explanation); paper and pencil task	X		
7. Name ways to keep the body safe.	X			X			Free verbal response (open ended questions); teacher observation; paper and pencil task	X		
Interdependence										
8. Explore how plants and animals often interact to meet the needs of both groups.	X			X	X		Free verbal response (open ended questions); work-sample evaluation; assessment of a group project	X	X	
9. Describe natural and human changes in the environment.	X			X			Free verbal response (open ended questions); free written response (essay, detail, or explanation)	X		

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Earth and Space Science										
The Universe										
1. Understand that the Earth is one of several planets that orbit the sun and that the moon orbits the Earth.	X	X		X			Work-sample evaluation; assessment of a group project; paper and pencil task	X		
2. Know that space exploration confirms that the Earth is spherical in shape.				X			Work-sample evaluation; paper and pencil task			
3. Understand that telescopes are used to study distant objects like planets and stars.	X			X			Free verbal response (open-ended questions)	X		
The Earth in Space										
4. Recognize that the appearance of the moon changes.	X	X		X			paper and pencil task; work-sample evaluation; assessment of a group project	X		
5. Understand how the movement of the Earth determines the seasons and the length of day and night.	X	X		X	X		Work-sample evaluation; paper and pencil task; assessment of a group project			
The Dynamic Earth										

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
6. Recognize and describe the different types of the Earth's materials.	X	X		X			Work-sample evaluation; assessment of a group project; paper and pencil task	X		
7. Recognize that human-made activities affect the surface of the Earth.		X		X			Free verbal response (open-ended questions); free written response (essay, detail, or explanation); work-sample evaluation	X		
8. Recognize that human-made activities affect the surface of the Earth.	X	X		X			Free verbal response (open-ended questions); work-sample evaluation	X		
9. Observe rocks and minerals.	X	X		X			Paper and pencil task; assessment of a group project; teacher observation	X		
10. Identify geological features of the Earth.	X	X		X			Paper and pencil task; assessment of a group project	X		
11. Relate events in daily life to aspects of the water cycle.	X	X		X			Paper and pencil task; assessment of a group project	X		
12. Understand that the atmosphere is made of a variety of components.	X	X		X			Free verbal response (open-ended questions); paper and pencil task	X		
Physical Science										
Matter										

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
1. Describe observable properties of the states of matter.		X		X			Free verbal response (open-ended questions); written response (essay, detail, or explanation); assessment of individual project	X		
2. Describe characteristics of objects (color, flexibility, composition, shape, size, texture, weight, and luster).		X		X			Assessment of a group project; free verbal response (open-ended questions); teacher observation	X		
3. Observe the difference between chemical changes and physical changes.	X	X		X			Assessment of a group project; free verbal response (open-ended questions); teacher observation	X	X	
Energy										
4. Explain ways that energy is useful and important.	X	X		X			Free verbal response (open-ended questions); free written response (essay, detail, or explanation); paper and pencil task	X		
5. Recognize things and processes that give off heat.	X			X			Free verbal response (open-ended questions); free written response (essay, detail, or explanation); paper and pencil task	X		

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
6. Explain the effects of heat on matter.	X			X			Free verbal response (open-ended questions); free written response (essay, detail, or explanation); paper and pencil task	X		
7. Explore sound (characteristics, how it is produced, and transmitted).		X			X		Assessment of a group project; teacher observation		X	
Force and Motion										
8. Understand that gravity is a force that pulls objects toward the Earth.		X		X			Free verbal response (open-ended questions); free written response (essay, detail, or explanation)	X		
9. Demonstrate that motion is a result of applying forces that are unequal.	X				X		Teacher observation; assessment of individual project		X	
Scientific Method										
1. Apply scientific method informally.		X		X			Assessment of individual project; free written response (essay, detail, or explanation); paper and pencil task	X		
2. Recognize that scientists use the scientific method.		X		X			Assessment of a group project; free verbal response (open-ended questions); teacher observation	X		

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Life Science										
Diversity										
1. Classify plants and animals according to their features (physical, structural, behavioral).	X	X		X			Assessment of individual project; free written response (essay, detail, or explanation); paper and pencil task		X	
2. Examine how fossils provide evidence of prehistoric life.	X	X		X			Free verbal response (open-ended questions); work-sample evaluation		X	
3. Examine inherited attributes of living things (physical feature and developmental patterns).	X	X		X			Assessment of a group project; free verbal response (open-ended questions); free written response (essay, detail, or explanation)		X	
Human Body										
4. Understand that the body is a system requiring basic nutritional needs.	X	X		X			Free written response (essay, detail or explanation; paper and pencil task; work-sample evaluation)	X		
5. Identify and give the function of bones and muscles.	X	X		X			Paper and pencil task; assessment of individual project; work-sample evaluation	X		
6. Understand the cause and effect of good/bad care of the human body.	X	X		X			Free verbal response (open-ended questions)	X	X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Cells										
7. Know that the smallest unit of life is called a cell.	X	X		X			Paper and pencil task; free written response (essay, detail, or explanation)	X		
8. Recognize that living things are made of one or more cells.	X	X		X			Paper and pencil task; free written response (essay, detail, or explanation)	X		
Interdependence										
9. Recognize helpful and harmful effects of organism.	X	X		X			Teacher observation; paper and pencil task	X		
10. Describe how various organisms satisfy their needs (food, water, air, shelter, space) within their environments.	X	X		X			Assessment of a group project; paper and pencil task; work-sample evaluation	X		
11. Understand that species depend on one another and on their environment for survival.	X	X		X			Free verbal response (open-ended questions); free written response (essay, detail, or explanation)	X		
Science Investigations										
1. Investigate scientific information through the study of current magazines, books, and Internet.	X			X			Oral or written report	X		

Target Skills	Introduced	Reinforced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Earth and Space Science										
The Universe										
1. Know the basic characteristics of stars, planets, and moons.	X			X			Book or teacher-made test	X		
2. Know that the sun is a star.	X	X	X	X			Book or teacher-made test	X		
3. Compare stars and planets.		X			X		Group or individual project		X	
4. Know that our solar system is a sun-centered system.		X	X	X	X	X	Group or individual project			X
The Earth in Space										
5. Explain the relationship between the rotation of the Earth on its axis and the day-to-night cycle.		X	X		X		Free verbal or written response		X	
6. Understand the relationship between the moon and tides.	X			X	X		Free verbal or written response		X	
7. Understand the relative scale of Earth to the planets, the sun, and the moon.	X			X	X		Free verbal or written response, group or individual project		X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
The Dynamic Earth										
8. Know the basic properties of air.	X			X			Book or teacher-made test	X		
9. Name and explain the use of common weather instruments in predicting and recording weather.		X		X			Book or teacher-made test	X		
10. Identify the impact of weather on the environment.		X			X		Free verbal or written response		X	
11. Understand the fundamental aspects of weather (pressure systems, air currents, ...)		X			X		Group or individual project		X	
12. Investigate the properties of rocks and minerals.		X		X	X		Lab work or test, book or teacher-made test, check list, group or individual project	X	X	
13. Describe the major geographic features of the ocean floor (trenches, mid-ocean ridges, ...).	X			X			Work-sample evaluation, written or oral test	X		
14. Identify the living communities in the ocean.	X			X			Free verbal or written response, book or teacher-made test	X		
15. Understand the importance of the oceans in our lives.	X			X	X	X	Free verbal or written response			X

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Physical Science										
Matter										
1. Explain that combining two or more materials may change properties of matter.		X			X		Free verbal or written response, book or teacher-made test		X	
2. Relate actions on objects to changes in those objects.		X			X		Free verbal or written response		X	
3. Describe physical and chemical change.		X	X	X			Free verbal or written response, book or teacher-made test	X		
4. Recognize that properties of materials differ (solubility, buoyancy, density, transparency, conductivity).	X			X			Book or teacher-made test	X		
5. Recognize that matter occupies space and has mass.	X			X			Free verbal or written response, book or teacher-made test	X		
Energy										
6. Compare the use of various forms of energy.	X			X	X		Group or individual project, free verbal or written response		X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
7. Explain the differences between conductors and nonconductors of heat.	X			X	X		Teacher observation, lab work or test		X	
8. Associate friction with objects charged with static electricity.	X			X	X	X	Lab work or test, free verbal or written response		X	
9. Investigate simple series and parallel circuits.	X			X			Lab work or test, teacher observation, free verbal or written response	X		
10. Know how fossil fuels were formed and that they cannot be replaced.	X			X			Free verbal or written response	X		
11. Explain how energy from the sun is used.	X			X	X	X	Group or individual project, free verbal or written response		X	
Force and Motion										
12. Explain how force affects motion.	X			X	X		Lab work or test, teacher observation, teacher-student interaction		X	
13. Investigate simple and compound machines.	X			X			Lab work or test, teacher observation	X		
Scientific Method										
1. Apply scientific method formally.	X				X		Teacher observation; free verbal response (open ended questions)		X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
2. Recognize that scientists use the scientific method.			X		X		Teacher observation; free verbal response (open ended questions)		X	
3. Generalize the scientific method to problem solving.	X			X			Teacher observation; free verbal response (open ended questions)	X		
Life Science										
Diversity									X	
1. Classify living things using various characteristics.		X			X	X	Lab work or test			
2. Examine fossil evidence for change in organisms over time.		X		X			Free verbal or written response	X		
Behavior										
3. Examine behaviors of living things (inherited, learned).	X			X	X		Lab work or test, group or individual project	X		
Human Body										
4. Understand the digestive, circulatory, respiratory, and excretory systems.	X			X			Book or teacher-made test, flash cards, group or individual project	X		

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Cells										
5. Describe cells as observed with the aid of various technologies.	X			X			Work-sample evaluation, group or individual project	X		
6. Understand that cells are specialized according to their functions.	X			X	X		Group or individual project, free verbal or written response	X		
Interdependence										
7. Understand that organisms depend on one another and on their environment for survival.		X		X	X	X	Free verbal or written response, book or teacher-made test		X	
Science Investigations										
8. Investigate scientific information through the study of current magazines, books, and Internet.		X		X			Oral or written report	X		
9. Recognize the importance of science for many careers including occupations in the field of science.	X			X	X	X	Free verbal or written response, group or individual projects	X		

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Earth and Space Science										
The Universe										
1. Understand that the size of a light source appears to vary with distance from the source.	X				X		Free verbal or written response		X	
2. Know that patterns of stars remain the same even though patterns appear to move across the sky.	X	X			X		Free verbal or written response		X	
3. Explain the variety of components of the solar system.		X	X	X			Book or teacher-made test, free verbal or written response, group or individual projects	X		
The Earth in Space										
4. Understand the relationship between the moon and tides.		X	X		X	X	Group or individual projects, free verbal or written response		X	
5. Explain the factors that determine seasons.		X	X		X	X	Book or teacher-made test, group or individual projects			X
The Dynamic Earth										
6. Explain methods that protect the limited natural resources.	X				X	X	Free verbal or written response, group or individual projects		X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eva
7. Describe basic components of the rock cycle.	X			X			Book or teacher-made test, work-sample evaluation, paper and pencil task	X		
8. Understand the geological features of the Earth.		X	X	X			Book or teacher-made test, group or individual projects	X		
9. Understand the water cycle.		X	X	X			Book or teacher-made test, group or individual projects	X		
10. Identify and explain conditions that affect weather.		X	X		X		Free verbal or written response		X	
11. Understand the symbols of a weather map.	X	X		X			Book or teacher-made test, work-sample evaluation	X		
12. Relate natural forces to fast and slow changes in the Earth's surface.		X	X			X	Free verbal or written response, book or teacher-made test			X
Physical Science										
Matter										
1. Describe chemical and physical changes that occur when two or more materials are combined.		X		X			Lab work or test, work-sample evaluation free verbal or written response	X		

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eva
2. Determine properties of objects and materials (conductivity, density, magnetism, solubility, transparency, rigidity, and flexibility).	X	X		X	X		Lab work or test, work-sample evaluation		X	
Energy										
3. Understand temperature radiation.	X			X	X		Free verbal or written response	X	X	
4. Explore the production, consumption, transformation, and conservation of energy.	X	X		X	X	X	Group or individual projects		X	
Force and Motion										
5. Realize that a gravitational force is created by the components of the Universe.	X			X	X	X	Free verbal or written response		X	
6. Identify forces required to make objects interact, change directions, or stop.		X		X	X	X	Group or individual projects, lab work or test			X

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eva
Scientific Method										
1. Apply scientific method formally.		X			X		Teacher observation; free verbal response (open ended questions)			X
2. Recognize that scientists use the scientific method.			X		X		Teacher observation; free verbal response (open ended questions)		X	
3. Generalize the scientific method to problem solving.		X		X			Teacher observation; free verbal response (open ended questions); group or individual projects		X	
Life Science										
Diversity										
1. Invent a classification system that serves a specific purpose.		X			X	X	Group or individual projects			X
2. Explain why living organisms are classified into five kingdoms.	X			X	X		Book or teacher-made test, free verbal or written response		X	
Heredity										
3. Associate physical characteristics with family lineage.	X			X	X		Free verbal or written response	X		
4. Describe the difference between a hybrid and a purebred organism.	X			X			Free verbal or written response	X		

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eva
Human Body										
5. Describe the components and basic functions of the skeletal and muscular systems in the human body.	X			X			Book or teacher-made test, free verbal or written response, work-sample evaluation	X		
6. Understand the control systems of the body (nervous and endocrine.)	X			X	X	X	Book or teacher-made test, free verbal or written response, work-sample evaluation		X	
Cells										
7. Identify the basic parts of a cell and their functions.	X			X			Book or teacher-made test, group or individual projects, work-sample evaluation	X		
8. Identify the basic life processes that occur in cells (growth, energy, reproduction, waste elimination, adaptation to the environment).	X			X			Book or teacher-made test, group or individual projects, work-sample evaluation	X		
9. Understand that tissues are groups of cells that are similar in appearance and function.		X		X	X		Free verbal or written response		X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eva
10. Understand that cells comprise tissue and tissues comprise organs, which together form systems.		X		X	X		Free verbal or written response		X	
Interdependence										
11. Recognize that changes in habitats may harm and/or help organisms.		X		X	X	X	Free verbal or written response, group or individual projects		X	
12. Understand that human activities have an impact on ecosystems.	X			X	X	X	Free verbal or written response, group or individual projects		X	
Science Investigations										
1. Investigate scientific information through the study of current magazines, books, and Internet.		X		X			Oral or written report	X		
2. Recognize the importance of science for many careers including occupations in the field of science.		X		X	X	X	Free verbal or written response, group or individual projects	X		
3. Research science topics.	X				X		Oral or written report, group of individual projects		X	
4. Recognize relationships among science, technology, and society.	X			X	X	X	Free verbal or written response, group or individual projects		X	X

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eva
5. Apply scientific knowledge and processes from one science (Earth and Space, Physical, Life) to another field of study.	X			X	X	X	Free verbal or written response, group or individual projects		X	X

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
Earth and Space Science										
The Universe										
1. Explain the life cycle of a star.	X	X		X	X		Book or teacher-made test, free verbal or written response, work sample evaluation		X	
2. Explore concepts of outer space (i.e., galaxies).	X			X	X		Individual or group project, book or teacher-made test		X	
3. Describe the basic technology of space exploration.	X			X			Individual or group project, book or teacher-made test	X		
The Earth in Space										
4. Describe the layers of the Earth and its atmosphere and their composition.	X			X	X		Individual or group project, book or teacher-made test	X		
5. Explain how the resources of Earth support life (i.e., water, minerals).	X	X		X	X		Free verbal or written response		X	
6. Understand gravity.		X	X		X		Free verbal or written response		X	
7. Relate the lunar orbit to the phases of the moon.	X			X	X	X	Work sample evaluation			X

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
8. Describe the forms and functions of technology that monitor the Earth and space.	X			X			Individual or group project	X		
9. Know theories of how the Earth was formed.	X			X			Free verbal or written response	X		
Physical Science										
Matter										
1. Understand mass and volume.	X	X		X	X		Free verbal or written response, lab task		X	
2. Distinguish between mass and weight.	X			X	X		Free verbal or written response	X		
3. Differentiate observable characteristics of solids, liquids, and gases.		X	X		X		Lab task, teacher observation, work sample evaluation		X	
4. Distinguish between physical and chemical changes in matter.		X	X		X		Work sample evaluation		X	
Energy										
5. Distinguish between static and current electricity.	X	X		X	X		Free verbal or written response	X		

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
6. Describe the relationship between electricity and magnetism.		X			X	X	Book or teacher-made test, free verbal or written response, individual or group project			X
7. Compare simple series and parallel circuits.		X	X		X		Book or teacher-made test, free verbal or written response, individual or group project, lab task		X	
Force and Motion										
8. Describe the relationship of magnitude of force to distance between two objects (i.e., distance between two magnets).	X			X	X		Free verbal or written response		X	
9. Understand that motion is judged relative to some other object or point.	X			X	X		Free verbal or written response, work sample evaluation	X		
10. Relate energy and force effect work.		X		X	X	X	Free verbal or written response, work sample evaluation	X		
11. Demonstrate ways that simple machines can change force.		X		X	X	X	Individual or group project, lab task		X	
12. Compare simple machines to the skeletal and muscular systems of the human body.	X	X		X	X	X	Individual or group project, work sample evaluation		X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
13. Analyze simple machines for mechanical advantage and efficiency.		X			X	X	Lab task			X
Scientific Method										
1. Apply scientific method formally.			X		X		Teacher observation; free verbal response (open ended questions)			X
2. Recognize that scientists use the scientific method.			X		X		Teacher observation; free verbal response (open ended questions)		X	
3. Generalize the scientific method to problem solving.		X		X			Teacher observation; free verbal response (open ended questions); group or individual projects		X	
Life Science										
Diversity										
1. Compare the distinguishing characteristics of organisms.		X			X		Book or teacher-made test		X	
2. Understand how different organisms get their food and convert it to useful forms of energy.	X			X	X	X	Book or teacher-made test, individual or group project			X
Cells										

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
3. Compare structure and function of plant and animal cells.	X			X	X		Book or teacher-made test, individual or group project		X	
4. Explain basic life functions of single cell organisms.	X			X	X		Book or teacher-made test		X	
Human Body										
5. Describe the components and basic functions of the growth and development systems (reproduction, life cycles, and growth).	X			X			Book or teacher-made test, work sample evaluation	X		
6. Understand how the body systems work together.		X	X	X	X	X	Book or teacher-made test, individual or group project, work sample evaluation		X	
7. Understand the nature of diseases (cause, care, prevention).		X		X	X	X	Book or teacher-made test, individual or group project			X
8. Identify the beneficial and harmful effects of drugs on the body.		X		X	X	X	Work sample evaluation, book or teacher-made test, free verbal or written response			X
Interdependence										
9. Explain interdependence among humans, between plants and animals, and among ecosystems.		X		X	X	X	Individual or group project, free verbal or written response		X	

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
10. Compare salt water communities (oceans, gulfs, beaches, estuaries, marshes).	X	X		X	X	X	Individual or group project, free verbal or written response			X
11. Differentiate between the two main interconnected global food webs (terrestrial and aquatic).	X	X		X	X	X	Individual or group project, free verbal or written response			X
12. Describe the Earth's biomes and the interdependence of their populations.	X	X		X	X	X	Individual or group project, free verbal or written response		X	
Science Investigations										
1. Investigate scientific information through the study of current magazines, books, and Internet.		X		X			Oral or written report	X		
2. Recognize the importance of science for many careers.			X	X	X	X	Free verbal or written response, group or individual projects	X		
3. Research science topics.		X	X		X	X	Oral or written report, group of individual projects		X	
4. Recognize relationships among science, technology, and society.		X		X	X	X	Free verbal or written response, group or individual projects			X

Target Skills	Intro-duced	Rein-forced	Long Term	Factual Level	Applied Analysis	Synth Eval	Sample Assessment Methods	Factual Level	Applied Analysis	Synth Eval
5. Investigate how science and the scientific method can be used to find solutions to current problems of society.	X			X	X	X	Free verbal or written response, group or individual projects. oral or written reports			X

Federal law prohibits discrimination on the basis of race, color, religion, sex, national origin, age, or disability in any educational programs or activities receiving federal financial assistance. (Title VI and VII of the Civil Rights Act of 1964; Title IX of the Educational Amendments of 1972; Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990.)

It is the policy of the Idaho State Department of Education not to discriminate in any educational programs or activities or in employment practices.

Inquiries regarding compliance with this nondiscriminatory policy may be directed to Dr. Anne C. Fox, State Superintendent of Public Instruction, P.O. Box 83720, Boise, Idaho 83720-0027, (208) 332-6800, or to the Director, Office of Civil Rights, Department of Education, Washington, D.C.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

REPRODUCTION BASIS

☑ This document is covered by a signed "Reproduction Release (Blanket) form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

☐ This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").