PROJECT LEARNING TREE’S
PreK-8 Activity Guide
AND
Energy & Society Kit
To NH Frameworks For
Science Literacy (K-12)

New Hampshire Project Learning Tree

March 1998
Revised September 2006
This handbook is a project of New Hampshire Project Learning Tree, a private non-profit organization committed to the environmental education of our youth. The handbook is dedicated to the hundreds of school teachers and administrators who are responding to the state’s move to standards-based education. Yours is not an easy job; we hope this handbook helps to lighten the load.

We would like to hear from our readers about how you have used the handbook and whether you find it accurate and clear. You can reach NH Project Learning Tree at

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METHODOLOGY
2006 Correlation Revision (Science)

NH’s curriculum standards have undergone substantial change in response to the federal No Child Left Behind Act. The former state standards were written for the end of grades three, six and ten. To meet new formalized assessment requirements, the NH Frameworks for Science Literacy (K-12), approved in June 2006, address content and skills, and are divided into grade spans for K-2, 3-4, 5-6, 7-8, 9-11 (basic literacy) and 11-12 (advanced literacy).

The NH Frameworks for Science Literacy (K-12) contain the following components:
- **Domain**: There are four domains within the science curriculum frameworks: Earth Space Science (ESS), Life Science (LS), Physical Science (PS), and Science Process Skills (SPS).
- **Strand**: There are five strands, or enduring knowledge statements, in LS and four each in domains of PS and ESS. Strands are the SAME for each grade span although not all components may be seen in each grade span. (Example: LS1 – All living organisms have identifiable structures and characteristics that allow for survival (organisms, populations, & species.))
- **Stem**: These are the categories of ideas. Stems are common throughout all grade spans. (Example: 1. Classification)
- **Grade-span Expectations (Proficiencies)**: These are what all students should know and be able to do within a specific grade range. The ranges include: K-2, 3-4, 5-6, 7-8, 9-11 (basic literacy level) 11-12 (advanced level).

For each strand, the associated proficiencies were consulted to help inform the degree of correlation of the broader strand with each activity; a match of at least one proficiency was required to indicate a correlation. Three elements of each activity will help focus the correlation process.
- The subject identifier in the sidebar determined whether the activity was correlated to the science frameworks; if science is not listed the activity was not be addressed.
- The grade levels noted in the sidebar determined which grade span proficiencies were examined.
- The description of activity objectives in the sidebar informed which curriculum and proficiency standard(s) are related to the activity.

Note: Any attempt to correlate universal curriculum standards and a single curriculum program involves subjectivity. Two important steps were taken to limit bias. First, the author applied this rigorous methodology to determine correlation. Second, drafts were peer-reviewed by PLT-trained elementary, middle, and high school teachers. Reviewers most common finding was that PLT activities lend themselves to modification, and in so doing, would meet many more standards than indicated. NHPLT chose, however, to correlate based on a strict interpretation of the activities, as they are written.
HOW TO USE THIS HANDBOOK

The purpose of this handbook is to assist educators who are reviewing and revising their science curricula. The primary audience is classroom teachers, curriculum specialists, and curriculum committees.

The handbook is divided into three sections, as follows:

- **PART I** lists each PLT activity in the *PreK-8 Activity Guide* and *Energy & Society Kit* followed by the standards from the NH Frameworks for Science Literacy (K-12) with which it is aligned.

  Use Part I if you have a particular PLT activity in mind and want to know how it correlates with the state curriculum standards. Or, to find an appropriate activity to meet your needs, use PLT’s “Topic Index” to select several potential activities to supplement your unit. To determine which state standards correlate with these activities, find the number and name of each activity in this handbook. Select an activity based on your objectives for your unit and the degree to which the activity correlates with appropriate standards. Each PLT activity is indicated by activity number and name and is followed by the strand and stem for each framework that is correlated to that activity.

- **PART II** lists individual state curriculum standards from the NH Frameworks for Science Literacy (K-12), followed by the PLT activities that meet the individual standards.

  Use Part II if you have a particular curriculum standard in mind and want to find an activity that meets this standard. Then read about the activities in your PLT guide to determine the one most suitable for your particular situation.

  All science domains (i.e. Life Science), strands (i.e. All living organisms have identifiable structures and characteristics that allow for survival (organisms, populations, & species) and stems (i.e. 1- Classification) are listed. Following each standard, the PLT activities aligned with that standard are identified by number and name.

- **Part III** is a chart that lists each PLT activity in the *PreK-8 Activity Guide* and *Energy & Society Kit* and the standards from the NH Frameworks for Science Literacy (K-12) with which each activity is aligned.

Note: Throughout this handbook, the domains are abbreviated as follows:

- ESS – Earth Space Science
- LS – Life Science
- PS – Physical Science
- SPS – Science Process Skills
NH Frameworks for Science Literacy (K-12)
Earth Space Science

ESS1 - The Earth and Earth materials, as we know them today, have developed over long periods of time, through constant change processes.

1. Atmosphere, Climate, & Weather
   44: Water Wonders
   84: The Global Climate

2. Composition & Features
   70: Soil Stories
   92: A Look at Lifestyles

3. Fossils
   None

4. Observation of the Earth from Space
   None

5. Processes & Rates of Change
   None

6. Rock Cycle
   70: Soil Stories

7. Water
   44: Water Wonders

ESS2 - The Earth is part of a solar system, made up of distinct parts, which have temporal and spatial interrelationships.

1. Earth, Sun and Moon
   None

2. Energy
   None

3. Solar System
   None

4. View from Earth
   None
ESS3 - The origin and evolution of galaxies and the universe demonstrate fundamental principles of physical science across vast distances and time.

1. Size and Scale
   None

2. Stars and Galaxies
   None

3. Universe
   None

ESS4 - The growth of scientific knowledge in Earth Space Science has been advanced through the development of technology and is used (alone or in combination with other sciences) to identify, understand and solve local and global issues.

1. Design Technology
   None

2. Tools
   48: Field, Forest, and Stream

3. Social Issues (Local and Global)
   35: Loving It Too Much
   36: Pollution Search
   37: Reduce, Reuse, Recycle
   38: Every Drop Counts
   40: Then and Now
   52: A Look At Aluminum
   71: Watch on Wetlands
   81: Living with Fire
   82: Resource-Go-Round
   85: In the Driver's Seat
   86: Our Changing World
   87: Earth Manners
   89: Trees for Many Reasons
   92: A Look at Lifestyles

4. Career Technical Education Connections
   34: Who Works In This Forest?
   83: A Peek at Packaging
Life Science

LS1 - All living organisms have identifiable structures and characteristics that allow for survival (organisms, populations, & species).

1. Classification
   4: Sounds Around
   7: Habitat Pen Pals
   9: Planet Diversity
   10: Charting Diversity
   11: Can It Be Real?
   12: Invasive Species

2. Living Things and Organization
   4: Sounds Around
   6: Picture This!
   7: Habitat Pen Pals
   8: The Forest of S.T. Shrew
   10: Charting Diversity
   12: Invasive Species
   23: Fallen Log (The)
   25: Birds and Worms
   27: Every Tree for Itself
   41: How Plants Grow

3. Reproduction
   79: Tree Lifecycle

LS2 - Energy flows and matter recycles through an ecosystem.

1. Environment
   2: Get In Touch With Trees
   3: Peppermint Beetle
   6: Picture This!
   8: The Forest of S.T. Shrew
   12: Invasive Species
   20: Environmental Exchange Box
   22: Trees as Habitats
   23: The Fallen Log
   24: Nature's Recyclers
   26: Dynamic Duos
   27: Every Tree for Itself
   29: Rain Reasons
   32: A Forest of Many Uses
   33: Forest Consequences
   41: How Plants Grow
   42: Sunlight and Shades of Green
   46: School Yard Safari
   47: Are Vacant Lots Vacant?
   48: Field, Forest, and Stream
   61: The Closer You Look
   62: To Be A Tree
   63: Tree Factory
   65: Bursting Buds
   66: Germinating Giants
   76: Tree Cookies
   77: Trees in Trouble
   78: Signs of Fall
   80: Nothing Succeeds Like Succession
   84: The Global Climate
2. Flow of Energy
   23: The Fallen Log
   24: Nature's Recyclers
   27: Every Tree for Itself
   28: Air Plants
   42: Sunlight and Shades of Green
   45: Web of Life
   46: School Yard Safari

3. Recycling of Materials
   8: The Forest of S.T. Shrew
   21: Adopt a Tree
   22: Trees as Habitats
   23: The Fallen Log
   24: Nature's Recyclers
   26: Dynamic Duos
   45: Web of Life
   47: Are Vacant Lots Vacant?
   48: Field, Forest, and Stream

**LS3 - Groups of organisms show evidence of change over time (e.g. evolution, natural selection, structures, behaviors, and biochemistry).**

1. Change
   12: Invasive Species
   17: People of the Forest
   18: Tale of the Sun
   23: The Fallen Log
   32: A Forest of Many Uses
   33: Forest Consequences
   34: Who Works In This Forest?
   35: Loving It Too Much
   36: Pollution Search
   40: Then and Now
   41: How Plants Grow
   42: Sunlight and Shades of Green
   48: Field, Forest, and Stream
   50: 400-Acre Wood
   69: Forest for the Trees
   72: Air We Breathe
   76: Tree Cookies
   77: Trees in Trouble
   80: Nothing Succeeds Like Succession
   81: Living with Fire
   84: The Global Climate
   86: Our Changing World
   89: Trees for Many Reasons
   94: By the Rivers of Babylon

2. Evolution
   11: Can It Be Real?

3. Natural Selection
   12: Invasive Species
   20: Environmental Exchange Box
   23: Fallen Log (The)
   29: Rain Reasons
   48: Field, Forest, and Stream
LS4 - Humans are similar to other species in many ways, and yet are unique among Earth’s life forms.

1. Behavior
   4: Sounds Around
   18: Tale of the Sun
   19: Viewpoints on the Line
   78: Signs of Fall
   91: In the Good Old Days

2. Disease
   None

3. Human Identity
   16: Pass the Plants, Please

LS5 - The growth of scientific knowledge in Life Science has been advanced through the development of technology and is used (alone or in combination with other sciences) to identify, understand and solve local and global issues.

1. Design Technology
   13: We All Need Trees
   15: A Few of My Favorite Things
   17: People of the Forest
   18: Tale of the Sun
   51: Make Your Own Paper
   67: How Big Is Your Tree?
   72: Air We Breathe
   92: A Look at Lifestyles

2. Tools
   4: Sounds Around
   48: Field, Forest, and Stream
   66: Germinating Giants
   67: How Big Is Your Tree?

3. Social Issues (Local and Global)
   72: Air We Breathe

4. Career Technical Education Connections
   31: Plant a Tree
   32: A Forest of Many Uses
   34: Who Works In This Forest?
   67: How Big Is Your Tree?
   69: Forest for the Trees
Physical Science

PS1 - All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another (independent of size/amount of substance).

1. Composition
   15: A Few of My Favorite Things

2. Properties
   None

PS 2 - Energy is necessary for change to occur in matter. Energy can be stored, transferred and transformed, but cannot be destroyed.

1. Change
   None

2. Conservation
   None

3. Energy
   39: Energy Sleuths

PS 3 - The motion of an object is affected by force.

1. Forces
   None

2. Motion
   None

PS4 - The growth of scientific knowledge in Physical Science has been advanced through the development of technology and is used (alone or in combination with other sciences) to identify, understand and solve local and global issues.

1. Design Technology
   15: A Few of My Favorite Things
   51: Make Your Own Paper

2. Tools
   51: Make Your Own Paper
PS4 - The growth of scientific knowledge in Physical Science has been advanced through the development of technology and is used (alone or in combination with other sciences) to identify, understand and solve local and global issues. (cont.)

3. Social Issues (Local and Global)
   14: Renewable or Not?    52: A Look At Aluminum
   39: Energy Sleuths      82: Resource-Go-Round
   51: Make Your Own Paper

4. Career Technical Education Connections
   None
Science Process Skills

SPS1: Scientific Inquiry and Critical Thinking Skills

1. Making Observations and Asking Questions
   1: The Shape of Things                   43: Have Seeds, Will Travel
   2: Get In Touch With Trees              46: School Yard Safari
   3: Peppermint Beetle                    47: Are Vacant Lots Vacant?
   4: Sounds Around                        48: Field, Forest, and Stream
   5: Poet-Tree                            54: I'd Like to Visit a Place Where...
   6: Picture This!                        61: The Closer You Look
   7: Habitat Pen Pals                     64: Looking at Leaves
   8: The Forest of S.T. Shrew             65: Bursting Buds
   9: Planet Diversity                     66: Germinating Giants
  10: Charting Diversity                   67: How Big Is Your Tree?
  11: Can It Be Real?                      68: Name That Tree
  13: We All Need Trees                   70: Soil Stories
  15: A Few of My Favorite Things         71: Watch on Wetlands
  20: Environmental Exchange Box          72: Air We Breathe
  21: Adopt a Tree                        73: Waste Watchers
  22: Trees as Habitats                   76: Tree Cookies
  23: The Fallen Log                      77: Trees in Trouble
  24: Nature's Recyclers                  78: Signs of Fall
  25: Birds and Worms                     80: Nothing Succeeds Like Succession
  36: Pollution Search                    81: Living with Fire
  37: Reduce, Reuse, Recycle              82: Resource-Go-Round
  38: Every Drop Counts                   83: A Peek at Packaging
  39: Energy Sleuths                      84: The Global Climate
  40: Then and Now                        96: Improve Your Place
  41: How Plants Grow                     42: Sunlight and Shades of Green

2. Designing Scientific Investigations
   41: How Plants Grow

3. Conducting Scientific Investigations
   4: Sounds Around                       67: How Big Is Your Tree?
   9: Planet Diversity                    70: Soil Stories
   24: Nature's Recyclers                 71: Watch on Wetlands
   41: How Plants Grow                    72: Air We Breathe
   42: Sunlight and Shades of Green       73: Waste Watchers
   47: Are Vacant Lots Vacant?            77: Trees in Trouble
   48: Field, Forest, and Stream          85: In the Driver's Seat
   51: Make Your Own Paper                96: Improve Your Place
   66: Germinating Giants                 69: How Big Is Your Tree?
SPS1: Scientific Inquiry and Critical Thinking Skills (cont.)

4. Representing and Understanding Results of Investigations
   9: Planet Diversity
   24: Nature's Recyclers
   25: Birds and Worms
   37: Reduce, Reuse, Recycle
   41: How Plants Grow
   47: Are Vacant Lots Vacant?
   24: Nature's Recyclers
   25: Birds and Worms
   37: Reduce, Reuse, Recycle
   41: How Plants Grow
   47: Are Vacant Lots Vacant?
   48: Field, Forest, and Stream
   67: How Big Is Your Tree?
   70: Soil Stories
   71: Watch on Wetlands
   73: Waste Watchers
   77: Trees in Trouble

5. Evaluating Scientific Explanations
   9: Planet Diversity
   42: Sunlight and Shades of Green
   48: Field, Forest, and Stream
   71: Watch on Wetlands

SPS2: Unifying Concepts of Science.

1. Nature of Science
   37: Reduce, Reuse, Recycle
   81: Living with Fire
   91: In the Good Old Days

2. Systems and Energy
   33: Forest Consequences
   37: Reduce, Reuse, Recycle
   45: Web of Life

3. Models and Scale
   44: Water Wonders
   62: To Be A Tree
   63: Tree Factory

4. Patterns of Change
   23: The Fallen Log
   40: Then and Now
   65: Bursting Buds
   80: Nothing Succeeds Like Succession
   84: The Global Climate

5. Form and Function
   65: Bursting Buds
   66: Germinating Giants
   86: Our Changing World
SPS3: Personal, Social, and Technological Perspectives

1. Collaboration in Scientific Endeavors
   2: Get In Touch With Trees
   3: Peppermint Beetle
   4: Sounds Around
   9: Planet Diversity
   13: We All Need Trees
   17: People of the Forest
   20: Environmental Exchange Box
   24: Nature's Recyclers
   31: Plant a Tree
   33: Forest Consequences
   35: Loving It Too Much
   41: How Plants Grow
   47: Are Vacant Lots Vacant?
   48: Field, Forest, and Stream
   50: 400-Acre Wood
   53: On the Move
   54: I'd Like to Visit a Place Where…
   60: Publicize It!
   63: Tree Factory
   67: How Big Is Your Tree?
   68: Name That Tree
   70: Soil Stories
   71: Watch on Wetlands
   74: Trees in Trouble
   83: A Peek at Packaging
   84: The Global Climate
   86: Our Changing World
   91: In the Good Old Days
   72: Air We Breathe
   73: Waste Watchers
   77: Trees in Trouble
   80: Nothing Succeeds Like Succession
   81: Living with Fire
   83: A Peek at Packaging
   84: The Global Climate
   85: In the Driver's Seat
   86: Our Changing World
   87: Earth Manners
   88: Life on the Edge
   89: Trees for Many Reasons
   90: Native Ways
   91: In the Good Old Days
   92: A Look at Lifestyles
   94: By the Rivers of Babylon
   96: Improve Your Place

2. Common Environmental Issues, Natural Resources Management and Conservation
   4: Sounds Around
   9: Planet Diversity
   10: Charting Diversity
   11: Can It Be Real?
   12: Invasive Species
   14: Renewable or Not?
   18: Tale of the Sun
   21: Adopt a Tree
   22: Trees as Habitats
   23: The Fallen Log
   31: Plant a Tree
   33: Forest Consequences
   35: Loving It Too Much
   36: Pollution Search
   37: Reduce, Reuse, Recycle
   38: Every Drop Counts
   39: Energy Sleuths
   40: Then and Now
   46: School Yard Safari
   50: 400-Acre Wood
   54: I'd Like to Visit a Place Where…
   60: Publicize It!
   71: Watch on Wetlands
   72: Air We Breathe
   73: Waste Watchers
   77: Trees in Trouble
   78: Signs of Fall
   79: Tree Lifecycle
   80: Nothing Succeeds Like Succession
   81: Living with Fire
   83: A Peek at Packaging
   84: The Global Climate
   85: In the Driver's Seat
   86: Our Changing World
   87: Earth Manners
   88: Life on the Edge
   89: Trees for Many Reasons
   90: Native Ways
   91: In the Good Old Days
   92: A Look at Lifestyles
   94: By the Rivers of Babylon
   96: Improve Your Place

3. Science and Technology; Technological Design and Application
   4: Sounds Around
   18: Tale of the Sun
   33: Forest Consequences
SPS4: Science Skills for Information, Communication and Media Literacy

1. Information and Media Literacy
   12: Invasive Species
   17: People of the Forest
   37: Reduce, Reuse, Recycle
   39: Energy Sleuths
   45: Web of Life
   49: Tropical Treehouse
   82: Resource-Go-Round
   84: The Global Climate
   88: Life on the Edge
   91: In the Good Old Days
   92: A Look at Lifestyles
   94: By the Rivers of Babylon

2. Communication Skills
   1: The Shape of Things
   2: Get In Touch With Trees
   5: Poet-Tree
   6: Picture This!
   7: Habitat Pen Pals
   9: Planet Diversity
   10: Charting Diversity
   11: Can It Be Real?
   12: Invasive Species
   15: A Few of My Favorite Things
   21: Adopt a Tree
   22: Trees as Habitats
   24: Nature's Recyclers
   36: Pollution Search
   38: Every Drop Counts
   39: Energy Sleuths
   44: Water Wonders
   46: School Yard Safari
   47: Are Vacant Lots Vacant?
   49: Tropical Treehouse
   50: 400-Acre Wood
   60: Publicize It!
   61: The Closer You Look
   71: Watch on Wetlands
   72: Air We Breathe
   79: Tree Lifecycle
   80: Nothing Succeeds Like Succession
   82: Resource-Go-Round
   86: Our Changing World
   87: Earth Manners
   88: Life on the Edge
   90: Native Ways
   91: In the Good Old Days
   94: By the Rivers of Babylon

3. Critical Thinking and Systems Thinking
   8: The Forest of S.T. Shrew
   15: A Few of My Favorite Things
   21: Adopt a Tree
   25: Birds and Worms
   36: Pollution Search
   50: 400-Acre Wood
   53: On the Move
   60: Publicize It!
   71: Watch on Wetlands
   75: Tipi Talk
   86: Our Changing World
   96: Improve Your Place

4. Problem Identification, Formulation, and Solution
   4: Sounds Around
   24: Nature's Recyclers
   38: Every Drop Counts
   73: Waste Watchers
   96: Improve Your Place
5. Creativity and Intellectual Curiosity
   71: Watch on Wetlands
   72: Air We Breathe
   88: Life on the Edge
   91: In the Good Old Days
   94: By the Rivers of Babylon

6. Interpersonal and Collaborative Skills
   4: Sounds Around
   13: We All Need Trees
   24: Nature's Recyclers
   35: Loving It Too Much
   41: How Plants Grow
   48: Field, Forest, and Stream
   50: 400-Acre Wood
   54: I'd Like to Visit a Place Where…
   60: Publicize It!
   63: Tree Factory
   64: Looking at Leaves
   67: How Big Is Your Tree?
   68: Name That Tree
   69: Forest for the Trees
   71: Watch on Wetlands
   77: Trees in Trouble
   83: A Peek at Packaging
   87: Earth Manners
   88: Life on the Edge
   92: A Look at Lifestyles
   94: By the Rivers of Babylon
   96: Improve Your Place

7. Self Direction
   21: Adopt a Tree
   38: Every Drop Counts
   65: Bursting Buds
   73: Waste Watchers
   80: Nothing Succeeds Like Succession

8. Accountability and Adaptability
   20: Environmental Exchange Box

9. Social Responsibility
   20: Environmental Exchange Box
   71: Watch on Wetlands
Earth Space Science

ESS1 - The Earth and Earth materials, as we know them today, have developed over long periods of time, through constant change processes.

1. Atmosphere, Climate, & Weather
   None

2. Composition & Features
   2: May The Source Be With You

3. Fossils
   None

4. Observation of the Earth from Space
   None

5. Processes & Rates of Change
   None

6. Rock Cycle
   None

7. Water
   None

ESS2 - The Earth is part of a solar system, made up of distinct parts, which have temporal and spatial interrelationships.

1. Earth, Sun and Moon
   None

2. Energy
   None

3. Solar System
   None

4. View from Earth
   None
ESS3 - The origin and evolution of galaxies and the universe demonstrate fundamental principles of physical science across vast distances and time.

1. Size and Scale
   None

2. Stars and Galaxies
   None

3. Universe
   None

ESS4 - The growth of scientific knowledge in Earth Space Science has been advanced through the development of technology and is used (alone or in combination with other sciences) to identify, understand and solve local and global issues.

1. Design Technology
   None

2. Tools
   None

3. Social Issues (Local and Global)
   5: In the Driver's Seat

4. Career Technical Education Connections
   None
Life Science

**LS1** - All living organisms have identifiable structures and characteristics that allow for survival (organisms, populations, & species).

None

**LS2** - Energy flows and matter recycles through an ecosystem.

None

**LS3** - Groups of organisms show evidence of change over time (e.g. evolution, natural selection, structures, behaviors, and biochemistry).

None

**LS4** - Humans are similar to other species in many ways, and yet are unique among Earth’s life forms.

None

**LS5** - The growth of scientific knowledge in Life Science has been advanced through the development of technology and is used (alone or in combination with other sciences) to identify, understand and solve local and global issues.

None
Physical Science

PS1 - All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another (independent of size/amount of substance).
  1. Composition
     None
  2. Properties
     None

PS 2 - Energy is necessary for change to occur in matter. Energy can be stored, transferred and transformed, but cannot be destroyed.
  1. Change
     None
  2. Conservation
     3: Energy Chains
  3. Energy
     1: Energy Detectives
     2: May The Source Be With You
     3: Energy Chains

PS 3 - The motion of an object is affected by force.
  1. Forces
     None
  2. Motion
     None

PS4 - The growth of scientific knowledge in Physical Science has been advanced through the development of technology and is used (alone or in combination with other sciences) to identify, understand and solve local and global issues.
  1. Design Technology
     None
  2. Tools
     None
  3. Social Issues (Local and Global)
     1: Energy Detectives
     3: Energy Chains
  4. Career Technical Education Connections
     None
Science Process Skills

SPS1: Scientific Inquiry and Critical Thinking Skills

1. Making Observations and Asking Questions
   5: In the Driver's Seat

2. Designing Scientific Investigations
   None

3. Conducting Scientific Investigations
   None

4. Representing and Understanding Results of Investigations
   None

5. Evaluating Scientific Explanations
   None

SPS2: Unifying Concepts of Science.

1. Nature of Science
   None

2. Systems and Energy
   None

3. Models and Scale
   None

4. Patterns of Change
   None

5. Form and Function
   None

SPS3: Personal, Social, and Technological Perspectives

1. Collaboration in Scientific Endeavors
   2: May The Source Be With You
   3: Energy Chains
**SPS3: Personal, Social, and Technological Perspectives (cont.)**

2. Common Environmental Issues, Natural Resources Management and Conservation
   1: Energy Detectives
   2: May The Source Be With You
   3: Energy Chains
   5: In the Driver's Seat

3. Science and Technology; Technological Design and Application
   *None*

**SPS4: Science Skills for Information, Communication and Media Literacy**

1. Information and Media Literacy
   *None*

2. Communication Skills
   1: Energy Detectives
   2: May The Source Be With You
   6: Energy Challenge Game

3. Critical Thinking and Systems Thinking
   3: Energy Chains

4. Problem Identification, Formulation, and Solution
   *None*

5. Creativity and Intellectual Curiosity
   2: May The Source Be With You

6. Interpersonal and Collaborative Skills
   2: May The Source Be With You
   3: Energy Chains
   6: Energy Challenge Game

7. Self Direction
   1: Energy Detectives
   5: In the Driver's Seat

8. Accountability and Adaptability
   *None*

9. Social Responsibility
   *None*