

## **Activity #1: THE SHAPE OF THINGS**

### **SCIENCE**

Students will demonstrate

- an increasing ability to distinguish among materials by utilizing observable properties (5a; *Physical Science*).

### **MATHEMATICS**

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- name, describe, model, classify, and compare geometric shapes and their properties with an emphasis on their wide applicability in human activity (4a; *Geometry, Measurement and Trigonometry*).
- develop spatial sense (4b; *Geometry, Measurement and Trigonometry*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #2: GET IN TOUCH WITH TREES!**

### **SCIENCE**

Students will demonstrate

- an increasing ability to distinguish among materials by utilizing observable properties (5a; *Physical Science*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #3: THE PEPPERMINT BEETLE**

### **SCIENCE**

Students will demonstrate an increasing ability to

- understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- understand fundamental structures, functions, and mechanisms of inheritance found in microorganisms, fungi, protists, plants, and animals (3d; *Life Science*).
- distinguish among materials by utilizing observable properties (5a; *Physical Science*).

## **Activity #4: SOUNDS AROUND**

### **SCIENCE**

Students will demonstrate an increasing ability to

- use measuring instruments to gather accurate and/or precise information (2a; *Science, Technology, and Society*).
- use technology to observe nature (2b; *Science, Technology, and Society*).
- recognize patterns and products of evolution, including genetic variation, specialization, adaptation, and natural selection (3a; *Life Science*).
- distinguish among materials by utilizing observable properties (5a; *Physical Science*).
- quantify their interactions with phenomena in the natural world, use these results to understand differences of scale in objects and systems, and determine how changes in scale affect various properties of those objects and systems (6d; *Unifying Themes and Concepts*).

### **SOCIAL STUDIES**

Students will demonstrate

- the ability to use maps, mental maps, globes, and other graphic tools and technologies to acquire, process, report, and analyze geographic information (10; *Geography*).

### **MATHEMATICS**

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- develop spatial sense (4b; *Geometry, Measurement, and Trigonometry*).
- use data analysis, statistics and probability to analyze given situations and the outcomes of experiments (5a; *Data Analysis, Statistics, and Probability*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in understanding, appreciating, interpreting, and critically analyzing classical and contemporary American and British literature as well as literary works translated into English (4; *Literature*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).

- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #5 : POET-TREE**

### **SCIENCE**

Students will demonstrate an increasing ability to

- understand that science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).
- understand fundamental structures, functions, and mechanisms of inheritance found in microorganisms, fungi, protists, plants, and animals (3d; *Life Science*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to write effectively for a variety of purposes and audiences (2; *Writing*).
- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #6: PICTURE THIS!**

### **SCIENCE**

Students will demonstrate an increasing ability to

- recognize patterns and products of evolution, including genetic variation, specialization, adaptation, and natural selection (3a; *Life Science*).
- understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- understand fundamental structures, functions, and mechanisms of inheritance found in microorganisms, fungi, protists, plants, and animals (3d; *Life Science*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #7: HABITAT PEN PALS**

### **SCIENCE**

Students will demonstrate an increasing ability to understand

- how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- that the Earth is a complex planet with five interacting systems, which consists of the solid Earth (lithosphere), air (atmosphere), water (hydrosphere), ice (cryosphere), and life (biosphere) (4b; *Earth/Space Science*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #8: THE FOREST OF S.T. SHREW**

### **SCIENCE**

Students will demonstrate an increasing ability to

- understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- understand fundamental structures, functions, and mechanisms of inheritance found in microorganisms, fungi, protists, plants, and animals (3d; *Life Science*).
- recognize parts of any object or system, and understand how the parts interrelate in the operation of that object or system (6a; *Unifying Themes and Concepts*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #9: PLANET OF PLENTY**

### **SCIENCE**

Students will demonstrate

- an increasing understanding of how the scientific enterprise operates (1a; *Science as Inquiry*).
- an increasing ability to use measuring instruments to gather accurate and/or precise information (2a; *Science, Technology, and Society*).
- an increasing ability to recognize patterns and products of evolution, including genetic variation, specialization, adaptation, and natural selection (3a; *Life Science*).
- an increasing ability to understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions. (3b; *Life Science*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #10: CHARTING DIVERSITY**

### **SCIENCE**

Students will demonstrate an increasing ability to

- recognize patterns and products of evolution, including genetic variation, specialization, adaptation, and natural selection (3a; *Life Science*).
- understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- understand fundamental structures, functions, and mechanisms of inheritance found in microorganisms, fungi, protists, plants, and animals (3d; *Life Science*).

## **Activity #11: CAN IT BE REAL?**

### **SCIENCE**

Students will demonstrate an increasing ability to

- recognize patterns and products of evolution, including genetic variation, specialization, adaptation, and natural selection (3a; *Life Science*).
- understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #12: TREE TREASURES**

### **SCIENCE**

Students will demonstrate an increasing ability to understand

- how technology is used to synthesize new products (2d; *Science, Technology, and Society*).
- that science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).

### **SOCIAL STUDIES**

Students will demonstrate an understanding of

- the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #13: WE ALL NEED TREES**

### **SCIENCE**

Students will demonstrate an increasing ability to understand

- how technology is used to synthesize new products (2d; *Science, Technology, and Society*).
- that science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).

### **SOCIAL STUDIES**

Students will demonstrate an understanding of

- the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #14: RENEWABLE OR NOT?**

### **SCIENCE**

Students will demonstrate an increasing ability to understand that

- science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).
- the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).

### **SOCIAL STUDIES**

Students will demonstrate

- the ability to use maps, mental maps, globes, and other graphic tools and technologies to acquire, process, report, and analyze geographic information (10; *Geography*).
- an understanding of the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

## **Activity #15: A FEW OF MY FAVORITE THINGS**

### **SCIENCE**

Students will demonstrate an increasing ability to understand that

- science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).
- the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).

### **SOCIAL STUDIES**

Students will demonstrate an understanding of

- the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #16: PASS THE PLANTS, PLEASE**

### **SCIENCE**

Students will demonstrate an increasing ability to

- understand fundamental structures, functions, and mechanisms of inheritance found in microorganisms, fungi, protists, plants, and animals (3d; *Life Science*).
- recognize parts of any object or system, and understand how the parts interrelate in the operation of that object or system (6a; *Unifying Themes and Concepts*).

### **MATHEMATICS**

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- use data analysis, statistics and probability to analyze given situations and the outcomes of experiments (5a; *Data Analysis, Statistics, and Probability*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #17: PEOPLE OF THE FOREST**

### **SOCIAL STUDIES**

Students will demonstrate an understanding of

- the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #18: TALE OF THE SUN**

### **SCIENCE**

Students will demonstrate an increasing ability to

- understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).

### **SOCIAL STUDIES**

Students will demonstrate

- an understanding of the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).
- a knowledge of the chronology and significance of the unfolding story of America including the history of their community, New Hampshire, and the United States (17; *History*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #19: VALUES ON THE LINE**

### **SCIENCE**

Students will demonstrate

- an increasing understanding of how the scientific enterprise operates (1a; *Science as Inquiry*).
- an increasing ability to understand that science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).
- an increasing ability to understand that progress in science and technology is controlled by societal attitudes and beliefs (2f; *Science, Technology, and Society*).

## **Activity #20: ENVIRONMENTAL EXCHANGE BOX**

### **SCIENCE**

Students will demonstrate an increasing ability to understand

- that science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).
- how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).

### **SOCIAL STUDIES**

Students will demonstrate an understanding of

- the physical and human geographic features that define places and regions (11; *Geography*).
- the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

## **Activity #21: ADOPT A TREE**

### **SCIENCE**

Students will demonstrate

- an increasing understanding of how the scientific enterprise operates (1a; *Science as Inquiry*).
- an increasing ability to understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).

### **SOCIAL STUDIES**

Students will demonstrate

- an understanding of the physical and human geographic features that define places and regions (11; *Geography*).

### **MATHEMATICS**

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- develop spatial sense (4b; *Geometry, Measurement, and Trigonometry*).
- develop an understanding of measurement and systems of measurement through experiences which enable them to use a variety of techniques, tools, and units of measurement to describe and analyze quantifiable phenomena (4c; *Geometry, Measurement, and Trigonometry*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #22: TREES AS HABITATS**

### **SCIENCE**

Students will demonstrate an increasing ability to

- use technology to observe nature (2b; *Science, Technology, and Society*).
- understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).

### **SOCIAL STUDIES**

Students will demonstrate an understanding of

- the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

### **MATHEMATICS**

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- use data analysis, statistics and probability to analyze given situations and the outcomes of experiments (5a; *Data Analysis, Statistics, and Probability*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #23: THE FALLEN LOG**

### **SCIENCE**

Students will demonstrate an increasing ability to

- use technology to observe nature (2b; *Science, Technology, and Society*).
- understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## Activity #24: NATURE'S RECYCLERS

### SCIENCE

Students will demonstrate an increasing

- understanding of how the scientific enterprise operates (1a; *Science as Inquiry*).
- ability to understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- ability to understand that organisms are linked to one another and to their physical setting by the transfer and transformation of matter and energy to maintain a dynamic equilibrium (3c; *Life Science*).

### ENGLISH LANGUAGE ARTS

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #25: BIRDS AND WORMS**

### **SCIENCE**

Students will demonstrate an increasing ability to understand

- how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).

### **MATHEMATICS**

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- compute (3c; *Numbers, Numeration, Operations, and Number Theory*).

## **Activity #26: DYNAMIC DUOS**

### **SCIENCE**

Students will demonstrate an increasing ability to understand

- how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #27: EVERY TREE FOR ITSELF**

### **SCIENCE**

Students will demonstrate an increasing ability to

- understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).

### **MATHEMATICS**

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- compute (3c; *Numbers, Numeration, Operations, and Number Theory*).

## **Activity #28: AIR PLANTS**

### **SCIENCE**

Students will

- demonstrate an increasing ability to understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- increasingly quantify their interactions with phenomena in the natural world, use these results to understand differences of scale in objects and systems, and determine how changes in scale affect various properties of those objects and systems (6d; *Unifying Themes and Concepts*).

### **MATHEMATICS**

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- develop an understanding of measurement and systems of measurement through experiences which enable them to use a variety of techniques, tools, and units of measurement to describe and analyze quantifiable phenomena (4c; *Geometry, Measurement and Trigonometry*).

## **Activity #29: RAIN REASONS**

### **SCIENCE**

Students will

- demonstrate an increasing understanding of how the scientific enterprise operates (1a; *Science as Inquiry*).
- demonstrate an increasing ability to use measuring instruments to gather accurate and/or precise information (2a; *Science, Technology, and Society*).
- demonstrate an increasing ability to understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- increasingly quantify their interactions with phenomena in the natural world, use these results to understand differences of scale in objects and systems, and determine how changes in scale affect various properties of those objects and systems (6d; *Unifying Themes and Concepts*).

### **SOCIAL STUDIES**

Students will demonstrate an understanding of

- the physical and human geographic features that define places and regions (11; *Geography*).
- landform patterns and water systems on Earth's surface; the physical processes that shape these patterns; and the characteristics and distribution of ecosystems (12; *Geography*).

### **MATHEMATICS**

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- develop an understanding of measurement and systems of measurement through experiences which enable them to use a variety of techniques, tools, and units of measurement to describe and analyze quantifiable phenomena (4c; *Geometry, Measurement and Trigonometry*).
- use data analysis, statistics and probability to analyze given situations and the outcomes of experiments (5a; *Data Analysis, Statistics, and Probability*).

## **Activity #30: THREE CHEERS FOR TREES**

## SCIENCE

Students will demonstrate an increasing ability to understand

- how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- that organisms are linked to one another and to their physical setting by the transfer and transformation of matter and energy to maintain a dynamic equilibrium (3c; *Life Science*).

## SOCIAL STUDIES

Students will demonstrate an understanding of

- the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

## ENGLISH LANGUAGE ARTS

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## Activity #31: PLANT A TREE

## **SCIENCE**

Students will demonstrate an increasing ability to understand

- how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- that organisms are linked to one another and to their physical setting by the transfer and transformation of matter and energy to maintain a dynamic equilibrium (3c; *Life Science*).

## **SOCIAL STUDIES**

Students will demonstrate an understanding of

- the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

## **Activity #32: A FOREST OF MANY USES**

## **SCIENCE**

Students will demonstrate an increasing ability to understand

- how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- that the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).

## **SOCIAL STUDIES**

Students will demonstrate an understanding of

- the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

## Activity #33: FOREST CONSEQUENCES

### SCIENCE

Students will demonstrate an increasing ability to understand that

- science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).
- progress in science and technology is controlled by societal attitudes and beliefs (2f; *Science, Technology, and Society*).
- the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).

### SOCIAL STUDIES

Students will demonstrate

- the ability and willingness to apply economic concepts in the examination and resolution of problems and issues in educational, occupational, civic, and everyday settings (9; *Economics*).
- an understanding of the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).
- the ability to apply their knowledge of geographic concepts, skills, and technology to interpret the past and present and to plan for the future (15; *geography*).

### ENGLISH LANGUAGE ARTS

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #34: WHO WORKS IN THIS FOREST?**

### **SCIENCE**

Students will demonstrate an increasing ability to understand

- that progress in science and technology is controlled by societal attitudes and beliefs (2f; *Science, Technology, and Society*).
- how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- that the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).

### **SOCIAL STUDIES**

Students will demonstrate

- an understanding of the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).
- the ability to apply their knowledge of geographic concepts, skills, and technology to interpret the past and present and to plan for the future (15; *Geography*).

## **Activity #35: LOVING IT TOO MUCH**

### **SCIENCE**

Students will demonstrate an increasing ability to

- analyze, synthesize, and communicate scientific information using technology (2c; *Science, Technology, and Society*).
- understand that science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).
- understand that the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).

### **SOCIAL STUDIES**

Students will demonstrate

- an understanding of the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).
- the ability to apply their knowledge of geographic concepts, skills, and technology to interpret the past and present and to plan for the future (15; *geography*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #36: POLLUTION SEARCH**

### **SCIENCE**

Students will demonstrate an increasing ability to understand

- that science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).
- how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- that the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).

### **SOCIAL STUDIES**

Students will demonstrate

- an understanding of the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

### **MATHEMATICS**

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- use data analysis, statistics and probability to analyze given situations and the outcomes of experiments (5a; *Data Analysis, Statistics, and Probability*).

## **Activity #37: TALKING TRASH, NOT!**

### **SCIENCE**

Students will demonstrate an increasing

- understanding of how the scientific enterprise operates (1a; *Science as Inquiry*).
- ability to understand that science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).
- ability to understand that the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).

### **SOCIAL STUDIES**

Students will demonstrate

- an understanding of the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

### **MATHEMATICS**

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- use data analysis, statistics and probability to analyze given situations and the outcomes of experiments (5a; *Data Analysis, Statistics, and Probability*).

## **Activity #38: EVERY DROP COUNTS**

### **SCIENCE**

Students will demonstrate an increasing

- understanding of how the scientific enterprise operates (1a; *Science as Inquiry*).
- ability to understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- ability to understand that the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).

### **SOCIAL STUDIES**

Students will demonstrate

- an understanding of the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

### **MATHEMATICS**

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- compute (3c; *Numbers, Numeration, Operations, and Number Theory*).

## **Activity #39: ENERGY SLEUTHS**

### **SCIENCE**

Students will demonstrate an increasing ability to understand that

- science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).
- the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).

### **SOCIAL STUDIES**

Students will demonstrate

- an understanding of the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).
- the ability to apply their knowledge of geographic concepts, skills, and technology to interpret the past and present and to plan for the future (15; *Geography*).

## **Activity #40: THEN AND NOW**

### **SCIENCE**

Students will demonstrate

- an increasing ability to understand that science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).
- an increasing ability to understand that the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).
- their understanding of the meaning of stability and change and will be able to identify and explain change in terms of cause and effect (6b; *Unifying Themes and Concepts*).

### **SOCIAL STUDIES**

Students will demonstrate

- an understanding of the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).
- the ability to apply their knowledge of geographic concepts, skills, and technology to interpret the past and present and to plan for the future (15; *Geography*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing, to gather and organize information in a variety of subject areas (5; *English Language Uses*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## Activity #41: HOW PLANTS GROW

### SCIENCE

Students will demonstrate an increasing

- understanding of how the scientific enterprise operates (1a; *Science as Inquiry*).
- ability to use measuring instruments to gather accurate and/or precise information (2a; *Science, Technology, and Society*).
- ability to use technology to observe nature (2b; *Science, Technology, and Society*).
- ability to understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- ability to understand that organisms are linked to one another and to their physical setting by the transfer and transformation of matter and energy to maintain a dynamic equilibrium (3c; *Life Science*).

### MATHEMATICS

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- develop an understanding of measurement and systems of measurement through experiences which enable them to use a variety of techniques, tools, and units of measurement to describe and analyze quantifiable phenomena (4c; *Geometry, Measurement, and Trigonometry*).
- use data analysis, statistics and probability to analyze given situations and the outcomes of experiments (5a; *Data Analysis, Statistics, and Probability*).

## **Activity #42: SUNLIGHT AND SHADES OF GREEN**

### **SCIENCE**

Students will demonstrate an increasing ability to understand

- how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- that organisms are linked to one another and to their physical setting by the transfer and transformation of matter and energy to maintain a dynamic equilibrium (3c; *Life Science*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #43: HAVE SEEDS WILL TRAVEL**

### **SCIENCE**

Students will

- demonstrate an increasing understanding of how the scientific enterprise operates (1a; *Science as Inquiry*).
- demonstrate an increasing ability to recognize patterns and products of evolution, including genetic variation, specialization, adaptation, and natural selection (3a; *Life Science*).
- demonstrate an increasing ability to understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- understand the meaning of models, their appropriate use and limitations, and how models can help them in understanding the natural world (6c; *Unifying Themes and Concepts*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## Activity #44: WATER WONDERS

### SCIENCE

Students will

- demonstrate an increasing understanding of how the scientific enterprise operates (1a; *Science as Inquiry*).
- demonstrate an increasing ability to understand that organisms are linked to one another and to their physical setting by the transfer and transformation of matter and energy to maintain a dynamic equilibrium (3c; *Life Science*).
- demonstrate an increasing ability to understand that the Earth is a complex planet with five interacting systems, which consists of the solid Earth (lithosphere), air (atmosphere), water (hydrosphere), ice (cryosphere), and life (biosphere) (4b; *Earth/Space Science*).
- demonstrate an increasing ability to understand that the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).
- demonstrate an increasing ability to recognize parts of any object or system, and understand how the parts interrelate in the operation of that object or system (6a; *Unifying Themes and Concepts*).
- understand the meaning of models, their appropriate use and limitations, and how models can help them in understanding the natural world (6c; *Unifying Themes and Concepts*).

### ENGLISH LANGUAGE ARTS

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #45: WEB OF LIFE**

### **SCIENCE**

Students will demonstrate an increasing ability to

- recognize patterns and products of evolution, including genetic variation, specialization, adaptation, and natural selection (3a; *Life Science*).
- understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- understand that organisms are linked to one another and to their physical setting by the transfer and transformation of matter and energy to maintain a dynamic equilibrium (3c; *Life Science*).
- recognize parts of any object or system, and understand how the parts interrelate in the operation of that object or system (6a; *Unifying Themes and Concepts*).
- understand the meaning of models, their appropriate use and limitations, and how models can help them in understanding the natural world (6c; *Unifying Themes and Concepts*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #46: SCHOOL YARD SAFARI**

### **SCIENCE**

Students will demonstrate an increasing ability to

- use technology to observe nature (2b; *Science, Technology, and Society*).
- understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #47: ARE VACANT LOTS VACANT?**

### **SCIENCE**

Students will demonstrate an increasing ability to

- understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- understand that organisms are linked to one another and to their physical setting by the transfer and transformation of matter and energy to maintain a dynamic equilibrium (3c; *Life Science*).
- understand fundamental structures, functions, and mechanisms of inheritance found in microorganisms, fungi, protists, plants, and animals (3d; *Life Science*).

### **MATHEMATICS**

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- develop an understanding of measurement and systems of measurement through experiences which enable them to use a variety of techniques, tools, and units of measurement to describe and analyze quantifiable phenomena (4c; *Geometry, Measurement, and Trigonometry*).

### **ENGLISH LANGUAGE ARTS**

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## **Activity #48: FIELD, FOREST AND STREAM**

## SCIENCE

Students will

- demonstrate an increasing understanding of how the scientific enterprise operates (1a; *Science as Inquiry*).
- demonstrate an increasing ability to use measuring instruments to gather accurate and/or precise information (2a; *Science, Technology, and Society*).
- demonstrate an increasing ability to use technology to observe nature (2b; *Science, Technology, and Society*).
- demonstrate an increasing ability to understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- demonstrate an increasing ability to recognize parts of any object or system, and understand how the parts interrelate in the operation of that object or system (6a; *Unifying Themes and Concepts*).
- increasingly quantify their interactions with phenomena in the natural world, use these results to understand differences of scale in objects and systems, and determine how changes in scale affect various properties of those objects and systems (6d; *Unifying Themes and Concepts*).

## MATHEMATICS

Students will

- recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- develop an understanding of measurement and systems of measurement through experiences which enable them to use a variety of techniques, tools, and units of measurement to describe and analyze quantifiable phenomena (4c; *Geometry, Measurement, and Trigonometry*).

## Activity #49: TROPICAL TREEHOUSE

## SCIENCE

Students will demonstrate an increasing ability to understand

- that science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).
- how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species interactions (3b; *Life Science*).
- that organisms are linked to one another and to their physical setting by the transfer and transformation of matter and energy to maintain a dynamic equilibrium (3c; *Life Science*).
- that the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).

## SOCIAL STUDIES

Students will demonstrate

- the ability to use maps, mental maps, globes, and other graphic tools and technologies to acquire, process, report, and analyze geographic information (10; *Geography*).
- an understanding of the physical and human geographic features that define places and regions (11; *Geography*).
- an understanding of the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).

## ENGLISH LANGUAGE ARTS

Students will demonstrate

- the interest and ability to speak purposefully and articulately, as well as listen and view attentively and critically (3; *Speaking, Listening, and Viewing*).
- competence in using the interactive language processes of reading, writing, speaking, listening, and viewing to communicate effectively (6; *English Language Uses*).
- competence in applying the interactive language processes of reading, writing, speaking, listening, and viewing to succeed in educational, occupational, civic, social, and everyday settings (7; *English Language Uses*).

## Activity #50: 400-ACRE WOOD

## SCIENCE

Students will demonstrate

- an increasing ability to understand that science and technology can affect individuals, and that individuals in turn can affect science and technology (2e; *Science, Technology, and Society*).
- an increasing ability to understand that the Earth contains a variety of renewable and non-renewable resources (4c; *Earth/Space Science*).
- their understanding of the meaning of stability and change and will be able to identify and explain change in terms of cause and effect (6b; *Unifying Themes and Concepts*).

## SOCIAL STUDIES

Students will demonstrate

- the ability to analyze the potential costs and benefits of economic choices in market economies including wants and needs; scarcity; tradeoffs; and the role of supply and demand, incentives, and prices (5; *Economics*).
- the ability and willingness to apply economic concepts in the examination and resolution of problems and issues in educational, occupational, civic, and everyday settings (9; *Economics*).
- the ability to use maps, mental maps, globes, and other graphic tools and technologies to acquire, process, report, and analyze geographic information (10; *Geography*).
- an understanding of landform patterns and water systems on Earth's surface; the physical processes that shape these patterns; and the characteristics and distribution of ecosystems (12; *Geography*).
- an understanding of the connections between Earth's physical and human systems; the consequences of the interaction between human and physical systems; and changes in the meaning, use, distribution, and importance of resources (14; *Geography*).
- the ability to apply their knowledge of geographic concepts, skills, and technology to interpret the past and present and to plan for the future (15; *Geography*).

## MATHEMATICS

Students will

- use problem-solving strategies to investigate and understand increasingly complex mathematical content (1a; *Problem-Solving and Reasoning*).
  - use mathematical reasoning (1b; *Problem-Solving and Reasoning*).
  - recognize, develop, and explore mathematical connections (2b; *Communication and Connections*).
- compute (3c; *Numbers, Numeration, Operations, and Number Theory*).