

**Florida Project Learning Tree Sunshine State Standards linkages for grades 3-5, 6-8, and 9-12: WASTE WATCHERS (#73; pp. 274-279 in old edition *PreK-8 Activity Guide*; pp. 314-317 new edition and #8; pp. 63-69 in *Introductory Handbook for the Secondary Modules*)**

**Subject Area: Mathematics**

**Strand: Number Sense, Concepts, and Operations**

**Standard 3:** The student understands the effects of operations on numbers and the relationships among these operations, selects appropriate operations, and computes for problem solving.

- **Grades 3-5** – Benchmark: adds, subtracts, and multiplies whole numbers, decimals, and fractions, including mixed numbers, and divides whole numbers to solve real-world problems, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator. [MA.A.3.2.3]
- **Grades 6-8** – Benchmark: adds, subtracts, multiplies, and divides whole numbers, decimals, and fractions, including mixed numbers, to solve real-world problems, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator. [MA.A.3.3.3]
- **Grades 9-12** – Benchmark: adds, subtracts, multiplies, and divides real numbers, including square roots and exponents, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator. [MA.A.3.4.3]

**Strand: Measurement**

**Standard 4:** The student selects and uses appropriate units and instruments for measurement to achieve the degree of precision and accuracy required in real-world situations.

- **Grades 3-5** – Benchmark: selects and uses appropriate instruments and technology, including scales, rulers, thermometers, measuring cups, protractors, and gauges, to measure in real-world situations. [MA.B.4.2.2]
- **Grades 6-8** – Benchmark: selects and uses appropriate instruments, technology, and techniques to measure quantities in order to achieve specified degrees of accuracy in a problem situation. [MA.B.4.3.2]
- **Grades 9-12** – Benchmark: selects and uses appropriate instruments, technology, and techniques to measure quantities in order to achieve specified degrees of accuracy in a problem situation. [MA.B.4.4.2]

**Strand: Data Analysis and Probability**

**Standard 1:** The student understands and uses the tools of data analysis for managing information.

- **Grades 3-5:** No applicable benchmark

- **Grades 6-8** – Benchmark: collects, organizes, and displays data in a variety of forms, including tables, line graphs, charts, bar graphs, to determine how different ways of presenting data can lead to different interpretations. (met during “Enrichment” segment of activity) [MA.E.1.3.1]
- **Grades 9-12** – Benchmark: interprets data that has been collected, organized, and displayed in charts, tables, and plots. (met during “Enrichment” segment of activity) [MA.E.1.4.1]

## **Subject Area: Science**

### **Strand: Energy**

**Standard 1:** The student recognizes that energy may be changed in form with varying efficiency.

- **Grades 3-5** – Benchmark: knows that various forms of energy (e.g., mechanical, chemical, electrical, magnetic, nuclear, and radiant) can be measured in ways that make it possible to determine the amount of energy that is transformed. [SC.B.1.2.5]
- **Grades 6-8:** No applicable benchmark
- **Grades 9-12** – Benchmark: knows that each source of energy presents advantages and disadvantages to its use in society (e.g., political and economic implications may determine a society’s selection of renewable or nonrenewable energy sources).

**Standard 2:** The student understands the interaction of matter and energy.

- **Grades 3-5** – Benchmark: recognizes the costs and risks to society and the environment posed by the use of nonrenewable energy. [SC.B.2.2.2]
- **Grades 6-8** – Benchmark: knows that most of the energy used today is derived from burning stored energy collected by organisms millions of years ago (i.e., nonrenewable fossil fuels). [SC.B.2.3.2]
- **Grades 9-12:** No applicable benchmark

### **Strand: Processes that Shape the Earth**

**Standard 2:** The student understands the need for protection of the natural systems on Earth.

- **Grades 3-5** – Benchmark: knows that using, recycling, and reducing the use of natural resources improve and protect the quality of life. [SC.D.2.2.1]
- **Grades 6-8** – Benchmark: knows the positive and negative consequences of human action on the Earth’s systems. [SC.D.2.3.2]
- **Grades 9-12:** No applicable benchmark

**Strand: How Living Things Interact with Their Environment**

**Standard 2:** The student understands the consequences of using limited natural resources.

- **Grades 3-5:** No applicable benchmark
- **Grades 6-8** – Benchmark: knows that some resources are renewable and others are nonrenewable. [SC.G.2.3.1]
- **Grades 6-8** – Benchmark: understands that humans are a part of an ecosystem and their activities may deliberately or inadvertently alter the equilibrium in ecosystems. [SC.G.2.3.4]
- **Grades 9-12** – Benchmark: knows that layers of energy-rich organic materials have been gradually turned into great coal beds and oil pools (fossil fuels) by the pressure of the overlying earth and that humans burn fossil fuels to release the stored energy as heat and carbon dioxide. [SC.G.2.4.1]
- **Grades 9-12** – Benchmark: knows the ways in which humans today are placing their environmental support systems at risk (e.g., rapid human population growth, environmental degradation, and resource depletion). [SC.G.2.4.6]

**Strand: The Nature of Science**

**Standard 1:** The student uses the scientific processes and habits of mind to solve problems.

- **Grades 3-5** – Benchmark: knows that a successful method to explore the natural world is to observe and record, and then analyze and communicate the results. [SC.H.1.2.2]
- **Grades 6-8** and **Grades 9-12:** No applicable benchmarks

**Subject Area: Social Studies****Strand: People, Places, and Environments (Geography)**

**Standard 2:** The student understands the interactions of people and the physical environment.

- **Grades 3-5** – Benchmark: understands how human activity affects the physical environment. [SS.B.2.2.3]
- **Grades 6-8** and **Grades 9-12:** No applicable benchmarks