
Use these cross-curricular content connections to align to your grade level standards and content goals.

| Find Content Connections by Grade Level | | |
|---|---|---|
| Kindergarten | 1st Grade | 2nd Grade |
| 3rd Grade | 4th Grade | 5th Grade |
| 6th Grade | 7th Grade | 8th Grade |

# GRADE K

## Math
COUNTING AND CARDINALITY

**Lesson 7:** As results start to come in from your campaign, make tallies to show the number of additional times lights have been turned off in class. Have each student count a set of tallies, then compare answers to see if there are any disagreements. For an added challenge, have students count the tallies from multiple classes.

CCSS.MATH.CONTENT.K.CC.B.4.A

## English Language Arts
USING PEER SUGGESTIONS

**Lesson 5:** As students share their ideas about how to effectively implement their campaign, explore how receiving peer suggestions can help to improve ideas about writing.

CCSS.ELA-LITERACY.W.K.5

## Science
REDUCING ENVIRONMENTAL IMPACT

**Lesson 4**: After watching the Energy, Let's Save It video, explore a variety of ways in which humans can reduce our environmental impact by conserving energy.

K-ESS3-3

## Social Studies
REASONS TO SAVE

**Lesson 2:** As you learn about saving energy, explore how perspectives on energy consumption have changed over time. Examples might include how early industrialists had little concern for sustainable or energy-efficient growth.

D2.Civ.14.K-2

# GRADE 1

## Math
PLACE VALUE

**Lesson 7:** As students count the number of times each classroom has turned out the lights, arrange tallies into groups of ten. Have students quickly count tallies by using their understanding of place value.

CCSS.MATH.CONTENT.1.NBT.B.2

## English Language Arts
USING PEER SUGGESTIONS

**Lesson 5:** As students share their ideas about how to effectively implement their campaign, explore how receiving peer suggestions can help to improve ideas about writing.

CCSS.ELA-LITERACY.W.1.6

## Science
LIGHT AND VISIBILITY

**Lesson 3:** As you reflect on why it might be difficult to save electricity, explore the value of light by conducting a simple experiment. Have students evaluate the color of mysterious objects, once in the dark, once in dim light, and once in bright light. Explore how lighting improves visibility.

NGSS 1-PS4-2

## Social Studies
REASONS TO SAVE

**Lesson 2:** As you learn about saving energy, explore how perspectives on energy consumption have changed over time. Examples might include how early industrialists had little concern for sustainable or energy-efficient growth.

D2.Civ.14.K-2

# GRADE 2

## Math
PLACE VALUE

**Lesson 8:** As your class communicates about the impact of your campaign, have them count the total number of times your school turned off the light by creating groups of hundreds, tens, and ones, Explore how to use a visual display of hundreds, tens, and ones to quickly and easily determine how many times your school turned off the lights for the Light Saver campaign.

CCSS.MATH.CONTENT.2.NBT.A.1

## English Language Arts
USING PEER SUGGESTIONS

**Lesson 5:** As students share their ideas about how to effectively implement their campaign, explore how receiving peer suggestions can help to improve ideas about writing.

CCSS.ELA-LITERACY.W.2.5

## Science
SEEDS OF AN IDEA

**Lesson 6:** As you monitor the power of your campaign, explore the ways in which ideas can spread like seeds by asking high-performing classes to share their secret tips and tricks with other classes. Assign each class a partner class, and have them join forces as a team to be smarter together. Then, compare and contrast the ways in which seeds and ideas spread.

NGSS 2-LS2-2

## Social Studies
REASONS TO SAVE

**Lesson 2:** As you learn about saving energy, explore how perspectives on energy consumption have changed over time. Examples might include how early industrialists had little concern for sustainable or energy-efficient growth.

D2.Civ.14.K-2

# GRADE 3

## Math

UNKNOWN WHOLE NUMBERS

**Lesson 4:** As students calculate the cost of different amounts of electricity, have them solve word problems involving unknown whole numbers. For example, “If an electric blanket costs $4 to run each night for a month, how many months would it take to cost $52?”

CCSS.MATH.CONTENT.3.OA.A.4

## English Language Arts

AUDIENCE

**Lesson 6:** As students draft their presentations to key decision makers, have them consider the wants and needs of their audience and revise their writing accordingly.

CCSS.ELA-LITERACY.W.3.10

## Science

WEATHER AND ENERGY USAGE

**Lesson 3:** As you discuss energy usage, point out how climate control devices like heaters and air conditioners use large amounts of energy. Construct a table of the typical weather in your area by month and use it to discuss how energy usage patterns may vary throughout the year.

NGSS 3-ESS2-1

## Social Studies

RULES AND LAWS CHANGE SOCIETY

**Lesson 2:** Explain to students that in California, as of January 1, 2018, a law was passed that prohibited stores to continue to stock incandescent bulbs because of their "high" energy use. This law is currently set to go into place on a national level in 2020. Discuss and debate.

NCSS D2.CIV.12.3-5

# GRADE 4

## Math

MULTISTEP WORD PROBLEMS

**Lesson 4:** As students calculate the cost of different amounts of electricity, have them solve related multi step word problems. For example, “Let’s assume electricity costs 11 cents per kilowatt-hour. If installing a baboon in the room saves 9 kwh per month, how much energy would installing two room baboons save over the course of a year?”

CCSS.MATH.CONTENT.4.OA.A.3

## English Language Arts

PURPOSE AND AUDIENCE

**Lesson 6:** As students draft their presentations to key decision makers, have them consider the wants and needs of their audience and revise their writing accordingly to help them accomplish their purpose.

CCSS.ELA-LITERACY.W.4.4

## Science

TRANSFER OF ENERGY

**Lesson 2:** Lead a discussion on the different ways in which electricity is produced, and how it is transferred to your home or school. Include a discussion on the environmental costs of different means of producing electricity.

NGSS 4-PS3-2

## Social Studies

COMPARISONS WITH HISTORY

**Lesson 3:** Discuss with students how home life in the 19th century was very different than it is today. One big difference was that light bulbs did not exist in homes. Have students brainstorm alternative light sources that may have been available during this time period.

NCSS D2.HIS.2.3-5

# GRADE 5

## Math

OPERATIONS WITH DECIMALS

**Lesson 3:** As students calculate the cost of the appliances, they will need to perform operations with decimals. Money gives a great real-world context for addressing this standard.

CCSS.MATH.CONTENT.5.NBT.B.7

## English Language Arts

RESEARCH TO BUILD AND SHARE KNOWLEDGE

**Lesson 6:** As students analyze their audits, they consider the costs of different changes to the school's energy usage, as well as the benefits.

CCSS.ELA-LITERACY.W.5.7

## Science

PROTECTING EARTH'S RESOURCES

**Lesson 4:** As students explore energy efficiency, they learn how to protect the Earth's natural resources.

NGSS 5-ESS3-1

## Social Studies

BENEFITS AND COSTS OF INDIVIDUAL CHOICES

**Lesson 6:** As students analyze their audits, consider the costs of different changes to the school's energy usage, as well as the benefits. Discuss how changes can be associated with positives and negatives, and that we can weigh whether a decision is a good one by whether the benefits outweigh the costs.

NCSS D2.ECO.1.3-5

Additional Grade 5 correlations also available.

# GRADE 6

## Math
EQUIVALENT EXPRESSIONS

**Lesson 4:** Help students explore equivalent expressions in a real-world context by applying the associative property of multiplication to multistep word problems. For example, write an algebraic expression for the following: “Let’s assume electricity costs 11 cents per kilowatt hour. If installing a baboon in the room saves 9 kwh per month, how much energy would installing two room baboons save over the course of a year?”

CCSS.MATH.CONTENT.6.EE.A.3

## English Language Arts
REASONS AND EVIDENCE

**Lesson 6:** As students construct their presentations to key decision-makers, have them revise their writing to improve the clarity and relevance of the evidence they present. For instance, have them clarify how they know that the statistics or metrics they cite are sound by providing their sources.

CCSS.ELA-LITERACY.W.6.1

## Life Science
ENERGY FLOW THROUGH SYSTEMS

**Lesson 2:** Explore the flow of matter and energy through ecosystems. Compare and contrast with the flow of energy through an electrical circuit.

NGSS MS-LS2-3

## History
INFLUENCES ON PERSPECTIVE

**Lesson 4:** As you prepare for the audit of your school, discuss the ways in which technology changes the educational experience, and explore what education would have been like prior to the advent of various technologies. Discuss how this might have influenced not only student experiences, but student perspectives.

D2.HIS.4.6-8

## Earth and Space Science
IMPACTS OF ENERGY CONSUMPTION

**Lesson 3:** As you examine energy consumption, explore the ways in which increasing energy usage puts stress on the natural environment.

NGSS MS-ESS3-4

## Geography
MAPPING SPATIAL PATTERNS

**Lesson 4:** Have students explore the maps at NightEarth.com to identify geographic, economic, and cultural features which contribute to the prevalence of electrical lights across the world.

D2.GEO.3.6-8

## Physical Science
EFFECT OF FIELDS BETWEEN OBJECTS

**Lesson 1:** When learning about electricity, construct an electromagnet and evaluate the nature of the forces exerted using different methods of construction.

NGSS MS-PS2-5

## Economics
IMPACT OF ECONOMIC DECISIONS

**Lesson 6:** As students analyze the results of their audit, explore the idea of well-being through different lenses: physical, environmental, psychological, etc. Have students explain how economic decisions affect individual, business, and social well-being.

| | |
|---|---|
| | D2.ECO.1.6-8 |

# GRADE 7

## Math
RANDOM SAMPLING

**Lesson 5:** During the audit, discuss how random sampling could allow the class to draw inferences about the whole school based on a sample of classrooms or areas randomly selected. Explore variation between different samples, as well as measures of uncertainty.

CCSS.MATH.CONTENT.7.SP.A.2

## English Language Arts
REASONS AND EVIDENCE

**Lesson 6:** As students construct their presentations to key decision-makers, have them revise their writing to improve the clarity and relevance of the evidence they present. For instance, have them introduce and acknowledge opposing claims and compare their conclusions favorably in a clear and compelling fashion.

CCSS.ELA-LITERACY.W.7.1

## Life Science
ENERGY FLOW THROUGH SYSTEMS

**Lesson 2:** Explore the flow of matter and energy through ecosystems, then compare and contrast with the flow of energy through an electrical circuit.

NGSS MS-LS2-3

## History
INFLUENCES ON PERSPECTIVE

**Lesson 4:** As you prepare for the audit of your school, discuss the ways in which technology changes the educational experience, and explore what education would have been like prior to the advent of various technologies. Discuss how this might have influenced not only student experiences, but student perspectives.

D2.HIS.4.6-8

## Earth and Space Science
IMPACTS OF ENERGY CONSUMPTION

**Lesson 3:** As you examine energy consumption, explore the ways in which increasing energy usage puts stress on the natural environment.

NGSS MS-ESS3-4

## Geography
MAPPING SPATIAL PATTERNS

**Lesson 4:** Have students explore the maps at NightEarth.com to identify geographic, economic, and cultural features which contribute to the prevalence of electrical lights across the world.

D2.GEO.3.6-8

## Physical Science
EFFECT OF FIELDS BETWEEN OBJECTS

**Lesson 1:** When learning about electricity, construct an electromagnet and evaluate the nature of the forces exerted using different methods of construction.

NGSS MS-PS2-5

## Economics
IMPACT OF ECONOMIC DECISIONS

**Lesson 6:** As students analyze the results of their audit, explore the idea of well-being through different lenses: physical, environmental, psychological, etc. Have students explain how economic decisions affect individual, business, and social well-being.

D2.ECO.1.6-8

# GRADE 8

## Math
FUNCTIONS

**Lesson 4:** After conducting your investigation of the energy efficiency of different types of light bulbs, construct functions describing the relationship between the usage of different numbers of each type of bulb and the associated energy utilization. Additionally, construct a function demonstrating the energy savings associated with exchanging different numbers of less-efficient bulbs for more-efficient ones.

CCSS.MATH.CONTENT.8.F.A.1

## English Language Arts
REASONS AND EVIDENCE

**Lesson 6:** As students construct their presentations to key decision-makers, have them revise their writing to improve the clarity and relevance of the evidence they present. For instance, as they cite their sources, have them discuss the credibility of each source.

CCSS.ELA-LITERACY.W.8.1

## Life Science
ENERGY FLOW THROUGH SYSTEMS

**Lesson 2:** Explore the flow of matter and energy through ecosystems, then compare and contrast with the flow of energy through an electrical circuit.

NGSS MS-LS2-3

## History
INFLUENCES ON PERSPECTIVE

**Lesson 4:** As you prepare for the audit of your school, discuss the ways in which technology changes the educational experience, and explore what education would have been like prior to the advent of various technologies. Discuss how this might have influenced not only student experiences, but student perspectives.

D2.HIS.4.6-8

## Earth and Space Science
IMPACTS OF ENERGY CONSUMPTION

**Lesson 3:** As you examine energy consumption, explore the ways in which increasing energy usage puts stress on the natural environment.

NGSS MS-ESS3-4

## Geography
MAPPING SPATIAL PATTERNS

**Lesson 4:** Have students explore the maps at NightEarth.com to identify geographic, economic, and cultural features which contribute to the prevalence of electrical lights across the world.

D2.GEO.3.6-8

## Physical Science
EFFECT OF FIELDS BETWEEN OBJECTS

**Lesson 1:** When learning about electricity, construct an electromagnet and evaluate the nature of the forces exerted using different methods of construction.

NGSS MS-PS2-5

## Economics
IMPACT OF ECONOMIC DECISIONS

**Lesson 6:** As students analyze the results of their audit, explore the idea of well-being through different lenses: physical, environmental, psychological, etc. Have students explain how economic decisions affect individual, business, and social well-being.

D2.ECO.1.6-8