

Gold Seal Lessons for Rigor and Relevance – Grades K - 8



**International Center
for Leadership in Education**

Overview

The purpose of this kit is to provide educators with resources to assist students in achieving success in meeting education standards. The most critical standards are those that are assessed by high-stakes tests and those that are considered most useful to everyone in daily life. The latter are known as Essential Skills.

Each Gold Seal Lesson in this collection of 120 high rigor/high relevance lessons includes a performance task, Essential Skills, a scoring guide to share with students, and strategies for differentiating the lesson for English language learners. All lessons were written by teachers.

This kit includes the following lessons:

30 English Language Arts
30 Mathematics
30 Science
30 Social Studies

In each subject area, the lessons are loosely divided in grades K – 5 lessons and grades 6 – 8 lessons, but teachers are advised to check both sets of lessons, since grade spans vary and many lessons can be made appropriate for a higher or lower grade level with a little tweaking.

What Are Gold Seal Lessons?

Gold Seal Lessons are tasks or activities that are strategically designed to teach to specific academic standards/performance indicators/objectives/benchmarks. It is these standards that are assessed by high-stakes state and national tests, which are then used to evaluate individual student, school and district educational effectiveness.

Each Gold Seal Lesson is centered about a highly motivating theme, activity or project. The lessons are almost always multidisciplinary and deal with real-world situations or problems.

A lesson may take as little time as half a class period or as much as a year to complete. The task may run concurrently with other class activities, or it may be the exclusive activity for a period of time. Students sometimes work individually, but more frequently they accomplish the task in a small work group.

Gold Seal Lessons require students to learn and perform in a number of different ways. Students may research, write, compute, model, demonstrate, build, survey or report in a variety of academic, technical, work and community environments.

Working with Gold Seal Lessons requires the teacher to wear several hats, including instructor, curriculum specialist, coach, counselor, facilitator, manager and evaluator. A lesson may be directed by a single teacher or by a team of teachers within a grade level or across subject areas.

The International Center for Leadership in Education has been developing performance-based lessons since the mid-1990s. Over that time, revisions and improvements have been made to make the lessons more useful and effective.

How to Design Gold Seal Lessons, available from the International Center, can assist you in writing your own Gold Seal Lessons.

What Is Special about Gold Seal Lessons?

Gold Seal Lessons teach standards and Essential Skills to specified levels of rigor and relevance. Rigor is achieved by explicitly stating the Essential Skills that the student is expected to acquire and determining the level of rigor required using Bloom’s Taxonomy (known here as the Knowledge Taxonomy). These skills are learned, practiced and assessed through relevant, real-world activities, as indicated by the level on the Application Model.

Gold Seal Lessons:

The Knowledge Taxonomy and Application Model form the Rigor/Relevance Framework™.

- Ensure academic rigor and teach students to use the knowledge they acquire.
- Are keyed to state standards and prepare students for high-stakes testing.
- Provide a vehicle for bringing teachers from different subject areas and grade levels together to talk about common ideas for improving instruction.
- Are usually multidisciplinary and can point the way to effective collaboration among faculty members.
- Can be stockpiled by a school, district or even state in resource banks to provide a plentiful source of ideas for teaching state standards.
- Are fun and intellectually and professionally satisfying to use.

Using Gold Seal Lessons

The Gold Seal Lessons are based on state standards and matched to the high priority topics tested on state assessments. Teachers in every state should be able to find lessons that directly address state requirements.

In addition, the lessons are correlated to the highest rated topics in the International Center’s National Essential Skills Study (NESS), which identifies the skills and knowledge needed by all students in their post-school lives.

Unique to this collection of Gold Seal lessons are strategies to assist English language learners. Of course, Quadrant D lessons are developed with all learners in mind, so these strategies are an added bonus to assist teachers in instruction.

Differentiated instructional strategies are included in all lessons for English language learners.

Every Gold Seal Lesson follows the same format and has the same components.

- **Title:** An attempt has been made to give the lesson interesting titles that may appeal to students.
- **Subject:** Each lesson is assigned to one of the four disciplines (English language arts, Math, Science, Social Studies) for organizational purposes and to assist in the correlation to Essential Skills. At the same time, because the lessons involve real-world tasks, they are typically interdisciplinary.
- **Grade Level:** The lessons are grouped to cover a grade span. Teachers will need to review the lessons in the relevant group to determine which ones are most appropriate for their students’ ability level.
- **Rigor/Relevance Framework:** Each lesson includes a graphic of the Rigor/Relevance Framework at the top of the lesson. Each lesson indicates that it is “D” quadrant, a high rigor/high relevance lesson.

- **Instructional Focus:** These statements describe the goals of the lesson. These statements correspond to the areas commonly found in state standards and help determine where the task fits within the curriculum.
- **Student Learning:** This is a list of what the students will be able to do as a result of the lesson activities. Teachers can give a quick review of the objectives prior to implementing the lesson.
- **Performance Task:** This is a clear and concise description of what the student is asked to do, generally in the context of a real-world situation. The task may be written as instructions to either the teacher or student. It also includes any special instructions for the teacher regarding materials, step up, or other resources needed.
- **Assisting English Language Learners:** Strategies for differentiating instruction are included in all lessons. These strategies can be integrated into each lesson at different stages of the lesson.
- **Essential Skills:** The International Center conducts nationwide surveys of curriculum topics to determine what educators and the general public believe are the most essential skills and knowledge for students to have acquired by the time they graduated from high school. The Curriculum Survey of Essential Skills, conducted in 1998, covered English language arts, mathematics and science. In 2007, the International Center launched the National Essential Skills Study (NESS), which included social studies. The survey’s primary purpose is to serve as a point of departure for a school or district to begin considering what must be taught in the limited number of hours available in the school year. Each lesson includes a list of related Essential Skills
- **Scoring Guide:** Each lesson includes a scoring guide. The scoring guide is a “measuring stick” for teacher and student. Both of them can use it to determine how well the student has mastered the skills and knowledge covered. The teacher can also use it to determine how well the lesson worked as well as for diagnostic purposes
- **Attachment:** Many of the lessons include additional resources for teachers. Handouts for students are referenced in the attachment section of the lesson. **All attachments are included only on the electronic version of the lesson provided on the enclosed CD.**

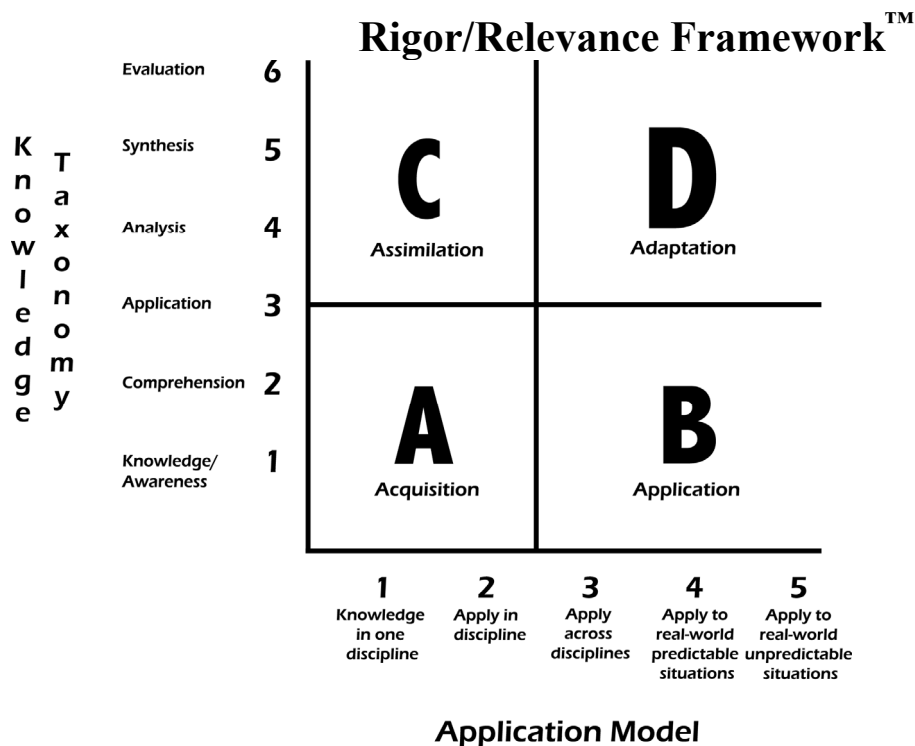


Rigor/Relevance Framework

The Rigor/Relevance Framework, shown on the next page uses four quadrants that represent levels of learning. On the Knowledge axis, the framework defines low rigor as Quadrants A and B and high rigor as Quadrants C and D. On that axis, Quadrant A represents simple recall and basic understanding of knowledge for its own sake. Quadrant A is labeled “Acquisition” because students gather and store bits of knowledge and information.

Quadrant C, “Assimilation,” represents more complex thinking, but still knowledge for its own sake. In Quadrant C, students extend and refine their acquired knowledge to be able to use it automatically and routinely to analyze and solve problems and to create unique solutions.

Quadrants B and D represent action, or high degrees of application. In Quadrant B “Application,” students use acquired knowledge to solve problems, design solutions, and complete work.



In Quadrant D, “Adaptation,” students have the competence to think in complex ways as they apply knowledge and skills they have acquired to new and unpredictable real-world situations. Students create solutions and take actions that further develop their skills and knowledge.

For students to become lifelong learners, problem-solvers and decision-makers, Quadrant B and D skills are required. In effect, our students need to *know what to do when they do not know what to do*.

Gold Seal Lesson Service

In 2003, the International Center developed a not-for-profit membership organization, the Successful Practices Network, as a way for K-12 educators to share strategies, practices, research, data and experiences. The Network continues to expand and connect hundreds of schools with services such as Collaborating Online for Rigor and Relevance (CORR) and the Gold Seal Lesson Service. Network schools use these tools to develop their own Gold Seal Lessons and also have access to more than 1,000 high-quality lessons in an online database.

Member schools can submit draft lessons, which the Network reviews and revises if necessary to place them solidly in Quadrant D of the Rigor/Relevance Framework. Most lessons included in this resource kit were written by teachers who are Network members. To inquire about membership in the Network and the Gold Seal Lesson service, visit the Successful Practices Network website at www.successfulpractices.org.

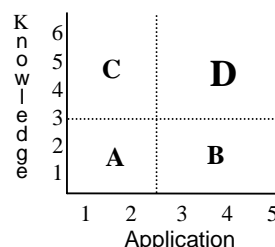
**GOLD
SEAL
LESSON**



Best Animal

Subject(s)
Science, English

**Rigor/Relevance
Framework**



Grade Level K–4

**Instructional
Focus**

Science as Inquiry: Students demonstrate knowledge necessary to persuade an audience.
Habits of Mind: Students develop habits of mind including curiosity, open-mindedness, and persistence.
Writing: Students write for a variety of purposes and audiences with sophistication and complexity appropriate to the grade level.
Reading: Students read a variety of grade level materials, applying strategies appropriate to various situations.

**Student
Learning**

- Students will communicate the results of their research work by journal writing, diagrams, and oral presentation.
- Students will investigate the characteristics of various animals and draw simple conclusions as a result of their research.

**Performance
Task**

Through discussion, the teacher and students will create a list of animal characteristics, for example color, size, type of skin covering (fur, scales, skin), and means of movement (crawl, walk, swim, fly).

Each student will choose a characteristic of an animal to study and research. The student’s goal is to find animals that have that characteristic and select the best example. For example, the best animal that flies is the hawk because . . .

The student will write a persuasive paper that asks audiences to pick the student’s selected animal as the best with that characteristic. The paper will present facts that will support the student’s selection. The student will then make a poster to show examples of animals with that characteristic.

Students will read books (including their textbooks) and go to Web sites that tell about reptiles, amphibians, mammals, birds, fish, and insects. Each student will next decide which animal type (reptile, amphibian, mammal, bird, fish, or insect) is the most important. Using the information learned in class as well as personal opinion, each student will write a paper to persuade others to pick the student’s selected animal type as the best. Facts and opinions will make up the paper.

The students will type their papers into Alphasmart, upload their papers to Word, and correct mistakes. Students will print out copies of their papers to put on a poster.

Performance Task
(con't.)

The student will also add pictures of animals to the poster. The animals should be good examples of their animal type. For example, if the student selected fish because they are designed to swim fast, you might draw sharks or other types of fish that make people think of speed.

Last, students will give their reports to the audience. They will use body language and intonation to help their argument.

Assisting English Language Learners

Distinguishing fact from opinion is an important reading comprehension strategy that students will need in any reading situation in any subject, so it is important to take extra steps to ensure comprehension.

Introduce the lesson by explaining the concept and offering several examples of facts and opinions. Use a table or chart to categorize the examples visually and label the examples.

Have students work in pairs or small groups to:

- Write several examples of statements that are facts and opinions.
- Locate examples of both facts and opinions in articles or text excerpts.
- Talk about how they knew if a statement was a fact or an opinion.

It can be beneficial to pair English language learners with more dominant English speakers who can model reading strategies, correct language, and pronunciation.

Essential Skills

- S50 Examine the characteristics and roles of simple organisms (bacteria, fungi, algae, and protozoa) and their possible interactions with complex living organisms (i.e., plants and animals).
 - E1 Apply writing rules and conventions (grammar, usage, punctuation, sentence structure, and spelling).
 - E4 Use resources (dictionary, grammar books, thesaurus, online references, etc.) as needed to edit.
 - E3 Follow oral directions.
 - E2 Read for main ideas and supporting details and discriminate important ideas from unimportant ideas to aid comprehension.
 - E8 Prepare and deliver individual speeches that address the needs of the target audience by gathering information, rehearsing, making eye contact, speaking loudly enough, and delivering information in a well-organized fashion.
 - E7 Research information from a variety of sources and draft a well-organized, accurate, and informative report or essay that engages an audience and addresses its needs.
 - E9 Organize supporting detail in logical and convincing patterns that focus on audience and purpose.
 - E6 Collect and focus thoughts about the writing activity (brainstorming, listing, drafting, etc.).
 - E5 Develop processes or techniques for building vocabulary, decoding unfamiliar words/texts, and understanding or remembering information by using such strategies as context clues, word structure, letter-sound relationships, word histories, and mnemonics.
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Submitted by: Barry Liebovitz, Wilson Elementary School

Scoring Guide

- 4 Points** The student is able to follow directions carefully and use facts and opinions in the paper. The paper is complete, clear, and demonstrates an understanding of the animal type being discussed. The student shares his/her creation with others using eye contact and intonation.
- 3 Points** The student follows directions and carefully constructs a paper that tells about an animal type. The student requires little help to write or correct the paper. The student uses facts and some opinions about the animal type being discussed. The paper is complete but somewhat unclear. The student shares his/her paper with others but lacks either eye contact or intonation.
- 2 Points** The student needs help to follow directions. The student attempts to write the paper on his/her own but needs some guidance with facts. However, the paper is unclear and demonstrates only a partial understanding of the animal type. The student shares his/her creation with others but lacks eye contact and intonation.
- 1 Point** The student requires help to write the paper. The student requires help to make it make sense. The paper is incomplete and does not have correct information. The student does not share his/her paper with others.

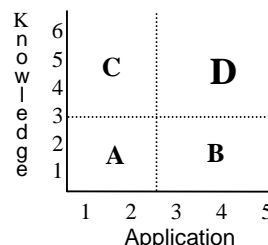
**GOLD
SEAL
LESSON**



Animal Planet

Subject(s)
English Language
Arts, Science

**Rigor/Relevance
Framework**



Grade Level 3–6

**Instructional
Focus**

Reading: Students read a variety of grade level materials, applying strategies appropriate to various situations.
Writing: Students write for a variety of purposes and audiences with sophistication and complexity appropriate to the grade level.
Basic Concepts and Knowledge: Students develop an understanding of scientific concepts using facts, theories, principles, and models.
Unifying Concepts and Processes: Students recognize patterns and processes, making connections in terms of systems and subsystems that explain the interrelationships of the natural and designed world.
Communication: Students communicate and apply scientific concepts.

**Student
Learning**

- Students will demonstrate note-taking skills from informational texts.
- Students will choose the main ideas from expository texts for the purpose of composing a report on animals.
- Students will organize information into a chart to help them prepare their report.
- Students will design topic sentences for each paragraph using their research.
- Students will create a realistic model of their animal and habitat.

**Performance
Task**

Overview
 Students will work independently on note taking and research skills for the purpose of writing a report on an animal of the student’s choosing. The teacher will model these skills for the students prior to allowing the students to conduct their own research from a variety of classroom resources. Students will be required to select pertinent information about their animal and arrange this material as notes in an organizational chart. Students will then use these notes to develop topic sentences for each paragraph of their report. Last, students will create a model of their animal in its natural habitat.

Description
 Brainstorm with the students some ideas that they will be looking for to put into their reports on animals (what they look like, what they eat, where they live, etc.) Let each student choose an animal that they want to learn more about.

Create a chart similar to the one that is attached (Animal Planet Notes) that includes the questions that the class brainstormed from the previous part of this activity. Model reading a section from a reference source about an animal not chosen and show students how to pull out the main idea and important

Performance Task
(con't.)

details from the text. Students will follow teacher prompts and record the information on the correct place in the organization chart in note form (*not* complete sentences).

Students will begin researching their animal using books, encyclopedias, Internet, and videos. Remind students to record their resources in their organizational chart.

Once students have gathered all the information on their sheet, they will gather together as a class. Explain that each of the boxes in the organizational chart will be a paragraph in their report. Model the process of looking at the information in one of the boxes and thinking about what would make a good topic sentence for that paragraph. Then write it in the box. Students will do the same with each of their boxes. The students now have all the information they need in note form, plus the topic sentences for each of their paragraphs in their report.

Students will then write the report adding an introduction and conclusion to the paper. Students will be required to make a visual model of the animal in its natural habitat. They can draw, use clay, make a shadow box, etc.

Encourage students to present their reports in a PowerPoint format to be shared with the class in an oral report.

Assisting English Language Learners

Consider making this a collaborative activity by having English language learners work with an English-proficient peer to conduct research and complete the worksheet.

English language learners might benefit from focusing on the visual aspect of this activity before they write. Gathering images of the animal in its natural habitat and reading visual descriptions of the animal will provide context and will be a good start to the research project.

Work with students on strategies for reading and researching. Point out book and Web page features such as headings, bold text, margin notes, captions, menus, boxes, graphics, glossaries, indexes, and others. Even students who are unable to read every word of an article or text in English will be able to gather significant information from headings, graphics, captions, charts, and boxed features.

If necessary, simplify the activity by having English language learners focus on writing clear and accurate topic sentences rather than a full essay.

Essential Skills

- E2 Read for main ideas and supporting details and discriminate important ideas from unimportant ideas to aid comprehension.
 - E4 Use resources (dictionary, grammar books, thesaurus, online references, etc.) as needed to edit.
 - E7 Research information from a variety of sources and draft a well-organized, accurate, and informative report or essay that engages an audience and addresses its needs.
 - E9 Organize supporting detail in logical and convincing patterns that focus on audience and purpose.
 - S16 Employ knowledge of ecology to study the interactions, relationships, and interdependence of organisms with their living and nonliving environments (e.g., ecosystems, communities, and populations).
 - S34 Know the survival requirements of animals and plants and the history,
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Essential Skills
(con't.)

dynamics, and implications of population growth.
S15 Plan and apply real or hypothetical models and constructions to facilitate short- and long-term investigation, learning, and solutions to practical problems, including experimental design that incorporates variables and a method for collecting fair and adequate data.

**Attachments/
Resources**

Animal Planet Notes

Scoring Guide**Organization of the Research Project**

4 Points = The student organized the writing into paragraphs with effective topic sentences for each paragraph. The sentences in each paragraph closely connect to the topic sentence.

3 Points = The student organized the writing into paragraphs with topic sentences for each paragraph. The sentences in each paragraph group ideas that are connected to the topic sentence.

2 Points = The student attempts to organize the writing into paragraphs. The student groups related ideas together. **1 Point** = The student writes a report that has ideas related to the research topic. The writing shows some evidence of grouping related ideas.

1 Point = The student writes a report that has ideas related to the research topic. The writing shows some evidence of grouping related ideas.

Model/Visual Representation

4 Points = The student model is highly realistic and visually appealing showing a high level of conscientious effort. The size and scale are appropriate. Exceeds teacher expectations.

3 Points = The student model is realistic and visually appealing. Size and scale are mostly accurate. Effort meets teacher expectations.

2 Points = The student model is not very realistic or visually appealing indicating a low level of effort. Size and scale are not accurate. The model does not meet teacher expectations.

1 Point = The student attempts to make a model, but the final product is not realistic looking or visually appealing. Far below teacher expectations.

Submitted by: Marie Hesper, Meadowlark Elementary

Animal Planet Notes

Checklist for the Student

- _____ Do I have at least *three* ideas in note form for each box?
- _____ Do I have at least *four* resources listed?
- _____ Did I list the author and publisher for each resource?
- _____ Do I have a topic sentence for each box?
- _____ Do all the ideas I have for each box fit the question at the top of that box?

Organizational Charts for Student Notes and Topic Sentences

What does it look like?	
_____	_____
_____	_____
_____	_____
_____	_____
Topic Sentence	

What does it eat?	
_____	_____
_____	_____
_____	_____
_____	_____
Topic Sentence	

Who are its enemies?	
_____	_____
_____	_____
_____	_____
_____	_____
Topic Sentence	

What are some interesting facts?

_____	_____
_____	_____
_____	_____
_____	_____

Topic Sentence

What resources did I use?

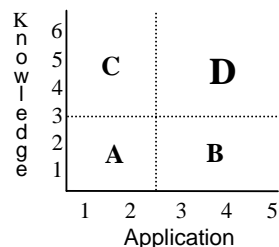
_____	_____
_____	_____
_____	_____



A King-Sized Dream

Subject(s)
Social Studies

**Rigor/Relevance
Framework**



Grade Level 4–8

Instructional Focus

Writing: Students write for a variety of purposes and audiences with sophistication and complexity appropriate to the grade level.
Listening : Students listen for a variety of purposes appropriate to the grade level.
Speaking: Students speak for a variety of purposes and audiences with sophistication and complexity appropriate to the grade level.
Turning Points: Students examine the significance of multiple causation and effects of major events in world history.
Patterns of Change: Students recognize patterns of social, political and economic change in the course of human history.
Critical Interpretation: Students demonstrate the ability to consult and apply primary and secondary sources in determining historical fact.

Student Learning

As a result of this lesson, students will be able to:

- Discuss the importance of the life and work of Martin Luther King, Jr.
- Discuss the impact of the “I Have a Dream” speech on society in the 1960s.
- Explain the similarities and differences between today’s society and society in the 1960s.
- Write a speech to inspire change and tolerance with a problem of the current society.

Performance Task

Overview
 Students will review the life of Martin Luther King, Jr. Students will watch a video of Martin Luther King, Jr.’s “I Have a Dream” speech. Students will discuss the impact this speech, as well as the impact of the life and work of Martin Luther King, Jr. on society in the 1960s and society today. Students will analyze problems that exist in today’s society and write a speech that could inspire change and tolerance.

Description

1. Review with students what they know about the life and work of Martin Luther King, Jr. Discuss what he believed in and stood for. Discuss the type of movement he led, as well as what his ultimate goal was.
2. Visit <http://www.mlkonline.net/video-i-have-a-dream-speech.html> and play the video of Martin Luther King, Jr.’s “I Have a Dream” speech.
3. When the video is finished, discuss the impact this speech had when it was delivered in 1963. Discuss with students why this speech is so famous and why it is still so well known today. How was society different then than it is today? How does this speech still affect our society today? Do you think that Martin Luther King, Jr.’s dream came true? Do inequalities still exist in our society today?
4. Have students brainstorm about the problems that exist in our society today.

Performance Task

(con't)

With the ideas of Martin Luther King, Jr.'s speech in mind, have students write their own speech that could inspire change and tolerance within today's society.

5. When students have finished their speeches, have them share these with their classmates.
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Assisting English Language Learners

Provide copies of the text of the speech and ask students to read along as you play an audio or video recording. Pause the recording periodically to discuss key points and ask students to summarize or restate the main ideas in their own words. Ask students to use a highlighter or pen to mark any words they do not understand. Encourage them to guess the meanings of these words by using context clues.

Allow quiet time for English language learners to read, listen, take notes in their journals, look up vocabulary words, and contemplate the unique achievements of Martin Luther King, Jr. Turn on soft background music during reading. English language learners respond well to songs and poems given their rhythm and repetition. Incorporate any appropriate ones that can be memorized and used to teach both phonemic awareness and concepts. MLK Online (www.mlkonline.net) contains a variety of useful text, audio, video, and music resources.

Essential Skills

- E1 Apply writing rules and conventions (grammar, usage, punctuation, sentence structure, and spelling).
 - E9 Organize supporting detail in logical and convincing patterns that focus on audience and purpose.
 - E33 Define a position on a controversial topic and write an essay to persuade a specific audience to change an opinion or take a particular action.
 - E16 Locate and gather information such as data, facts, ideas, concepts, and generalizations from oral sources.
 - E19 Analyze and evaluate a speaker's opinions, personal values, and persuasive techniques.
 - E8 Prepare and deliver individual speeches that address the needs of the target audience by gathering information, rehearsing, making eye contact, speaking loudly enough, and delivering information in a well-organized fashion.
 - SS55 Compare and contrast family life as well as local and North American community life now and in the past.
 - SS18 Explain how American principles and values came to be and are represented today by people from many cultures, which contribute to and help form a national cultural, economic, and political heritage.
 - SS15 Analyze and describe the struggle for racial and gender equality and the extension of civil liberties.
 - SS13 Compare the present with the past, evaluating the consequences of past events and decisions and determining the lessons that were learned.
 - SS16 Identify bias and prejudice in historical or modern interpretations of people, places, or events.
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Scoring Guide

Rate student performance on each item using the following method:

4 Points: The student demonstrates a high-quality performance and presentation of new knowledge and skills.

3 Points: The student demonstrates a good application of new knowledge and skills.

2 Points: The student demonstrates an appropriate application of new knowledge and/or skills, which is technically correct.

1 Point: The student demonstrates minimally acceptable application of new knowledge and/or skills.

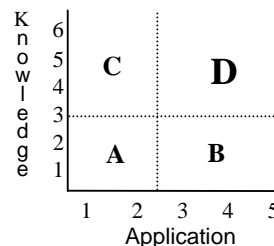
Item	Rating (circle one)			
Student was able to discuss the importance of the life and work of Martin Luther King, Jr.	1	2	3	4
Student was able to discuss the impact of the “I Have a Dream” speech on society in the 1960s.	1	2	3	4
Student was able to explain the similarities and differences between today’s society and society in the 1960s.	1	2	3	4
Student was able to write a speech to inspire change and tolerance with the problems of the current society.	1	2	3	4



Where Are All the Angles?

Subject(s)
Mathematics

**Rigor/Relevance
Framework**



Grade Level 5

**Instructional
Focus**

Geometry: Students apply geometric concepts, properties, and relationships in a problem-solving situation. Students communicate the reasoning used in solving these problems.

Writing: Students write for a variety of purposes and audiences with sophistication and complexity appropriate to the grade level.

Language Arts Integration: Students synthesize individual language arts skills.

**Student
Learning**

- Students will be able to recognize standard angles from the world around us.
- Students will be able to use appropriate geometric vocabulary in referring to two- and three-dimensional objects.
- Students will create a brochure to be presented to 3rd and 4th graders outlining how to recognize angles.
- Students will work cooperatively in groups on this project.

**Performance
Task**

Overview

Grade 5 students will demonstrate their understanding of angles by creating a brochure to inform 3rd and 4th graders on recognizing angles in the environment around them. Students will take and include actual photographed pictures of angles (acute, obtuse, right angles) from a specific part of the school, estimate the measure of the angles, and assess the role angles play in the environment.

Description

1. When students arrive, quickly review the definition of *angle*, *right angle*, *acute angle*, *obtuse angle*, and *straight angle*. Also demonstrate how to use the edge of an index card to determine whether a given angle is right, obtuse, or acute.
2. Then distribute the attached worksheet taken from *Tall-Tale Math Book 3: Geometry Basics* by Elizabeth Hoover. Students are instructed to complete this sheet with their partner. Circulate throughout the room to check for understanding.
3. After it is clear that students have a good understanding of angles, facilitate a discussion of the use of angles in our world, in particular in photography, art, and architecture. Ask the students to think of angles within the school building.
4. Then explain to the class that they will be working in groups of three or four to investigate angles within the building. They must find or take pictures of various angles and create a brochure for the 3rd and 4th graders to help them understand and recognize the use of angles in our world.
5. Then assign students to groups, distribute the attached rubric, and review this with the class.

Performance Task

(con't)

6. While students work on the project, circulate to facilitate the activity.

Assisting English Language Learners

Help English language learners understand the four different types of angles through a visual experiment utilizing a manual clock. Set the clock at different times and ask students to determine the type of angle. For example:

- 1:00 — acute angle
- 3:00 — right angle
- 4:00 — obtuse angle
- 6:00 — straight angle

Continue with other more complex variations. Later in small groups, ask students to set a time on their own, determine the type of angle, and record their times/angles on a data sheet. Continually gauge comprehension by asking questions, obtaining feedback, paraphrasing and reviewing salient points, and requiring students to provide short oral, written, and/or visual summaries as they progress in their understanding of angles.

Consider doing the attached Soccer Practice worksheet as a guided activity. Reproduce the soccer diagram on a whiteboard or poster. Invite students to read the items aloud (or read along with you). Draw the path of the ball for each step, and ask students to say and write the name of the type of the angle the path forms.

Essential Skills

- M15 Classify angles by measure (acute, right, obtuse, and straight) and understand angle relationships (supplementary, complementary, and vertical).
- E32 Evaluate the logic and organization of technical or other nonfiction texts for clarity and effectiveness in describing a set of directions or procedures.
- E25 Write in various formats such as learning logs, laboratory reports, note-taking, response journals, organizers, and portfolios.
- E14 Write clear and concise directions or procedures.
- E20 Understand the nature and purpose of a variety of technical formats (essays, business letters, memos, investigative reports, brochures, critiques, instructions, policy statements, technical proposals, lab reports, etc.) and write in these formats.
- E15 Demonstrate ability to select and use appropriate technology or media for presenting information to the target audience for the specific purpose.
- E31 Apply an understanding of graphics, layout, white space, italics, graphs, charts, and other visual aids to enhance informational reading, writing, or presenting.

Attachments/ Resources

Soccer Practice Worksheet

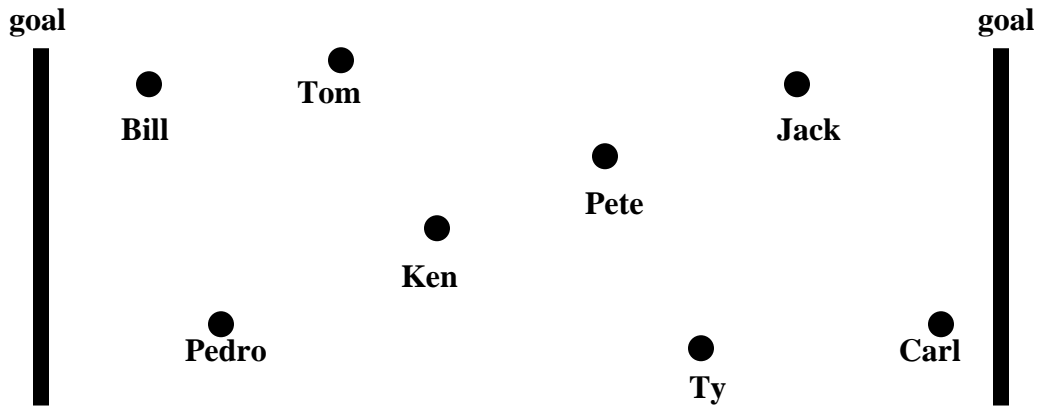
Submitted by: Melissa Brantley, Henderson County School

Soccer Practice

Kinds of Angles

When the Balookaville Badgers have soccer practice, Coach Alphonso makes each player stand in a certain place. Staying in the same spot, the player must kick the ball wherever Coach Alphonso tells him.

Today, the Badgers are arranged like this:



1. Coach tells Pete to kick the ball to Ty, and then he tells Ty to kick the ball to Jack. What kind of angle has the ball's path made: acute, right, obtuse, or straight?
2. Coach tells Ken to kick the ball to Pete, and then he tells Pete to kick the ball to Tom. Instead, Pete goofs and kicks the ball to Ty. What kind of angle has the ball's path made?
3. Pedro kicks the ball to Ken, who kicks it to Pete. What kind of angle has the ball's path made?
4. If Bill kicks the ball to Tom, and Tom kicks it to Pete, what kind of angle has the ball's path made?
5. So far, Carl has been left out of practice. Find two players that, with Carl, can form an acute angle. The players can kick in any order.

Scoring Guide

Category	4	3	2	1
Working with Others	Student was an engaged partner, listening to suggestions of others and working cooperatively throughout lesson.	Student was an engaged partner but had trouble listening to others and/or working cooperatively.	Student cooperated with others, but needed prompting to stay on-task.	Student did not work effectively with others.
Mathematical Concepts	Explanation shows complete understanding of the mathematical concepts used to solve the problem(s).	Explanation shows substantial understanding of the mathematical concepts used to solve the problem(s).	Explanation shows some understanding of the mathematical concepts needed to solve the problem(s).	Explanation shows very limited understanding of the underlying concepts needed to solve the problem(s) OR is not written.
Explanation	Explanation is detailed and clear in brochure.	Explanation is clear in brochure.	Explanation is a little difficult to understand but includes critical components in brochure.	Explanation is difficult to understand and is missing several components OR was not included in brochure.
Neatness and Organization	The work is presented in a neat, clear, organized fashion that is easy to read in brochure.	The work is presented in a neat and organized fashion that is usually easy to read in brochure.	The work is presented in an organized fashion but may be hard to read at times in brochure.	The work appears sloppy and unorganized. It is hard to know what information goes together in brochure.
Use of Manipulatives	Student always listens and follows directions and only uses manipulatives as instructed.	Student typically listens and follows directions and uses manipulatives as instructed most of the time.	Student sometimes listens and follows directions and uses manipulatives appropriately when reminded.	Student rarely listens and often "plays" with the manipulatives instead of using them as instructed.