

**Assessment of 21st Century Skills:
A Return to the Authentic
Assessment of the '90s:
Kentucky's View**

National Conference on Student
Assessment

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Basic Foundations

- Standards that addressed 21st Century Skills – in the 1990's, addressing core content plus..
 - Information and Communication Skills
 - Thinking and Problem-solving Skills
 - Interpersonal and Self-directional Skills
- Standards were designed to expand learning in core content – and thinking skills
- Assessments that required students to apply knowledge and skills.
- Intention that assessment would positively impact classroom instruction.

Kentucky's Learning Goals and Academic Expectations

1. Students are able to use basic communication and mathematics skills for purposes and situation they will encounter throughout their lives.
2. Students shall develop their abilities to apply core concepts and principles from mathematics, the sciences, the arts, the humanities, social studies, practical living studies, and vocational studies to what they will encounter throughout their lives.

3. Students shall develop their abilities to become self-sufficient individuals.

- Students demonstrate positive growth in self-concept through appropriate tasks or projects.
- Students demonstrate the ability to maintain a healthy lifestyle.
- Students demonstrate the ability to be adaptable and flexible through appropriate tasks or projects.
- Students demonstrate the ability to be resourceful and creative.
- Students demonstrate self-control and self-discipline.
- Students demonstrate the ability to make decisions based on ethical values.
- Students demonstrate the ability to learn on one's own.

4. Become Responsible Group Members

- Students effectively use interpersonal skills.
- Students use productive team membership.
- Students individually demonstrate consistent, responsive, and caring behavior.
- Students demonstrate ability to accept the rights and responsibilities for self and others.
- Students demonstrate an understanding of, appreciation for, and sensitivity to a multicultural and world view.
- Students demonstrate an open mind to alternative perspectives.

Kentucky's Learning Goals and Academic Expectations

5. Students shall develop their abilities to think and solve problems in school situations and in a variety of situations they will encounter in life.
6. Students shall develop their abilities to connect and integrate experiences and new knowledge from all subject matter fields with what they have previously learned and build on past learning experiences to acquire new information through various media sources.

Goal 2: Apply Core Concepts and Principles

Academic Expectation 2.19: Students recognize and understand the relationship between people and geography and apply their knowledge in real-life situations.

Learning Link: Pollution / Culture / Rivers / Climate / Endangered Species / Erosion / Agriculture / Families / Overpopulation / Earthquake / Desalination / Space / Diseases

Related Concepts: Location / Place / Regions / Relationships Within Places / Movement

Elementary Demonstrators	Middle School Demonstrators	High School Demonstrators
<ul style="list-style-type: none">Examine the interaction between people and their environment and predict trends.Compare regions to identify unifying characteristics.Explain the influence of geographic factors on human movement.Use geographic sources of information and data for a purpose.Use a variety of means to identify absolute and relative location.Recognize that everything has a location.	<ul style="list-style-type: none">Evaluate the influence of geographical factors in real-life decisions.Analyze relationships among people, places, and events using geographic skills and resources.Analyze geographic characteristics (e.g., landforms, waterways, climate, and natural resources) to explain human/regional relationships.	<ul style="list-style-type: none">Evaluate the impact of geographic factors in real-life issues.Analyze and evaluate geographic considerations in making decisions.

Sample Teaching/Assessment Strategies:

Collaborative Process: Cooperative Learning • Peer Tutoring • Community-Based Instruction • Field Studies • Seriated Learning • Continuous Progress Assessment Interviews • Portfolio Development • Self-assessment • Partners and Events Exhibitions • Graphic Organizers • Graphs • Representations, Mapping/Webbing, Storyboard, Time Line, Venn Diagram • Problem Solving • Inquiry Case Studies • Creative Problem Solving, Future Problem Solving, Debate, Interviews, Oral History, Simulation • Technology/Tools: Computers, Games, Interactive Video • Whole Language Approach • Writing Process

There are a variety of strategies and are relevant to individual learning modalities. More strategies are found in the resource center.

Ideas for Incorporating Community Resources:

- Obtain information from the Kentucky Tourism Cabinet about significant geographic locations in the state (e.g., Mammoth Cave, Kentucky Lake).
- Contact chambers of commerce nationwide and local travel agencies about the geography of other states.
- Utilize an electronic bulletin board to communicate with others.
- Involve a local agronomist to discuss the influence of geographic factors on land use and development.
- Contact the Kentucky Geographic Alliance to obtain resources about geography.
- Contact the National Guard or a military base for information about the influence of topography in military movements.

Core Concept: Relationship of Geography to Human Activity

Sample Elementary Activities

- Create a classroom grid to show the relative location of the students, teacher, and furniture in the room. Extend the activity to include relative location. Present and explain the grid. PE, P
- Create and present a riddle about one of the fifty states. Include at least five pieces of relevant information concerning geographic location. Sequence clues from general to specific. PE
- Create a map of your town and apply the five themes of geography to explain it. PE
- Prepare a lesson plan of which class for another class. Explain how geography influences the details of people around the world. PE
- Develop a travel brochure of an Asian country and what tourists will see there. PE, CE, P

Applications Across the Curriculum

Variations on a theme: Location/Place

Language Arts

- Read a novel (e.g., *My Side of the Mountain*, *Sign of the Beaver*, *Sarah, Plain and Tall*) and explain how geography affected the life of the central character. CE, P

Science

- Construct a topographical map with various types of terrain. Predict what a storm might develop and explain the reasons why. PE, P

Mathematics

- Make a scatter chart showing the relationship between altitude and climate. PE

Arts and Humanities

- Study folk arts and determine how they express cultural beliefs. Create and present a folk-art representation of your culture. PE

Practical Living

- Analyze the relationship between the location and features of houses built in various areas around the world. Build a scale model of one of the houses. CE, P

Vocational Education

- Research types of jobs in the geography of an area. PE

Reflections

The study of geography—regions, places and products, resources and relationships—is as old as humankind. As long as we have existed, we seek to explore, map, understand, and travel. Maps, globes, and atlases are tools students love to explore. Not only are these tools interesting to youngsters, they are also relevant to their everyday lives. They hear and read about these disasters on the news. Moreover, geography focuses on environmental issues which affect us all. To be environmentally aware is not only a product of today's young people, it is a product of all ages. This awareness and knowledge must be actively marketed, as water and even more pollution are easily found in our world. The possibilities for incorporating geography in class, extra, home, and global studies are endless. Consider using the following ideas to incorporate geography into the learning environment. You can find additional ideas, maps, and the changing globe into helping your child in the classroom.

Core Concept: Relationship of Geography to Human Activity

Sample Middle School Activities

- Prepare a videotape showing relevant geographic features of the local area. Hold a round-table discussion on after the video to consider the impact of geography on the community. PE, P
- Identify sites for locating a factory, a school, or a park in your community. Use aerial photographs and other resources to propose a site. Submit your plan to a panel of teachers and planning experts for evaluation. PE, OE, P
- Create a brochure, including maps, which explains local geography and points of interest for newcomers in the community. PE, P
- Draw a map of your school which shows directions for getting from school to every student's home in the class. Distribute the map to class members for future reference. PE, P

Applications Across the Curriculum

Language Arts

- Describe a book in which a character relocates (e.g., *In the Year of the Boar and Jackie Robinson*). Explain how the character's move affects the story. P

Science

- Research how a volcanic eruption can affect the climate in other parts of the world. Present your findings. PE, OE

Mathematics

- Design a travel itinerary from Tucson, Arizona to Hartford, Connecticut. On a budget of \$1,000, rent ten taxis and explain geographic features which contribute to the unobscuredness of each. OE, P

Arts and Humanities

- Analyze how artists (e.g., Matisse, Gauguin) works reflect their changing environments. OE, P

Practical Living

- Chart the spread of a communicable disease from one region to another. P

Vocational Education

- Research how and why businesses choose various locations for their industry. Explain your findings to a group of your peers. PE, P

Core Concept: Relationship of Geography to Human Activity

Sample High School Activities

- Produce a presentation for middle school students which explores the relationships between Kentucky's geography and the state's economy. Suggest solutions to economic problems which are supported by geographic conditions. PE
- Write a fictional novel with a career in the profession. List at the novel into a geographically significant area of care in the community and create a case study showing major geographic features applied to the picture. PE
- Use a series of news articles and other relevant data to determine if a relationship exists between an issue and its location. Create maps and visuals to use in support of your conclusions in a presentation. PE
- Investigate how the movement of industrial pollution from the United States has affected the environment in Canada. Hold a debate focusing on the responsibility of nations to control their emissions. PE, OE

Applications Across the Curriculum

Language Arts

- Write a story which examines the relationship between the individual and his/her environment. OE, P

Science

- Analyze the impact of communication technology on the exchange of information. OE, P

Mathematics

- Study air-mass cells which have facilitated the movement of people and goods. Calculate distance and time involved from one point to another in pre-central and central time periods. OE, P

Arts and Humanities

- Observe the portrayal of geographic features in different works of art (e.g., Winslow Homer, Japanese landscape). Create art works to reflect the characteristics of each artist. PE

Practical Living

- Study diseases that occur in different parts of the world. Relate how geography is involved in the occurrence and prevention of the diseases. PE, OE, P

Vocational Education

- Predict jobs of the future and where they might be located in the world. Prepare a series of maps which illustrate your findings. OE, P

School-wide Goals for Student Learning (NSSE, 1997)

- Learning-to-Learn Skills
- Expanding and Integrating Knowledge
- Communication Skills
- Thinking and Reasoning Skills
- Interpersonal Skills
- Personal and Social Responsibility

Assessment Types

■ Performance Tasks

- | | | |
|----------------------|------------------|----------------------|
| ■ Mathematics | Science | Social Studies |
| ■ Vocational Studies | Practical Living | Arts &
Humanities |

■ Writing Tasks

■ Open Response

- | | | |
|------------------|-------------------|---------|
| ■ Reading | Mathematics | Science |
| ■ Social Studies | Arts & Humanities | PL/VS |

■ Writing Portfolio

Performance Tasks



- Often addressed more than one content area; addressed learning skills
- Group tasks followed by individual student reflection or other written piece.
- Recorded information
- There were often manipulatives or other resources for their use.
- Trained task administrators provided group instructions.

21st Century Learning

To cope with the demands of the 21st century, people need to know more than core subjects. They need to know how to use their knowledge and skills – by thinking critically, applying knowledge to new situations, analyzing information, comprehending new ideas, communicating, collaborating, solving problems, making decisions.”

Learning for the 21st Century

Example – Grade 8 – S/SS

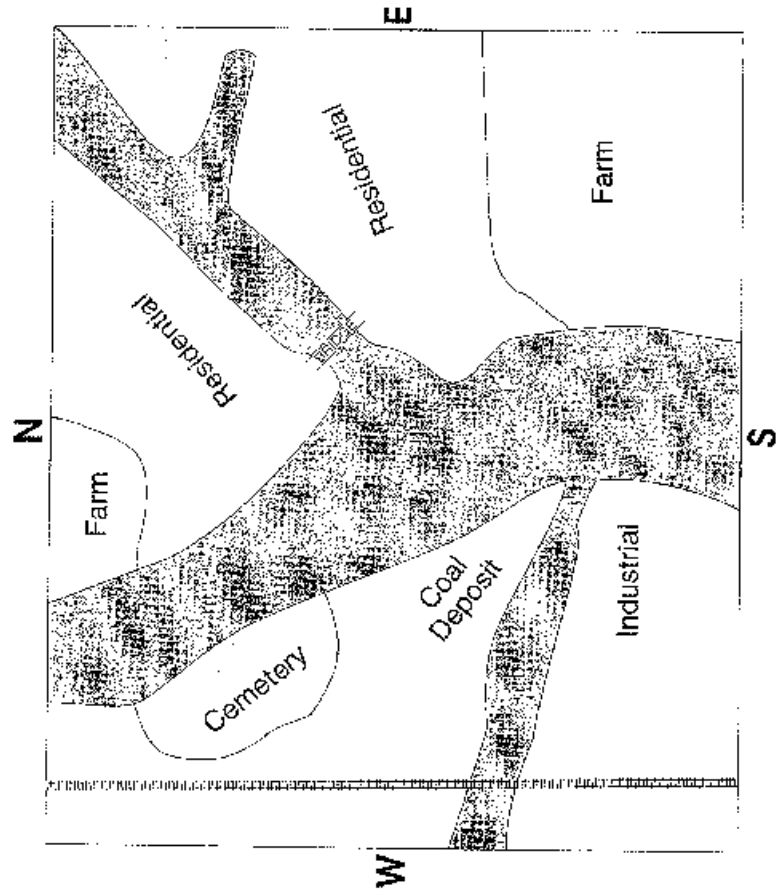
- Purpose: determine where, how high, and for what purpose to build a dam. You have 20 minutes to complete group work.
- Group work:
 - Examine model and map of river valley, discuss possible sites.
 - Use clay to construct dam on model. Use water to test impact of dam on nearby areas.
 - Try different locations and heights. Record.

Record Sheet

Name of all students in a group: _____

School Name: _____

School Code: _____



Example

- Individual work:
 - Review group work, determine where you would place and how high. Why?
 - What social, environmental, and economic impacts?
 - Describe concerns you would include in an environmental impact state for dam sites other than one you chose.

Tasks Addressed...

- Content knowledge plus...
 - Communication and collaboration
 - Critical thinking and problem solving
 - Decision-making
 - Integration of content with real life or application scenarios

Constructive Response

- Sixty year after the Battle of Concord, Levi Preston was asked why he fought. “What we meant in going for those Redcoats was this,” he answered. “We always had governed ourselves, and we always meant to.”

After people like Levi Preston and others fought for Americans’ right to govern themselves, why don’t more citizens participate in the process of government?

Explain several reasons why you think many Americans fail to take an active role in civic affairs.

Writing Tasks

- On-demand writing with a set amount of time (90 minutes) to respond.
- Two choices of topics
- Topics selected to be relevant, engaging, and age-appropriate.
- Assessed writing and learning skills

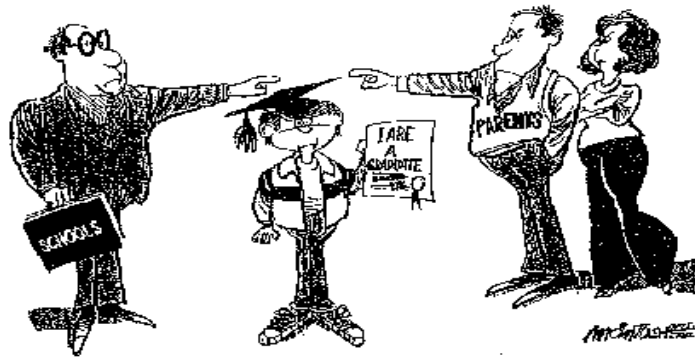
Writing Prompt Examples

- Many people in Kentucky believe that a student should be required to maintain a specific attendance and academic record in school in order to obtain and keep his or her driver's license. Your local school board is currently deciding whether or not these requirements will apply to students in your high school. Think about this and take a stand.
 - Letter to school board. Convince board to take your position seriously.

Writing Prompt Examples

- Smoking in public places has been an issue concerning Americans for the past two decades. It has become such a debatable issue that many people believe that smoking should be banned in all public places.
 - Write letter to Director of the Environmental Protection Agency (EPA) taking a stand, support your position.

Even Multiple Choice...



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30. What is the major controversy involved in the cartoon?
- A. High school graduates today are illiterate.
 - B. Teachers and parents are upset because children are not doing well in school.
 - C. Earning a high school diploma does not mean as much as it used to mean.
 - D. Teachers and parents blame each other for falling educational standards.

