EXEMPLARY GEOGRAPHY BENCHMARKS AMONG THE SEVEN STATES IN THE CENTRAL REGION

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McREL

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INTRODUCTION

This study identifies a core set of geography standards and benchmarks that have been identified as exemplary and are used by a significant number of educators in the Central Region served by McREL (Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, and Wyoming). Specifically, the study provides a list of the knowledge and skills expected of students in most or all states in the Central Region that also are found in state standards documents rated as exemplary by national organizations for their coverage of social studies content, including geography.

Over the past 10 years, as McREL has helped schools, districts, and states develop and improve their standards, certain questions have continued to arise: how can we determine what is most essential for students to learn? How can we be confident that we have not omitted significant content?

The increased attention to accountability and testing mandated by state and federal accountability measures adds urgency to these questions. In the social studies, these concerns are more pressing and more difficult to address than in other content areas, for two principal reasons. First, the amount of material identified for coverage is significantly larger than in other subject areas. Kendall and Marzano's synthesis of subject-matter content across all content areas (2000) reveals that the number of benchmarks identified for the social studies (civics, economics, geography, and history) is two-and-a-half times greater than the benchmarks identified for English language arts, mathematics, and science *combined*. Given the sheer number of social studies benchmarks, the pressures to reduce them to those which are most significant seem clear. Second, a recent study on the decline of liberal arts in K–12 education (von Zastrow, 2004) suggests that increased emphasis on reading and mathematics has led to a decrease in the instructional time made available for social studies, civics, and geography, a trend especially evident in high-minority schools. In the absence of other solutions for the lack of instructional time, there appears to be a pressing demand to help schools make informed selections from among the significant amount of social studies content.

Current school reform efforts have created a significant demand for curriculum materials that help students achieve specific and worthwhile standards. The shared set of standards and benchmarks presented here should provide educators with a useful focus for their efforts to find or share high-quality materials that support exemplary standards and benchmarks.

The list of standards and benchmarks presented in this report represents geography content that is highly valued nationally as well as within the Central Region. One of a series of related reports published by McREL, this report is intended to assist curriculum directors, social studies coordinators, and others who seek to identify important geography content and focus classroom instruction on the most important content. Earlier studies have addressed language arts (Kendall, Norford, & Snyder, 2001), mathematics (Kendall, Gilpin, & Williams, 2002), science (Kendall, DeFrees, & Richardson, 2003), and history (Kendall, Rode, & Snyder, 2004).

METHOD

To ensure that the list of standards and benchmarks produced by this study can be considered exemplary, analysts selected an earlier McREL publication as the reference document, which identified highly rated geography standards and benchmarks (Kendall, Schoch-Roberts, & Young-Reynolds, 2000).

The 2000 McREL study synthesized the geography content present in documents from a handful of states that were highly rated by reputable national organizations — specifically, the American Federation of Teachers and the Fordham Foundation — for the quality of their standards:

- *Alabama Course of Study: Social Studies* (1998, February), by the Alabama State Department of Education

- *Social Studies Standards* (2000), by the Arizona Department of Education

- *Kansas Curricular Standards for Civics-Government, Economics, Geography, and History* (1999, July), by the Kansas State Board of Education

- *Social Studies Content Standards* (1997, May), by the Louisiana State Department of Education

- *Curriculum Standards: Social Studies* (2000), by the South Carolina State Department of Education

The list of "exemplary benchmarks" gleaned from a synthesis of the above documents summarizes the model geography content found to be common among top-rated states. This list was used as a reference for the current study. McREL analysts compared content in the standards documents from the seven states in the Central Region to the 2000 list of exemplary benchmarks. The Central Region state standards documents analyzed for this study, along with the grades or grade ranges of the benchmarks[1], are listed in Table 1.

The process of comparison was first undertaken independently by two analysts. Each analyst determined whether the content in the 2000 McREL study also could be found in any of the state documents and thus, which states in the Central Region shared the same exemplary content. For the purpose of the analysis, benchmarks were considered comparable if they appeared within two grades above or below the grade range of the reference study and if they addressed content at a comparable concept or skill level.

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[1] Although states use differing terms to describe what students should know at various points in their schooling, we use the term *benchmark* throughout this paper. The term *standard* refers to a broader statement about student accomplishment under which multiple topic-related benchmarks are organized.

Table 1. Standard Documents of the Seven Central Region States and their Grade Ranges

State Document	Benchmark Grade Range
Colorado Model Content Standards: Geography (1995, November)	K–4, 5–8, 9–12
Kansas Curricular Standards for Civics – Government, Economics, Geography and History (1999, July)[2]	K–2, 3–4, 5–8, 9–12
Missouri Social Studies: Grade-Level Expectations (2003, August)	K, 1, 2, 3, 4, 5, 6, 7, 8, 9–12
Nebraska Social Studies/History Standards (2003, September)	K–1, 4, 8, 12
North Dakota Standards and Benchmarks: Content Standards: Social Studies (2000)	4, 8, 12
South Dakota Social Studies Standards (1999)	K, 1, 2, 3, 4, 5, 6, 7, 8, 9–12
Wyoming Social Studies Content and Performance Standards (2003, July)	4, 8, 11

When both analyses were completed, a third analyst then reviewed the separate findings to determine whether there was a significant discrepancy in their judgments on any one benchmark. If the first two analysts disagreed regarding whether the content described in a benchmark could be found in three or more of the states under review, the analysts conferred to determine whether they could come to an agreement. If they could not, the problem was resolved by the third analyst.

This process was used to resolve only significant discrepancies; specifically those likely to have a bearing on whether the identified content would meet the threshold for inclusion in the final list of commonly found benchmarks. Thus, if resolving disparate analyst ratings would not influence the decision to include the content, the disagreement was left unresolved.

THRESHOLD FOR INCLUSION

A preliminary comparison of the two independent reviews of state standards with the reference list of exemplary standards indicated that if the identified standards and benchmarks were restricted to content common to every state in the region, then just over six percent of the potential number of all benchmarks would be identified. If the content to be identified was expanded to content common to *any six or all seven* states, then the number of common benchmarks still represented just 27 percent of the number of total benchmarks. If the threshold was lowered to the presence of the content in *any five of seven states*, then the number of common benchmarks included 41 of the 64 exemplary benchmarks (64%). To ensure the

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[2] Note that the Kansas state standards document was highly rated by national organizations and, because Kansas is one of the seven states in the Central Region, the Kansas state standards document also was analyzed for the present study.

list was representative of the region, the threshold for commonality was not lowered any further to include content that might be present in *any four of seven states.* Thus, it was decided that presence in at least five states would serve as the threshold for inclusion in the list of benchmarks common to the region.

PRIMARY FINDINGS

The exemplary benchmarks commonly found in the Central Region are organized by the five standards listed in Table 2. The benchmarks are organized primarily by grades K–2, 3–5, 6–8, and 9–12, a structure that accommodates the various designs of the state documents reviewed.

Table 2. Geography Standards that Organize the Exemplary Benchmarks Commonly Found in the Central Region

Geography
1.   Understands the world in spatial terms
2.   Understands the characteristics of places and regions
3.   Understands the Earth's physical systems
4.   Understands human culture and social systems
5.   Understands the interaction of the environment and society

Each state analyzed presents its standards and benchmarks in a different way. Two of the exemplary states organize their standards grade by grade; the other states use varying grade-band structures — for example, K–2, 3–5, 6–8, 9–12 or K–4, 5–8, 9–12. In order to represent as closely as possible the range of grades under which the content appears, when listing the benchmarks in the next section, we also have provided broader ranges where appropriate. For example, grade bands in this report may appear as K–2, K–5, or 3–5. Benchmarks within the seven state documents were considered comparable to benchmarks in the 2000 McREL study only if the same or similar content appeared within two grades above or below the same grade band.

The 41 exemplary benchmarks found in five of the seven Central Region state standards documents appear across all standards listed in the 2000 McREL study. Table 3 shows the results of the analysis for each of the geography standards.

Table 3. Number of Exemplary Benchmarks in the 2000 McREL Study That Are Common Among 5 or More Central Region States, by Standard

Standard	# of Exemplary Benchmarks Shared by 5 or more Central Region States (a)	# of Exemplary Benchmarks Listed in the 2000 McREL Study (b)	% (a/b)
1. Understands the world in spatial terms	8	10	80%
2. Understands the characteristics of places and regions	12	18	67%
3. Understands the Earth's physical systems	2	8	25%
4. Understands human culture and social systems	10	16	63%
5. Understands the interaction of the environment and society	9	12	75%

Standard 1 shows the highest percentage of exemplary benchmarks shared among the states, at 80%. This is not surprising, because this standard relates to the tools of geography, including the fundamental knowledge and skill necessary for reading and using maps and globes. Standard 3 has the lowest percentage of benchmarks shared among states in the region. This is also to be expected. The content in the standard on Earth's physical systems can be, and often is, categorized as earth science and so appears in state science standards rather than geography standards.

Exemplary Geography Benchmarks Commonly Found in the Central Region

Following is a list of the exemplary geography benchmarks commonly found in the Central Region, organized by standard and grade band.

Standard 1. Understands the world in spatial terms

Grades K–2

- Knows the purposes and features of maps and globes (e.g., relative location terms, cardinal directions, simple grid systems, basic map symbols)

- Knows the location of school, home, neighborhood, community, state, and country

- Knows basic physical and human features of places as they are represented on maps and globes (e.g., land forms, mountains, valleys, water bodies, continents, political boundaries, cities)

- Knows the basic elements of maps and globes (e.g., legend, distance, scale, compass, cardinal and intermediate directions, meridians and hemispheres, latitude and longitude or alphanumeric grid systems)

- Knows the features and characteristics of different kinds of maps, databases, and models, including thematic maps (e.g., patterns of population, disease, economic features, rainfall, vegetation)

- Uses a variety of geographic representations to analyze spatial distribution of physical and human features (e.g., maps, globes, models, aerial images, satellite images)

- Knows the characteristics and purposes of a variety of geographic tools (e.g., databases, models, different map projections, charts, graphs, Geographic Information Systems [GIS]

- Knows the location and distribution of physical and human features on maps and globes (mountains, river systems, climate, cities, population, language, religion)

Standard 2. Understands the characteristics of places and regions

- Knows the physical and human characteristics of the local community (e.g., weather, land vegetation; parks, schools, shopping, housing)

- Knows that characteristics of places are shaped by physical and human processes (e.g., addition or removal of buildings, damage as a result of severe weather)

- Knows the human characteristics of places (e.g., houses, schools, types of land use, population, transportation, communication)

- Knows the causes and effects of physical and human changes in a place over time (e.g., erosion, river systems, agriculture, urban growth, transportation, settlement patterns)

- Knows areas that can be classified and unified as regions according to physical criteria (e.g., location, land features, water features, climate, vegetation, resources) and human criteria (e.g., population, religion, language, customs, economic activities)

Grades 3–8

- Knows the physical characteristics of places (e.g., river systems, land forms, climate, vegetation, wildlife)

- Knows the similarities and differences between a variety of regions (e.g., physical characteristics such as climate and land forms, human characteristics such as religion and language)

- Knows how the human and physical characteristics of a region change over time

Grades 3–12

- Understands the criteria that give a region identity (e.g., cultural features, perceptions and popular images, physical features)

Grades 6–8

- Knows factors that contribute to changing the human and physical characteristics of a region (e.g., technology, cultural influences, migration and settlement, economic development)

- Understands the ways in which regional systems are interconnected (e.g., trade, migration, international organizations, river systems, watersheds)

Grades 9–12

- Knows factors that contribute to the dynamic nature of regions (e.g., human influences such as migration, technology, and economic development; physical influences such as environmental change, natural resource use)

Standard 3. Understands the Earth's physical systems

Grades 6–8

- Understands how physical processes help to shape features and patterns on Earth's surface (e.g., weathering, erosion, water cycle, soil formation, mountain building)

- Knows the major processes that shape patterns in the physical environment (e.g., plate tectonics, glaciation, erosion)

Standard 4. Understands human culture and social systems

Grades K–5

- Understands why people choose to settle in different places (e.g., job opportunities, available land, climate)

Grades 3–5

- Knows the similarities and differences in the cultures of different regions (e.g., beliefs, food, jobs, gender roles, status of women, literacy, property rights)

- Knows the factors that affect the location of economic activities (e.g., resources, transportation, communication technology)

Grades 6–8

- Knows the causes and effects of human migration (e.g., war, famine, opportunity, oppression; population shifts, conflict, cultural diffusion, environmental change, economic change)

- Understands demographic concepts and how they are used to describe population characteristics of a country or region (e.g., rates of natural increase, crude birth and death rates, infant mortality, population growth rates, doubling time, life expectancy, average family size)

- Knows the causes and effects of migration around the world (e.g., types of migration; effects on resources, economy, government)

- Understands the significance of patterns of cultural diffusion (e.g., language, religion, technology, foods, dress, housing types, ethnic neighborhoods, settlement patterns, agricultural methods)

- Understands the relationship between the location of economic activities and the physical characteristics of a given place (e.g., natural resources, land forms, climate, drainage patterns; available technology and transportation)

- Understands the causes of world trade patterns (e.g., economic interdependence; the influence of location, the physical environment, resources)

- Knows the similarities and differences in various settlement patterns of the world (e.g., agricultural settlement types; urban settlement types)

Standard 5. Understands the interaction of the environment and society

Grades K–2

- Knows ways in which people depend on the physical environment (e.g., food, clean air, water, mineral resources)

- Knows the ways people alter the physical environment (e.g., by creating irrigation projects; clearing the land to make room for houses and shopping centers; planting crops; building roads)

- Knows how humans adapt to variations in the physical environment (e.g., choices of clothing, housing styles, agricultural practices, recreational activities, food, daily and seasonal patterns of life)

Grades K–5

- Knows natural hazards that occur in the physical environment (e.g., floods, hurricanes, tornadoes, earthquakes) and their effect on the people who live there

Grades K–8

- Knows the ways in which the physical environment is impacted by human activity (e.g., air and water pollution, loss of habitat)

Grades 6–8

- Understands the environmental consequences of people changing the physical environment (e.g., deforestation, desertification, shifting cultivation, overpopulation)

- Knows the ways in which human systems develop in response to conditions in the physical environment (e.g., patterns of land use, economic livelihoods, architectural styles of buildings, building materials, flows of traffic, recreation activities)

Grades 6–12

- Understands contemporary issues in terms of Earth's physical and human systems

Grades 9–12

- Understands the ways in which technology influences the human capacity to modify the physical environment (e.g., dams, irrigation, fossil fuels, diesel machinery, steel plow, strip mining, desert settlements)

ADDITIONAL FINDINGS

As anticipated, during the preliminary comparison of the independent reviews, the study revealed other information that might be of interest to educators in the region. Specifically, a number of benchmarks that were present in the reference document, and therefore viewed as important geography content in highly rated standards documents, were found to be either missing from all state documents or present in just one or two states.

Table 4 provides a list of those standards in the reference document of exemplary standards under which the benchmarks that appear in just two or fewer of the Central Region state standards documents are organized.

Table 4. Geography Standards that Organize the Exemplary Benchmarks Rarely Found in the Central Region

Geography
1.   Understands the world in spatial terms
2.   Understands the characteristics of places and regions
3.   Understands human culture and social systems

Exemplary Geography Benchmarks Rarely Found in the Central Region

Following is a list of the three benchmarks rarely found in Central Region states, organized by standard and grade band.

Standard 1. Understands the world in spatial terms

Grades 3–12

- Knows the relative location, size of, and distances between political and physical features

Standard 2. Understands the characteristics of places and regions

Grades 6–8

- Knows that places can be defined in terms of their predominant human and physical characteristics (e.g., land forms, bodies of water, natural resources, weather; houses, schools, neighborhoods, communities)

Standard 3. Understands human culture and social systems

Grades 6–8

- Knows the causes and consequences of industrialization and urbanization (e.g., technology, manufacturing; migration, changes in settlement patterns)

SUMMARY

Of the 64 exemplary geography benchmarks identified by McREL in its review of highly rated state standards, 41, or 64 percent, are common to at least five of the seven states in the McREL region. This suggests that, for the most part, the Central Region states have incorporated essential geography content into their standards. However, the report also identifies three benchmarks commonly found in highly rated state standards but missing in all but one or two of the region's states. Curriculum directors, social studies coordinators, and other educators involved in developing or teaching to geography standards might consider reviewing and incorporating these missing benchmarks into their existing standards and curriculum.

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