

# PERFORMANCE DESCRIPTORS FOR MASTERY

## 8TH GRADE SCIENCE

### Nature of Science:

SC.PD.8.1

#### Mastery

Eighth grade students at the mastery level recognize the importance of scientific innovation and report the role of these innovations in advancing societal, cultural and economic issues;

use scientific methodology to conduct and communicate experiments utilizing safe procedures and appropriate technology;

repeat experiments to verify results; draw conclusions from a data source or model.

#### Students will:

- Demonstrate an understanding of history and nature of science as a human endeavor encompassing the contributions of diverse cultures and scientists.
- Demonstrate the ability to use the inquiry process to solve problems.

### Application of Science:

SC.PD.8.3

#### Mastery

Eighth grade students at the mastery level test and record data to explore systems, models, and changes; identify a technological innovation and the science that makes it possible; identify positive outcomes and unintended consequences of a scientific discovery; identify the impact of a public policy decision regarding health, population resources or environmental issues.

#### Students will:

- Demonstrate the ability to use inquiry process to explore systems, models, and changes.
- Demonstrate an understanding of the interdependence between science and technology.
- Demonstrate an understanding of the utilization of technology to gather data and communicate designs, results and conclusions.
- Demonstrate an understanding of personal and societal benefits of science, and an understanding of public policy decisions as related to health, population, resource and environmental issues.

### Content of Science:

SC.PD.8.2

#### Mastery

Eighth grade students at the mastery level describe the importance of cell type in human systems; analyze how genetics, behavior and environment interact; construct simple dichotomous keys; trace the flow of energy in food webs; relate atomic structure and properties to location on the periodic table; write word equations and classify type; evaluate variations in diffusion rates and examine the effect of changing temperature; examine sources of energy; calculate and/or graph properties of waves, motion, work, power, and pressure; relate conservation of energy to transformations; recognize Doppler shift to sound; explain Newton's Laws of Motion; relate plate tectonics to geologic events; describe forces which shape the Earth's surface; describe motion and the origin of solar system objects; explain the relationships among weather, climate and oceans.

#### Students will:

- Demonstrate knowledge, understanding and applications of scientific facts, concepts, principles, theories and models as delineated in the objectives.
- Demonstrate an understanding of the interrelationships among physics, chemistry, biology, earth/environmental science, and astronomy.
- Apply knowledge, understanding and skills of science subject matter/concepts to daily life experiences.



## 8TH GRADE SOCIAL STUDIES

### Geography:

Performance Descriptors

#### Mastery

Eighth grade students at mastery level in geography: label the four major physical geographic regions, major rivers, landforms, natural/manmade borders, points of interest, counties and bordering states on selected maps and correlate the reasons for the development of the major cities in their respective locations;

investigate climate, landforms, natural resources and population density in West Virginia's geographical regions using special purpose maps and evaluate the impact on people's lives and settlement patterns and summarize how the cultural isolation of West Virginia has been affected through technological advances;

classify the geographic factors that led to development of agriculture, coal, glass, chemical, metallurgic and tourism industries in West Virginia; interpret facts about West Virginia from various types of charts, graphs, maps, pictures, and models;

provide exact location and relative location to explain West Virginia's position on a variety of maps and globes by using correct geographic vocabulary and graphic displays; and

identify the nine distinct tourist regions in the state of West Virginia and analyze which geographic factors influence each region.

### Civics:

Performance Descriptors

#### Mastery

Eighth grade students at mastery level in civics: demonstrate patriotism and evaluate how citizens participate in local, state and national government by analyzing their rights and responsibilities;

differentiate between the powers of each branch of government, state and national, cite the elected officials at each level and the requirements and responsibilities of their office;

explain the process for amending the West Virginia Constitution and for a bill becoming a law, assuming the role of a legislator in a simulation; and

analyze the function of local, county, state and national governments, federal, state, local and special courts and identify various types of elections.

### Economics:

Performance Descriptors

#### Mastery

Eighth grade students at mastery level in economics: compare and contrast West Virginia's role in the global economy to the economic role of other states;

compare and contrast West Virginia's economic conditions to those of other states;

analyze the impact of past and current economic conditions on economic growth of West Virginia;

investigate the effects of changes in the economies of the four regions of West Virginia; and

compare and contrast the effects of technological/ industrial advancements in West Virginia to their effects in other states.

Regional Education  
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### Literacy:

Performance Descriptors

#### Mastery

Sixth through eighth grade students at mastery level in literacy:

determine central ideas and cite textual evidence; provide an accurate summary; identify key steps in a process related to history/social studies;

determine the meaning of domain-specific vocabulary; identify an author's point of view or purpose;

integrate visual information; distinguish among fact, opinion and reasoned judgment; analyze the relationship between primary and secondary sources;

read and comprehend history/social studies texts in the grades 6-8 text complexity band independently and proficiently;

compose arguments and informative/explanatory texts; use precise language and domain-specific vocabulary;

with some guidance and support, use technology to develop, strengthen, publish and present clear and coherent writing;

conduct short research projects drawing on several relevant, credible, and accurate sources; avoid plagiarism; and

write over extended time frames for research-based projects and shorter time frames for a range of discipline-specific tasks, purposes and audiences.

### History:

Performance Descriptors

#### Mastery

Eighth grade students at mastery level in history:

explain the effects of European exploration on the various Native American cultures in western Virginia;

compare and contrast the various roles of western Virginians during the American Revolution, compare and contrast the military strategies of the North and South and describe the effects of significant contributions of West Virginia men and women;

identify the types of transportation that facilitated the growth of West Virginia and compare and contrast the West Virginia Constitutions;

summarize the evolution of the labor movement, and the political, social and economic situation in West Virginia following World War I;

summarize the economic and industrial growth of West Virginia during WWI, evaluate and analyze the impact of social, economic and echnological developments on the culture of West Virginia;

analyze the economic, social and political impact of the late 20th century and 21st century events on West Virginia; and

explain the importance of major fairs and festivals to West Virginia.