Watershed Integrated Learning Program - Seventh Grade

General Information

Length: Full Year
Format: Meets Daily
Grade: 7

Course Description

WATERSHED

Watershed is a nationally and internationally recognized Integrated Learning Program for 7th grade. Created by Mark Springer and Ed Silcox in 1987, Watershed is a yearlong full day program, which replaces the traditional seventh grade curriculum. Skills and concepts are integrated around the specific study of a local watershed through a combination of classroom activities and site visits, which meet the PA Common Core State Standards for Language Arts, Social Studies and Science. Watershed is a research-based program, which focuses on scientific investigation through experimental design while incorporating data interpretation/analysis, math and reading skills to solve problems. Students are encouraged to gather, retain, interrelate, apply and communicate first hand information about watersheds with special emphasis about what it means to live sustainably in the 21st century.

The ultimate goal of the Watershed Program is to foster a positive sense of self within each student to be a responsible member of a vibrant close community of learners who enjoy learning from each other. Students are encouraged to set goals, to take pride in the quality of their work and accomplishments as they navigate the academic as well as the social challenges of middle school.

Students are encouraged to leave their personal footprint on the local/global community. They conduct in-depth research projects on a variety of watershed topics and present their experiences and findings at various local, state and national conferences and community Open Houses. Watershed students become fearless problem solvers, confident public speakers, solid writers, successful stewards and informed citizens about land and water issues, climate change and sustainable living.

Course Objectives:

1. Students will demonstrate understanding of key ideas and details, craft and structure in informational texts with an emphasis on comprehension, vocabulary acquisition, and making connections among ideas and between texts with a focus on textual evidence.

2. Students will demonstrate understanding of key ideas and details, craft and structure and vocabulary and figurative language in literature.

3. Students will draw evidence from literary or informational texts to support analysis, reflection, and/or research.

4. Students will apply the scientific method to solve problems and formulate testable
hypotheses to make predictions and design experiments.

5. Students will work collaboratively to obtain data using appropriate scientific equipment and tools to create appropriate graphic representations, lab reports and field studies.

6. Students will write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

7. Students will write narratives to develop real or imagined experiences or events using effective techniques, relevant descriptive details, and well-structured event sequences.

8. Students will write arguments to support claims with clear and cohesive reasons and relevant evidence using precise language, phrases and clauses to create support in a consistent voice.

9. Students will practice communication skills that enable critical listening and effective expression of ideas, including collaborative discussion, inquiry and presentation skills.

10. Students will develop and refine vocabulary skills and grammatical conventions and apply them consistently as they write across all Watershed content areas.

11. Students will develop an understanding and be able to analyze and discuss how our local area was established, grew into a political and economic force, fought for independence, created a new form of government and ultimately evolved into a world power that became engaged in a civil war.

12. Students will engage in activities to analyze and discuss the influence of water and land to humanity throughout history as well as man’s influence and impact on the land (flora and fauna) and water.

For more detailed information about course objectives, please refer to Pennsylvania’s Common Core State Standards. http://static.pdesas.org/content/documents/6-12 ELA standards 8-2-12 DRAFT .pdf

Common Assessments:

Writing: Written assessments will focus on the areas of emphasis identified by the Pennsylvania Common Core State Assessments including narrative, informative/explanatory, opinion/argumentative, and response to literature. This will be accomplished through informal, process and timed writing assessments. (CCS.W.7.1-5)

Common Assessments

1. WLB Response to Literature: Students will analyze an unfamiliar fiction excerpt in a multi-paragraph, timed essay. This common assessment will follow Method and Meaning in Fiction and Poetry.

2. Nonfiction Comparison: Students will compare two unfamiliar nonfiction excerpts in a multi-paragraph, timed essay. This common assessment will follow Method and Meaning in Nonfiction.

3. WLB Narrative: Students will write an original personal narrative in an on-demand setting. This common assessment will follow The Art of Narrative Writing.

4. WLB Persuasive: Students will write to persuade in a multi-paragraph, timed essay. This
common assessment will follow Crafting an Argument.

5. **10 Book Log**: A 10 book log will assess students’ ability to read and comprehend a wide range of literature, literary non-fiction and informational texts on and above grade level, reading independently and proficiently.

6. **Grammar Assessments**: Students will be assessed twice a year on their mastery of phrases as outlined in *Grammar for Middle School: A Sentence- Composing Approach*.

7. **Reading literature and informational text**: A Dialectical Reading Journal will assess student’s ability to read and comprehend genres of literature independently, fiction, historical fiction, non-fiction and informational texts on or above grade level. (CCS.W.7-1, CCS.RL.7.1-6, CCS.RI.7.1-6). A common rubric will be used to score the reading journal once every month.

8. **Speaking and Listening Assessment**: Whole group and small group discussion, individual conferencing and presentations are formally assessed twice a year during Student-led Conferences. Accessed with the RTSD Speaking and Listening Rubric (CCS.SL.7-1)

**Common Course Assessments**

**Assessing Policy**
Traditional letter grades cannot adequately reflect Watershed’s emphasis on process. Student performance and progress is evaluated with rubrics (developed and designed by students and teachers) for individual and group projects and presentations. Self- reflection, setting daily goals, recognizing accomplishments, bi-monthly student self-assessments, Open Houses and Student-Led conferences assess student progress.

**Watershed Unit Assessments** (located on the Watershed webpage)

**Field Studies lab reports**; Lab reports will be required following each field study and will be assessed using the Watershed Field Study Rubric; Lab reports are required once a month and will be assessed using the RTSD Lab report rubric.

**Benthic Macro-invertebrate research, vocabulary, poster, movie trailer and skit Project**; assess using the Watershed BMI presentation rubric, sketch book rubric, and multimedia rubric.

**Raptor Migration research unit and bulletin board presentation**; assess using the Watershed raptor rubric, sketchbook rubric and presentation rubric.

**Geology and USGS topographic map project**; assess using the 3-D Topography map rubric.

**Drip Essay** - a drop of water’s journey down stream; assess using RTSD writing rubric.

**Lenni Lenape village and culture presentation**; assess using the Lenape Watershed presentation and sketchbook rubrics.

**American Diaries and focus papers**; all writing pieces that accompany each unit will be assessed using the RTSD writing rubric.

**Swedish Voyage and Settlement; American Diaries #2 and #3**; assess using the Watershed presentation, sketchbook and writing rubrics.


**Road to Revolution, Battle of the Brandywine, Valley Forge Encampment, American Diaries #4**
and #5: assess using Watershed presentation, sketchbook and writing rubrics.

**Constitutional Convention Simulation:** assess using the Watershed presentation and writing rubrics.

**C-Span Student Cam National Competition:** assess using the Watershed multimedia rubric.

1800s Newspaper project, 1800s novels: assess using Watershed multimedia, writing and sketchbook rubrics.

**Sustainability Research Paper, publishing an E Book:** assess using Watershed multimedia, writing, and sketchbook rubrics.

**Creating a Blueprint for a Future City:** assess using Watershed presentation, writing, sketchbook and multimedia rubrics.

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## Major Units of Study

Units of study are organized in a manner that encourages students to make connections across complex skills, strategies and content and to make fluid connections across content from all curriculum areas. Many topics are on-going and run concurrently throughout the year.

### Unit 1: Sense of Place

*Students will become familiar with the physical boundaries and conditions of the watershed by concentrating on limnology, biogeochemical cycles, flora and fauna, topography and what it means to be part of a small learning community. Students will begin to look at the people who have lived in the watershed over time.*

**Building Community – Sense of Place**
- Physical, Environmental and Ecological Boundaries of the Watershed – Field Studies
- Limnology, Plants and Animals, Adaptation, Biodiversity – Macro Invertebrates, Raptors, Native species field guide
- Method and meaning in Fiction and Poetry - Nature Journaling, Dialectical Reading Journal
- Rocks and Topography

### Unit 2: Sense of Time

*Students will continue to examine human impact to the area as well as water’s influence over land and water development. The connections between human activities of the past and the natural features of the watershed are continually emphasized as students trace the development of our region through time.*

- Lenape culture; PA’s “first” environmentalists
- Swedish settlement, William Penn and Quaker Mills
- Road to Independence; Confederation to Constitution
- Manifest Destiny and the Rise of Competing Political ideologies and Resources
- United States Civil War and Reconstruction
- C –Span Student Cam Competition

### Unit 3: Sense of Quality

*As students more clearly understand the intricate relationships that tie us to our watersheds and realize how past, present and future actions directly influence the quality of life in any watershed, they can apply their knowledge and interest to a sustainable research project and a blueprint for a*
model future city.

Knowing Your Carbon Footprint
Energy – Non-renewable v. Renewable Resources
Transportation – Best Management Practices, alternative fuels
Water – Waste Water, Drinking Water, Storm Water Management
Food - Farm to Table - Best Management Practices – Knowing your Foodshed
Sustainable Building Practices - Green School
Future Sustainable City Blueprint and model
Community Action and Service

**Materials & Texts**

**Common Text and Resources**

- *The Outsiders* by S.E. Hinton (common text)
- *The Call of the Wild* by Jack London (common text)
- Outliers by Malcolm Gladwell (common text)
- *Fever 1793* by Laurie Halse (common text)
- *American Plague* by Jim Murphy (common text)

- *Grammar for Middle School: A Sentence Composing Approach* by Don and Jenny Kilgallon

**Common Course Texts and Resources**

- Selected materials from National Math and Science Initiative (NMSI)
- *Watersheds – A Practical Handbook for Healthy Water* by Clive Dobson
- *Water: A Natural History* By Alice Outwater
- *My Healthy Stream – Trout Unlimited/Aldo Leopold Foundation* by Jack E. Williams
- *Omnivore’s Dilemma* by Michael Pollan
- *Crazy Makers* by Carol Simontacchi
- *Chew on This* by Eric Schlosser and Charles Wilson
- *Common Sense* by Thomas Paine

- NEED -National Energy Education Development curriculum Project (Exelon and Franklin Institute Grant)
- MMW - *Mapping My Watershed* on-line research program with Stroud Water Research

**Supplemental Texts and Resources (may vary)**

- In addition, students may also choose to read supplemental texts

- *Misfits* by James Howe, *Hidden Talents* by David Lubar
- *Dickon Among the Lenape* by M.R. Harrington, *Last of the Mohicans* by James Fenimore Cooper
- *I am Regina* by Sally Keene, *Light in the Forest* by Conrad Richter
- Riddle of Penncroft Farm by Dorothea Jensen
- 19th century classics: *Call of the Wild* as well as other 19th century classic selections:
  - Austen, Bronte, Dickens, Hawthorne, Irving, Melville, Poe, Doyle, Twain, Whitman
- *Twelfth Night* by William Shakespeare
- Poetry and selected prose from noted American naturalists: Abbey, Barry, Carson, Diamond, Friedman, Leopold, McPhee, McKibbon, Pollan, Thoreau
A research-based program, Watershed relies on the internet and primary source materials in lieu of textbooks. Students have iPads and laptops and work with multiple media: iMovie, Prezi, E-book and Google Drive. The classroom strives to be paperless.

**Summer Assignment**

Students are encouraged to read books from a variety of genres over the summer; Reading Olympic Book lists (middle and high school)

**Required Summer Reading for this Course:**

*Watersheds – A Practical Handbook for Healthy Water* by Clive Dobson  
*Water – A Natural History* by Alice Outwater (chapters 1-3)  
*My Healthy Stream – Trout Unlimited/Aldo Leopold Foundation* by Jack E. Williams