

PROJECT WET

Alignment with Maryland Voluntary State Curriculum Grades K-2ⁱ

AQUA BODIES – GRADES K-6; PAGE 63

STUDENTS TRACE THEIR BODIES AND COLOR PORTIONS TO REPRESENT THE AMOUNT OF WATER THEIR BODIES CONTAIN. HOW DOES THEIR WATER CONTENT COMPARE TO THAT OF A CACTUS, LETTUCE, OR A WHALE? NOTES: K-2 TEACHERS MAY WANT TO FOCUS ON PART 1 ONLY; THIS ACTIVITY ALSO INVOLVES ART.

Reading/English/Language Arts	Social Studies	Science	Mathematics
None	None	<p>1.0 Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning; C. Communicate Scientific Information;</p> <p>Kindergarten 3.0 Life Science: D. Evolution: 1. There are different kinds of living things in different places: c. external features of plants & animals affect how well they thrive; E. Flow of Matter & Energy: 1. How features of living things are related to their ability to satisfy basic needs for growth and survival (acquiring water).</p> <p>Grade 2 6.0 Environmental Science: A. Natural Resources and Human Needs: 1. Natural resources are used to meet human needs (water).</p>	None

HOUSE OF SEASONS – GRADES K-3; PAGE 155

BY CONSTRUCTING A “HOUSE OF SEASONS” COLLAGE, STUDENTS OBSERVE THE ROLE OF WATER IN EACH OF THE SEASONS. NOTE: THIS ACTIVITY INVOLVES ART.

Reading/English/Language Arts	Social Studies	Science	Mathematics
<p>4.0 Writing: 2. Compose oral, written, and visual presentations; a & f (drawing; journals; letters; logs).</p>	None	<p>1.0 Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning; C. Communicate Scientific Information.</p> <p>2.0 Earth & Space: E. Interactions of Hydrosphere and Atmosphere:</p> <p>Kindergarten - 2. Changes in weather.</p> <p>Grade 1 - Describe observable changes in water on the surface of the Earth (states of water); 2. Some events in nature have repeating patterns (e.g., weather).</p>	None

STUDENTS ANALYZE THE RESULTS OF A SIMULATION TO UNDERSTAND THAT WATER IS A SHARED RESOURCE AND IS MANAGED.

Reading/English/Language Arts	Social Studies	Science	Mathematics
<p>None</p>	<p>Kindergarten 3.0 Geography: B. Characteristics of Places & Regions: 1. c. (how humans have changed the land); D. Modifying & Adapting the Environment. b. (ways people change the environment to meet their needs); 4.0 Economics A. Scarcity & Economic Decision-Making: 2. c. We use natural resources to make products.</p> <p>Grade 1 2.0 People of the Nation & World: A. Elements of Culture. 1. a. How people meet their needs. 3.0 Geography: B. Geographic Characteristics of Places & Regions: 1. c. (describe places by how people make a living & where they live); D. Modifying & Adapting the Environment. a-c (meeting human needs; protect & conserve environment).</p> <p>Grade 2 1.0 Political Science C. Protecting Rights & Maintaining Order: 1 a-b (making choices & ID community concerns; Grade 2 3.0 Geography: D. Modifying & Adapting the Environment. 1 a-c (impact of modifying environment; protecting environment; responding to environmental emergencies).</p> <p>All grades 6.0 Social Studies Skills & Processes A Develop & apply social studies vocabulary: economic resources; environment; natural resources; natural/physical features & characteristics; population distribution; production; scarcity; settlement patterns; Smart Growth; (sustainable development).</p>	<p>1.0 Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning; C. Communicate Scientific Information; D. Technology.</p> <p>Grade 2 6.0 Environmental Science: A. Natural Resources and Human Needs: 1. Natural resources are used to meet human needs; conservation.</p> <p>Grades K-2 B. Environmental Issues: 1. Identify “natural” resources; caring for natural resources is important; people affect the environment.</p>	<p>None</p>

LONG HAUL – GRADES K-12; PAGE 260

STUDENTS WORK IN TEAMS TO COMPETE IN A WATER-HAULING GAME.

Reading/English/Language Arts	Social Studies	Science	Mathematics
<p>None</p>	<p>Grade 1 2.0 People of the Nation & World: A. Elements of Culture. 1. a. How people meet their needs.</p> <p>6.0 Social Studies Skills & Processes: A. Develop & apply social studies vocabulary: e.g., economic resources; environment; natural resources; scarcity; sustainable development.</p>	<p>1.0 Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning; C. Communicate Scientific Information.</p> <p>Grade 2 6.0 Environmental Science: A. Natural Resources and Human Needs: 1. Natural resources are used to meet human needs; conservation.</p> <p>All Grades B. Environmental Issues: 1. Identify “natural” resources; caring for natural resources is important; people affect the environment.</p>	<p>Grade 2 3.0 Knowledge of Measurement: A. Measurement Units: e. ID & compare weights in pounds; B. Measurement Tools: 1. Measure in customary & metric.</p> <p>7.0 Processes of Math A. Problem Solving; B. Reasoning; C. Communication; D. Connections: 1. Relate or apply mathematics within the discipline, to other disciplines, & to life (a-d).</p>

PROJECT WET - Alignment with Maryland Voluntary State Curriculum Grades 3-5ⁱⁱ

AQUA BODIES – GRADES K-6; PAGE 63

STUDENTS TRACE THEIR BODIES AND COLOR PORTIONS TO REPRESENT THE AMOUNT OF WATER THEIR BODIES CONTAIN. HOW DOES THEIR WATER CONTENT COMPARE TO THAT OF A CACTUS, LETTUCE, OR A WHALE?

Reading/English/Language Arts	Social Studies	Science	Mathematics
None	None	<p>1.0 Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning; C. Communicate Scientific Information.</p> <p>Grade 4 3.0 Life Science: E. Flow of Matter and Energy: 1. Food is the source all living things need to grow and survive (what animals & plants need to grow).</p> <p>Grade 5 3.0 Life Science: A. Diversity of Life 1. Some plants & animals survive well, some less well, & some not at all (environmental conditions [available water]).</p>	<p>Grade 3 3.0 Knowledge of Measurement: A. Measurement Units: e. estimate & determine weight.</p> <p>6.0 Knowledge of Number Relationships & Computation: C. Number Computation: (add, subtract, multiply, divide).</p> <p>7.0 Processes of Math A. Problem Solving; B. Reasoning; C. Communication; D. Connections: 1. Relate or apply mathematics within the discipline, to other disciplines, & to life (a-d).</p> <p>[potential exists to introduce the following 6 & 7 grade math concept: 6.0 Knowledge of Number Relationships & Computation: C. Number Computation: (percent).]</p>

HOUSE OF SEASONS – GRADES K-3; PAGE 155

BY CONSTRUCTING A “HOUSE OF SEASONS” COLLAGE, STUDENTS OBSERVE THE ROLE OF WATER IN EACH OF THE SEASONS. NOTE: THIS ACTIVITY INVOLVES ART.

Reading/English/Language Arts	Social Studies	Science	Mathematics
<p>4.0 Writing: 2. Compose oral, written, and visual presentations; e. write to learn strategies (journals; logs; drawings).</p>	None	<p>1.0 Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning; C. Communicate Scientific Information.</p>	None

HUMPTY DUMPTY – GRADES 4-8; PAGE 316

STUDENTS RELATE THE CHALLENGES OF DOING ENVIRONMENTAL RESTORATION PROJECTS TO PIECING TOGETHER A SIMPLE PUZZLE.

Reading/English/Language Arts	Social Studies	Science	Mathematics
None	<p>Grade 4 1.0 Political Science A. Foundations & Functions of Government 3. Analyze the role of MD government regarding public issues (a-b Chesapeake Bay; land use); B. Individual & Group Participation (2. b. volunteering).</p> <p>Grade 5 1.0 Political Science. B. Individual & Group Participation (2. b. volunteering); C. Protecting Rights & Maintaining Order 2.b. protection against natural disasters.</p> <p>Grade 4 3.0 Geography: D. Modifying & Adapting to the Environment 1. a-c (consequences; land use/growth of suburbia/pollution; governmental decisions).</p> <p>6.0 Social Studies Skills & Processes A. Develop & apply social studies vocabulary: e.g., AmeriCorps; environment; interest groups; natural hazards; natural resources; natural/physical features & characteristics; places; population distribution; scarcity; Smart Growth; sustainable development; urbanization; urban sprawl.</p>	<p>1.0 Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning; C. Communicate Scientific Information; Technology.</p> <p>Grade 4 3.0 Life Science: F. Ecology 1. Individuals & groups of organisms interact with each other & environment: d. changes in habitat are sometimes beneficial and sometimes harmful.</p> <p>6.0 Environmental Science: B. Environmental Issues: Grade 4 - 1. People depend on, change, & are affected by the environment;</p> <p>Grade 5 - 1. Decisions influencing the use of natural resources may have benefits, drawbacks, unexpected consequences, and tradeoffs (waste or harm; manage risk); 2. Consequences may occur when Earth’s natural resources are used: a. recycling centers, native plantings, and good farming practices may have positive consequences on the natural environment; b. habitat destruction air, water, land and/or noise pollution, may have a negative consequence on the natural environment; c. Identify environmental issues that affects different individuals and groups.</p>	None

IMAGINE! – GRADES 4-8; PAGE 157

STUDENTS TAKE AN IMAGINARY JOURNEY WITH WATER IN ITS SOLID, LIQUID, AND GASEOUS FORMS AS IT TRAVELS AROUND THE WORLD. NOTE: THIS ACTIVITY CAN INCLUDE ART (EXTENSION).

Reading/English/Language Arts
Grade 3 & 4
2.0 A. Comprehension of Informational Text: 5. Identify & explain author’s use of language (similes & metaphors).

Social Studies
None

Science
Grade 3
3.0 Life Science: E. Flow of Matter and Energy: 1. Materials change from one form to another (recycling; natural cycles; decomposition).
Grade 3
4.0 Chemistry: C. States of Matter: 1. How changes in temperature affect the properties of materials (heating & cooling change matter).
Grade 5
2.0 Earth & Space: E. Interactions of Hydrosphere and Atmosphere. 1. (water cycle).

Mathematics
None

LONG HAUL – GRADES K-12; PAGE 260

STUDENTS WORK IN TEAMS TO COMPETE IN A WATER-HAULING GAME.

Reading/English/Language Arts

None

Social Studies

6.0 Social Studies Skills & Processes
A. Learn to read & construct meaning (develop & apply social studies vocabulary, e.g., environment; interest groups; natural resources; scarcity; Smart Growth; sustainable development).
[Potential exists to meet: 3.0 Geography: D. Modifying & Adapting the Environment. 1. (grade 3) a-c (meeting changing needs; decisions about protecting environment; ways people adapt to the environment); **(grade 4) 1. a-c** (consequences; land use/growth of suburbia/pollution; governmental decisions).]

Science

1.0 Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning; C. Communicate Scientific Information.
Grade 5
6.0 Environmental Science: A. Natural Resources and Human Needs: 1. Renewable and nonrenewable natural resources are used by humans to meet basic needs.
[Potential exists to meet: Grade 4
6.0 Environmental Science: B. Environmental Issues: 1. People depend on, change, & are affected by the

Mathematics

Grade 3
3.0 Knowledge of Measurement: A. Measurement Units e. estimate & determine weight.
6.0 Knowledge of Number Relationships & Computation: C. Number Computation: (add, subtract, multiply, divide).
7.0 Processes of Math
A. Problem Solving; B. Reasoning; C. Communication; D. Connections: 1. Relate or apply mathematics within the discipline, to other disciplines, & to life (a-d).

environment (how a community is affected by environmental factors, e.g., water).]

MACROINVERTEBRATE MAYHEM – GRADES 4-8; PAGE 322

STUDENTS PLAY A GAME OF TAG TO SIMULATE THE EFFECTS OF ENVIRONMENTAL STRESSORS ON MACROINVERTEBRATE POPULATIONS.

Reading/English/Language Arts	Social Studies	Science	Mathematics
None	None	<p>Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning; C. Communicate Scientific Information; D. Technology</p> <p>Grade 4 3.0 Life Science: F. Ecology 1. d. Changes in habitat can be beneficial & harmful. [potential exists to meet A. Diversity of Life. 1. Animals & plants can be grouped by observable features.]</p> <p>Grade 5 3.0 Life Science: A. Diversity of Life 1. Some plants & animals survive well, some less well, & some not at all (adaptations & environmental conditions); 6.0 Environmental Science: B. Environmental Issues: 2. Consequences may occur when Earth’s natural resources are used: b. habitat destruction air, water, land noise pollution, may have a negative consequence on the natural environment; c. Identify environmental issues that affect individuals and groups.</p>	None

RAINING CATS AND DOGS – GRADES 4-8; PAGE 435

STUDENTS ANALYZE AND INTERPRET WATER SAYINGS – THROUGH A CARD GAME, SKITS, PANATOMINE, AND CREATIVE WRITING – TO COMPARE FIGURES OF SPEECH ACROSS CULTURES AND CLIMATE ZONES.

Reading/English/Language Arts	Social Studies	Science	Mathematics
<p>Grade 3-4 2.0 A. Comprehension of Informational Text: 5. Identify & explain author’s use of language (similes & metaphors).</p>	<p>[Potential exists to meet Grade 3 3.0 Geography: B. Geographic Characteristics of Places & Regions D. Modifying & Adapting the Environment. 1. a-c (meeting changing</p>	None	None

3.0 Comprehension of literary text: 4:
Use elements of poetry to facilitate understanding.

needs; decisions about protecting environment; ways people adapt to the environment); **Grade 4 3.0 Geography B. Geographic Characteristics of Places & Regions.** a. compare natural/physical features]

SALT MARSH PLAYERS – GRADES 4-5; PAGE 99

STUDENTS ROLE-PLAY HOW ORGANISMS ADAPT TO LIFE IN A SALT MARSH – A COASTAL, MARINE HABITAT THAT IS ALTERNATELY FLOODED AND DRAINED BY TIDES.

Reading/English/Language Arts	Social Studies	Science	Mathematics
None	None	<p>1.0 Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning; D. Technology. Grade 5 3.0 Life Science: A. Diversity of Life 1. Some plants & animals survive well, some less well, & some not at all (adaptations & environ. conditions). Grade 4 3.0 Life Science: D. Evolution 1. Individuals of the same kind differ in their characteristics; some differences give individuals an advantage in surviving and reproducing; F. Ecology 1. Individuals & groups of organisms interact with each other & environment: a. competition for habitat; c. roles within food chains/webs: scavengers/ decomposers, etc.; d. changes in habitat are beneficial and harmful; [potential exists to meet 3.0 Life Science. A. Diversity of Life: 1. Animals & plants can be grouped by observable features (classification).]</p>	None

WATER CROSSINGS – GRADES 4-12; PAGE 421

STUDENTS PARTICIPATE IN A WATER-CROSSING CONTEST IN WHICH THEY MUST MOVE THEIR POSSESSIONS (A HARD-BOILED EGG) ACROSS A SPAN OF WATER (A CAKE PAN).

Reading/English/Language Arts	Social Studies	Science	Mathematics
<p>1.0 General Reading Processes: Vocabulary D. Vocabulary. Develop & apply vocabulary via a variety of texts. Grade 4 4.0 Writing: 2. Compose oral, written,</p>	<p>Grade 4 3.0 Geography: A. Using Geographic Tools; B. Geographic Characteristics of Places & Regions a. compare natural/physical features; b. population distribution.</p>	None	None

and visual presentations; e. write to learn strategies (journals; logs; drawings).

Grade 5

4.0 Writing 2. Compose oral, written, and visual presentations that express personal ideas, inform, and persuade.

Grade 5

2.0 Peoples of the Nation & World A. Elements of Culture 1. Environmental influences (settlement & migration); **B. Cultural Diffusion 2.** Colonial settlement patterns.

SUPER BOWL SURGE – GRADES 4-12; PAGE 353

STUDENTS DO IN-DEPTH RESEARCH AND PRESENT ACTION PLANS TO SOLVE THE PROBLEM OF INCREASED DEMANDS ON A COMMUNITY’S WASTEWATER TREATMENT PLANT.

Reading/English/Language Arts	Social Studies	Science	Mathematics
<p>1.0 General Reading Processes: Vocabulary D. Vocabulary. Develop & apply vocabulary via a variety of texts.</p> <p>Grade 4 4.0 Writing: 2. Compose oral, written, and visual presentations; e. write to learn strategies (journals; logs; drawings). 7. Locate, retrieve, & use info. from various sources.</p> <p>Grade 5 4.0 Writing 2. Compose oral, written, and visual presentations that express personal ideas, inform, and persuade.</p> <p>6.0 Listening: Attend & respond to the speaker; asking questions; summarizing; following a set of directions.</p>	<p>Grade 4 1.0 Political Science A. Foundations & Functions of Government 3. Analyze the role of MD government regarding public issues (a-b Chesapeake Bay; land use).</p> <p>Grade 4 3.0 Geography B. Geographic Characteristics of Places & Regions b. population distribution; D. Modifying & Adapting to the Environment 1. a-c (consequences; land use/growth of suburbia/pollution; governmental decisions).</p>	<p>1.0 Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning; C. Communicate Scientific Information; D. Technology.</p> <p>Grade 4 6.0 Environmental Science: B. Environmental Issues: 1. People depend on, change, & are affected by the environment (soil type; water).</p> <p>Grade 5 6.0 Environmental Science: B. Environmental Issues: 1. Decisions influencing the use of natural resources have benefits, drawbacks, unexpected consequences, tradeoffs; 2. Consequences occur when natural resources are used: b. habitat destruction, air, water, land, noise pollution, may have a negative consequence on the natural environment; c. Id environmental issues that affect different individuals/groups.</p>	<p>None</p>

WATER ADDRESS – GRADES 4-8; PAGE 122

STUDENTS IDENTIFY PLANTS & ANIMALS & THEIR HABITATS BY ANALYZING CLUES THAT DESCRIBE WATER-RELATED ADAPTATIONS OF AQUATIC & TERRESTRIAL ORGANISMS.

Reading/English/Language Arts	Social Studies	Science	Mathematics
<p>4.0 Writing: 2. Compose oral, written, and visual presentations; e. write to learn strategies (journals; logs; drawings) – <i>Activity Extension only.</i></p>	<p>[potential exists to meet Grade 4 - 3.0 Geography: A. Using Geographic Tools.]</p>	<p>1.0 Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning.</p> <p>Grade 4 3.0 Life Science. A. Diversity of Life: 1. Animals & plants can be grouped by</p>	<p>None</p>

observable features (classification); **D. Evolution 1.** Individuals of the same kind differ in their characteristics; differences give individuals an advantage in surviving and reproducing.
Grade 5
3.0 Life Science: A. Diversity of Life
1. Some plants & animals survive well, some less well, & some not at all (adaptations & environ. conditions).

COMMON WATER – GRADES 3-8 (K-2 OPTION); PAGE 232

STUDENTS ANALYZE THE RESULTS OF A SIMULATION TO UNDERSTAND THAT WATER IS A SHARED RESOURCE AND IS MANAGED.

Reading/English/Language Arts	Social Studies	Science	Mathematics
None	<p>Grade 3 1.0 Political Science C. Protecting Rights & Maintaining Order: 1 a (citizen responsibilities, such as neighborhood cleanups [in this case, equitable water allocation/conservation]); 3.0 Geography: B. Geographic Characteristics of Places & Regions 1. a-b (population distribution); D. Modifying & Adapting the Environment. 1. a-c (meeting changing needs; decisions about protecting environment; ways people adapt to the environment). Grade 4 3.0 Geography B. Geographic Characteristics of Places & Regions a. compare natural/physical features; b. population distribution; D. Modifying & Adapting to the Environment 1. a-c (consequences; land use/growth of suburbia/pollution; governmental decisions); 4.0 Economics A. Scarcity & Economic Decision-making 1. Limited resources; 2. limited economic resources used to produce goods; 3. (technology). Grade 5 2.0 Peoples of the Nation & World: A. Elements of Culture 1. Environmental influences (settlement & migration); B. Cultural Diffusion 2. Colonial settlement patterns</p>	<p>1.0 Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning; C. Communicate Scientific Information; D. Technology. Grade 3 3.0 Life Science: E. Flow of Matter and Energy: 1. Materials change from one form to another (recycling; natural cycles). Grade 4 6.0 Environmental Science: B. Environmental Issues: 1. People depend on, change, & are affected by the environment (how a community is affected by environmental factors: soil type; water). Grade 5 6.0 Environmental Science: A. Natural Resources and Human Needs: 1. Renewable and nonrenewable natural resources are used by humans to meet basic needs; 6.0 Environmental Science: B. Environmental Issues: 1. Decisions influencing the use of natural resources may have benefits, drawbacks, unexpected consequences, and tradeoffs (waste or harm; manage risk); 2. Consequences may occur when Earth’s natural resources are used. [potential exists to meet Grade 5 2.0 Earth & Space: E. Interactions of Hydrosphere and Atmosphere. 1.</p>	None

All Grades 6.0 Social Studies Skills & Processes: A. Develop & apply social studies vocabulary: economic resources; environment; interest groups; natural resources; natural/physical features & characteristics; places; population distribution; production; scarcity; settlement patterns; Smart Growth; sustainable development)

(water cycle)].

MONEY DOWN THE DRAIN – GRADES 3-8; PAGE 328

THROUGH OBSERVATION AND SIMPLE CALCULATIONS, STUDENTS LEARN THAT A DRIPPING FAUCET WASTES A VALUABLE RESOURCE.

Reading/English/Language Arts	Social Studies	Science	Mathematics
None	<p>Grade 3 1.0 Political Science C. Protecting Rights & Maintaining Order: 1 a (citizen responsibilities, such as neighborhood cleanups [in this case, water conservation]).</p> <p>Grade 4 4.0 Economics A. Scarcity & Economic Decision-making 1. Limited resources.</p>	<p>1.0 Skills & Processes: A. Constructing Knowledge; B. Applying Evidence and Reasoning; C. Communicate Scientific Information; D. Technology.</p> <p>Grade 5 6.0 Environmental Science: A. Natural Resources and Human Needs: 1. Renewable and nonrenewable natural resources are used by humans to meet basic needs.</p> <p>Grade 4 6.0 Environmental Science: B. Environmental Issues: 1. People depend on, change, & are affected by the environment (how a community is affected by environmental factors: water).</p> <p>Grade 5 6.0 Environmental Science: B. Environmental Issues: 1. Decisions influencing the use of natural resources may have benefits, drawbacks, unexpected consequences, and tradeoffs; 2. Consequences may occur when Earth’s natural resources are used.</p>	<p>Grades 4-5 4.0 Knowledge of Statistics: B. Data Analysis. 1. Interpret data according to how it was displayed; 2. Describe a set of data: a. mean, median, mode, range. 6.0 Knowledge of Number Relationships & Computation: C. Number Computation: (add, subtract, multiply, divide). 7.0 Processes of Math A. Problem Solving; B. Reasoning; C. Communication; D. Connections: 1. Relate or apply math to other disciplines & to life (a-d).</p>