WOW! (Wonders of Wetlands) – Environmental Literacy Correlations

A Drop in the Bucket (Grades 6-8)

- Grades K-2 Option
  - 1.A.1 – Explain that some natural resources are limited and need to be used wisely.
  - 5.A.1; 5.A.2; 6.B.1; 7.A.1; 7.B.1; 7.E.1; 8.D.1; 8.E.1 – Recognize that caring for the environment is an important human activity.
- Grades 6-8
  - 1.A.1 – Identify and describe problems associated with obtaining, using, and distributing natural resources.
  - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.

Do You Dig Wetland Soil? (Grades K-12)

- Grades PK-2
  - 1.A.1; 1.A.2 - Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
  - 1.A.3 – Describe things as accurately as possible and compare observations with those of others.
  - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations.
- Grades 3-5
  - 1.A.1; 1.A.2; 1.A.4 – Gather and question data from many different forms of scientific investigations which includes…observing what things are like.
  - 1.A.5 – Develop explanations using knowledge possessed and evidence from observations.
- Grades 6-8
  - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.

Get Involved! (Grades K-12)

- Grades K-2
  - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations
  - 1.A.1; 1.B.2; 1.B.3; 5.A.1; 5.A.2; 7.A.1 – Recognize and describe that the activities of individuals or groups of individuals can affect the environment.
  - 5.A.1; 5.A.2; 6.B.1; 7.A.1; 7.B.1; 7.E.1; 8.D.1; 8.E.1 – Recognize that caring for the environment is an important human activity.
  - 1.B.1; 1.B.2 – Plan and engage in school or community events.
  - 7.A.1; 7.B.1 – Identify concerns in the community, such as pollution problems and ways to resolve these concerns.
- Grades 3-5
  - 1.B.1- Explain how human activities may have positive consequences on the natural environment.
  - 1..B.1; 1.B.2 – Engage in civic participation and public discourse.
  - 1.B.3 – Analyze the effectiveness of the action plan in terms of achieving the desired outcomes.
  - 7.B.1 – Analyze ways people can participate in the political process including voting, petitioning elected officials, and volunteering.
- Grades 6-8
  - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.
  - 1.B.1 – Engage in civic participation and public discourse.
  - 7.B.1 – Evaluate ways people can participate in the political process including voting, analyzing the media, petitioning elected officials, and volunteering.

Hear Ye! Hear Ye! (Grades 3-12)

- Grades 3-5
  - 1.A.3 – Identify and describe that an environmental issue affects individual people and groups of people differently.
  - 5.A.1; 5.B.1; 7.A.1; 7.B.1 – Explain why and how people adapt to and modify the natural environment and the impact of these modifications.
  - 6.B.1 – Describe how people in a community modify their environment to meet changing needs for…shelter.
  - 6.C.1 – Explain how the growth of communities and suburbs have had consequences on the environment and pollution.
  - 7.B.1 – Explain the decision making process used to accomplish a community goal or solve a community problem.
  - 7.B.1 – Analyze ways people can participate in the political process including… petitioning elected officials.
  - 8.A.1 – Describe how land use and urban growth are influenced by governmental decisions.
- Grades 6-8
  - 1.A.1; 5.A.1; 5.B.1; 6.C.1; 7.A.1; 7.B.1 – Analyze why and how people modify their natural environment and the impact of those modifications.
  - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.
  - 6.B.1 – Describe ways people modify their environment to meet their needs, such as cultivating land, building roads, etc.
  - 7.B.1 – Evaluate ways people can participate in the political process including…petitioning elected officials.
  - 7.D.1 – Evaluate ways citizens use, monitor, and influence the formation and implementation of public policy.
  - 7.D.1 – Explain how regional population patterns, trends, and projections affect the environment and influence government policies.
  - 8.A.1 – Identify and explain land use issues that illustrate the conflict between economic growth and using the environment.
- Grades 9-12
  - 1.A.1; 1.B.2; 1.B.3; 7.A.1; 7.B.1 – The student will recognize that real problems have more than one solution and decisions to accept one solution over another are made on the basis of many issues.
  - 1.A.1; 6.B.1; 7.B.1; 7.E.1 – Evaluate how the principles of economic costs, benefits, and opportunity cost are used to address public policy issues, such as environmental concerns.
  - 1.A.1; 4.C.1; 7.B.1; 8.C.1 – The student will evaluate the role of government in addressing land use and other environmental issues.

Helping Wetland Habitats (Grades K-12)

- Grades K-2
  - 1.A.3 – Identify a problem or situation that requires study.
  - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations.
  - 1.B.1; 1.B.2 – Plan and engage in school or community events.
  - 1.B.3 – Recognize and describe that the acts of individuals or groups of individuals can affect the environment.
- Grades 3-5
  - 1.A.2 – Identify a problem/situation that requires further study.
  - 1.B.1- Explain how human activities may have positive consequences on the natural environment.
  - 1.B.3 – Analyze the effectiveness of the action plan in terms of achieving the desired outcomes.
- Grades 6-8
  - 1.A.1 – Identify and describe a local…environmental issue.

    - 1.A.3 – Identify a problem/situation that requires further study.
    - 1.B.1 – Use recommendations to develop and implement an action plan.
    - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.
    - 1.B.3 – Analyze the effectiveness of the action plan in terms of achieving the desired outcomes.
- Grades 9-12
    - 1.B.1 – Use recommendations to develop and implement an action plan.
    - 1.B.3 – Analyze the effectiveness of the action plan in terms of achieving the desired outcomes.

How Thirsty Is the Ground? (Grades 3-12)

- Grades 3-5
    - 1.A.1; 1.A.2; 1.A.4 – Gather and question data from many different forms of scientific investigations which includes…observing what things are like and doing experiments.
    - 1.A.5 – Develop explanations using knowledge possessed and evidence from observations.
    - 2.B.2; 4.D.1 – Examine and modify models and discuss their limitations.
- Grades 6-8
    - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.
    - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.
- Grades 9-12
    - 1.A.5 – The student will analyze data to make predictions, decisions, or draw conclusions.
    - 2.B.2 – The student will use models…to extend his/her understanding of scientific concepts.

Hydropoly (Grades 4-12)

- Grades 3-5
    - 1.A.1; 1.B.3; 5.A.2; 7.A.1; 8.B.1; 8.C.1; 8.D.1; 8.E.1 – Recognize and describe that people…depend on, change, and are affected by the environment.
    - 1.A.1 – Describe the responsibilities of being an effective citizen, such as cleaning up your neighborhood, being informed, obeying rules and laws, etc.
    - 1.A.3 – Identify and describe that an environmental issue affects individual people and groups of people differently.
- Grades 6-8
    - 1.A.1 – Identify and describe a local, regional, or global environmental issue.
    - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.
    - 1.B.1; 1.B.2 – Propose and justify solutions to social studies problems.
    - 8.A.1 – Understand and apply the basic concept of sustainability to natural and human communities.
- Grades 9-12
    - 1.A.1; 1.B.2; 1.B.3; 7.A.1; 7.B.1 – The student will recognize that real problems have more than one solution and decisions to accept one solution over another are made on the basis of many issues.

Introducing Wetlands (Grades K-12)

- Grades PK-2
    - 1.A.1; 1.A.2 - Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
    - 1.A.3 – Describe things as accurately as possible and compare observations with those of others.
    - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations.

    - 1.A.5 – Have opportunities to work with a team, share findings with others…
    - 3.C.1 – Investigate a variety of familiar places where plants and animals live to describe the place and the living things found there.
- Grades 3-5
    - 1.A.1; 1.A.2; 1.A.4 – Gather and question data from many different forms of scientific investigations which includes…observing what things are like.
    - 1.A.1; 3.C.1 – Explain ways that individuals and groups of organisms interact with each other and their environment.

Let the Cattail Out of the Bag! (Grades K-6)

- Grades PK-2
    - 1.A.1; 1.A.2 - Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
    - 1.A.3 – Describe things as accurately as possible and compare observations with those of others.
    - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations.
    - 1.A.5 – Have opportunities to work with a team, share findings with others…
    - 3.C.1 – Investigate a variety of familiar places where plants and animals live to describe the place and the living things found there.
- Grades 3-5
    - 1.A.1; 3.C.1 – Explain ways that individuals and groups of organisms interact with each other and their environment.
- Grades 6-8
    - 2.B.2; 4.D.1 – Analyze the value and the limitations of different types of models in explaining real things…

Life in the Fast Lane (Grades 3-8)

- Grades 3-5
    - 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which include…observing what things are like and doing experiments.
    - 1.A.1; 3.C.1; 4.B.1; 4.C.1; 4.D.2 – Explain ways that individuals and groups of individuals interact with each other and their environment.
    - 4.B.1; 4.E.1 – Explain the idea that in any particular environment, some kinds of plants and animals survive well, some less well, and some cannot survive at all.
- Grades 6-8
    - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.
    - 3.C.1; 4.B.1; 4.C.1; 4.D.1 – Give reasons supporting the fact that the number of organisms an environment can support depends on the physical conditions…
    - 4.A.1 – Explain that the transfer and transformation of matter and energy links organisms to one another and to their physical setting.
    - 4.E.1 – Explain that in any particular environment, the growth and survival of organisms and species depend on the physical conditions.

Marsh Market (Grades 2-8)

- Grades PK-2
    - 1.A.1; 5.B.1; 7.D.1; 8.A.1; 8.B.1; 8.C.1; 8.D.1 – Recognize and explain how Earth's natural resources from the natural environment are used to meet human needs.
    - 1.A.1; 1.B.3; 5.A.1; 5.A.2; 7.A.1; 7.B.1; 7.D.1; 7.E.1; 8.A.1; 8.B.1; 8.C.1; 8.D.1 – Recognize and describe that the activities of individuals or groups of individuals can affect the environment.
    - 5.B.1 – Recognize that natural resources, such as water, trees, and plants are used to make products.

- Grades 3-5
  - 1.A.1; 5.A.2; 6.B.1; 7.D.1; 8.B.1; 8.C.1; 8.D.1; 8.E.1 – Recognize and explain that decisions influencing the use of natural resources may have benefits, drawbacks, unexpected consequences, and tradeoffs
  - 1.A.1; 7.D.1; 8.A.1; 8.B.1; 8.C.1 - Recognize and explain how renewable and nonrenewable natural resources are used by humans to meet basic needs.
  - 3.A.1; 4.A.1 – Recognize food as the source of materials that all living things need to grow and survive.
  - 1.B.2; 1.B.3; 5.A.1; 6.B.1; 7.E.1 – Recognize and describe that consequences may occur when Earth's natural resources are used.
- Grades 6-8
  - 1.A.1 – Identify and describe problems associated with obtaining, using, and distributing natural resources.
  - 1.B.2; 1.B.3; 5.A.1; 5.A.2; 6.B.1 – Recognize and explain that human-caused changes have consequences for Maryland's environment as well as for other places and future times.

Marsh Munchies (Grades 5-8)
- Grades 3-5
  - 1.A.1; 3.C.1; 4.B.1; 4.C.1; 4.D.2 – Explain ways that individuals and groups of individuals interact with each other and their environment.
  - 1.A.1; 5.A.2; 6.B.1; 7.D.1; 8.B.1; 8.C.1; 8.D.1; 8.E.1 – Recognize and explain that decisions influencing the use of natural resources may have benefits, drawbacks, unexpected consequences, and tradeoffs.
  - 3.A.1; 4.A.1 – Recognize food as the source of materials that all living things need to grow and survive.
- Grades 6-8
  - 1.A.1 – Identify and describe problems associated with obtaining, using, and distributing natural resources.
  - 3.A.1 – Explain that the transfer and transformation of matter and energy links organisms to one another and to their physical setting.

Marsh Mystery (Grades 5-12)
- Grades 3-5
  - 1.A.1 – 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which includes reviewing appropriate print resources.
  - 1.A.1; 3.C.1 – Explain ways that individuals and groups of organisms interact with each other and their environment.
  - 1.A.1 – Recognize and explain how renewable and nonrenewable natural resources are used by humans… to meet basic needs.
  - 1.A.1; 5.A.2; 6.B.1; 7.D.1; 8.B.1; 8.C.1; 8.D.1; 8.E.1 – Recognize and explain that decisions influencing the use of natural resources may have benefits, drawbacks, unexpected consequences, and tradeoffs.
  - 1.A.1; 1.A.3; 1.B.2; 1.B.3; 5.A.1; 6.B.1; 7.E.1 – Recognize and describe that consequences may occur when Earth's natural resources are used.
  - 1.A.3 – Identify and describe that an environmental issue affects individual people and groups of people differently.
  - 1.A.5 – Develop explanations using knowledge possessed and evidence from…reliable print resources.
  - 3.A.1; 4.A.1 – Recognize that materials continue to exist even though they change from one form to another.
  - 3.A.1; 4.A.1 – Recognize food as the source of materials that all living things need to grow and survive.

- Grades 6-8
  - 1.A.1 – Identify and describe problems associated with obtaining, using, and distributing natural resources.
  - 1.A.1 – Identify and describe a…regional environmental issue.
  - 1.A.1; 5.A.1; 5.B.1; 6.C.1; 7.A.1; 7.B.1 – Analyze why and how people modify their natural environment and the impact of those modifications.
  - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.
  - 3.A.1; 4.A.1 – Explain that the transfer and transformation of matter and energy links organisms to one another and to their physical environment.
- Grades 9-12
  - 1.A.1; 1.B.2; 1.B.3; 7.A.1; 7.B.1 – The student will recognize that real problems have more than one solution and decisions to accept one solution over another are made on the basis of many issues.
  - 1.A.1; 6.B.1; 7.B.1; 7.E.1 – Evaluate how the principles of economic costs, benefits, and opportunity cost are used to address public policy issues, such as… environmental concerns.
  - 3.A.1; 3.C.1; 4.A.1 – Demonstrate that matter cycles through and between living systems and the physical environment…
  - 3.C.1; 4.B.1; 5.A.1; 6.A.1; 7.A.1 – The student will investigate how natural and man-made changes in environmental conditions will affect individual organisms…

Nature's Filter (Grades K-3 as demonstration; Grades 4-12)
- Grades PK-2
  - 1.A.1; 1.A.2 - Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
  - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations.
  - 1.B.2; 5.A.1; 5.A.2 – Recognize and describe that the activities of individuals or groups of individuals can affect the environment.
  - 2.B.2; 4.D.2 – Examine a variety of physical models and describe what they teach about the real tings they are meant to resemble.
- Grades 3-5
  - 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which include…observing what things are like and doing experiments.
  - 2.B.2; 4.D.1 – Examine and modify models and discuss their limitations.
  - 2.A.1 – Describe ways that the following process contributes to changes always occurring to the Earth's surface – erosion
  - 7.A.1; 7.B.1 – Explain why and how people adapt to and modify the natural environment and the impact of these modifications.
- Grades 6-8
  - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.
  - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.
- Grades 9-12
  - 5.A.2; 5.B.1; 6.B.1; 7.A.1; 7.F.1; 8.A.1; 8.D.1 – The student will evaluate the interrelationship between humans and water quality and quantity.
  - 2.B.2 – The student will use models…to extend his/her understanding of scientific concepts.

Nature's Recyclers (Grades K-6)
- Grades PK-2
  - 1.A.1; 1.A.2 - Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
  - 1.A.3 – Describe things as accurately as possible and compare observations with those of others.

        - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations.
        - 1.A.4 – Use tools such as thermometers, magnifiers, rulers, or balances to extend their senses and gather data.
        - 2.A.1 – Use examples of observations from places around the school and neighborhood to describe ways Earth's materials can change.
        - 2.B.1 – Provide evidence from investigations to identify processes that can be used to change physical properties of materials.
        - 3.A.1; 4.A.1 - Develop an awareness of the relationship of features of living things and their ability to satisfy basic needs that support their growth and survival.
        - 3.C.1 – Investigate a variety of familiar places where plants and animals live to describe the place and the living things found there.
    - Grades 3-5
        - 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which includes…observing what things are like.
        - 1.A.1; 3.A.1; 4.A.1 – Recognize that materials continue to exist even though they change from one form to another.
        - 1.A.1; 3.C.1; 4.B.1; 4.C.1; 4.D.2 – Explain ways that individuals and groups of individuals interact with each other and their environment.
        - 3.A.1; 4.A.1 – Recognize that some source of energy is needed for all organisms to grow and survive.
    - Grades 6-8
        - 4.A.1 – Explain that the transfer and transformation of matter and energy links organisms to one another and to their physical setting.

Nutrients: Nutrition or Nuisance?

Part 1: Musical Nutrients (Grades 1-4)

- Grades PK-2
    - 3.A.1; 4.A.1 – Develop an awareness of the relationship of features of living things and their ability to satisfy basic needs that support their growth and survival.
    - 3.A.1; 4.A.1; 4.C.1 – Describe some of the ways animals depend on plants and on each other.
    - 2.B.2; 4.D.2 – Examine a variety of physical models and describe what they teach about the real tings they are meant to resemble.
- Grades 3-5
    - 1.A.1; 3.C.1; 4.B.1; 4.C.1; 4.D.1 – Explain ways that individuals and groups of organisms interact with each other and their environment.
    - 2.B.2; 4.D.1 – Examine and modify models and discuss their limitations.

Part 2: Wetlands – the Nutrient Trap (Grades 2-8)

- Grades PK-2
    - 2.B.2 – Examine a variety of physical models and describe what they teach about the real tings they are meant to resemble.
- Grades 3-5
    - 1.A.1; 3.C.1; 4.B.1; 4.C.1; 4.D.1 – Explain ways that individuals and groups of organisms interact with each other and their environment.
    - 2.B.2; 4.D.1 – Examine and modify models and discuss their limitations.
- Grades 6-8
    - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.

Over Hill and Dale (Grades 3-12; K-2 Option)

K-2 Option

- Grades PK-2
    - 1.A.1; 1.A.2 - Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
    - 1.A.4; 1.A.5 – Seek information through…exploration, and investigations.

Part 1: Watershed Model

- Grades 3-5
  - 1.A.1; 1.B.3; 5.A.2; 7.A.1; 8.B.1; 8.C.1; 8.D.1; 8.E.1 – Recognize and describe that people in Maryland depend on, change, and are affected by the environment.
  - 2.B.2; 4.D.1 – Examine and modify models and discuss their limitations.
  - 4.C.1; 5.A.1; 5.A.2; 7.A.1; 7.B.1 – Describe how people adapt to, modify, and impact the natural environment.
- Grades 6-8
  - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.
  - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.
  - 8.A.1 – Identify and explain land use issues that illustrate the conflict between economic growth and using the environment.
- Grades 9-12
  - 5.A.2; 5.B.1; 6.B.1; 7.A.1; 7.F.1; 8.A.1; 8.D.1 – The student will evaluate the interrelationship between humans and water quality and quantity.

Part 2: Topographic Map

- Grades 3-5
  - 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which include…observing what things are like.
  - 1.A.1; 1.B.3; 5.A.2; 7.A.1; 8.B.1; 8.C.1; 8.D.1; 8.E.1 – Recognize and describe that people in Maryland depend on, change, and are affected by the environment.
  - 1.A.3 – Identify a problem/situation that requires further study. (Wrap Up)
  - 2.A.1 – Describe ways that the following processes contribute to changes always occurring on the Earth's surface: weathering, erosion, deposition.
  - 4.C.1; 5.A.1; 5.A.2; 7.A.1; 7.B.1 – Describe how people adapt to, modify, and impact the natural environment.
  - 6.A.1 – Recognize and explain how physical weathering and erosion cause changes to the Earth's surface.
- Grades 6-8
  - 1.A.1 – Identify and describe a local…environmental issue.
  - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.
  - 1.B.2; 1.B.3; 5.A.1; 5.A.2; 5.B.1; 6.B.1; 8.A.18.B.1 – Recognize and explain that human-caused changes have consequences for Maryland's environment as well as for other places and future times.
  - 8.A.1 – Identify and explain land use issues that illustrate the conflict between economic growth and using the environment.
- Grades 9-12
  - 1.A.1; 1.A.2 – Identify an environmental issue and formulate related research questions.
  - 1.A.3 – Analyze geographic issues and problems using geographic concepts.
  - 1.B.1; 1.B.3 – The student will apply the skills, processes, and concepts of…earth science to societal issues.
    - 1.B.1 – Apply the conclusions to develop and implement an action plan.
    - 1.B.3 – Analyze the effectiveness of the action project in terms of achieving the desired outcomes.
  - 5.A.2; 5.B.1; 6.B.1; 7.A.1; 7.F.1; 8.A.1; 8.D.1 – The student will evaluate the interrelationship between humans and water quality and quantity.

People of the Bog (Grades 6-12)

- Grades 6-8
  - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.
  - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.
  - 4.E.1 – Explain that in any particular environment, the growth and survival of organisms and species depend on the physical conditions.

- Grades 9-12
    - 1.A.2 – The student will identify meaningful, answerable scientific questions.
    - 1.A.4 – The student will identify the appropriate methods for conducting an investigation (independent and dependent variables, proper controls, etc.)
    - 2.B.2 – The student will use models…to extend his/her understanding of scientific concepts.
    - 3.A.1; 3.C.1; 4.A.1 – Demonstrate that matter cycles through and between living systems and the physical environment, constantly being recombined in different ways.\

Recipe for Trouble (Grades 4-12)

- Grades 3-5
    - 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which include…observing what things are like and doing experiments.
    - 2.B.2; 4.D.1 – Examine and modify models and discuss their limitations.
    - 4.E.1 – Explain the idea that in any particular environment, some kinds of plants and animals survive well, some less well, and some cannot survive at all.
    - 7.A.1; 7.B.1 – Explain why and how people adapt to and modify the natural environment and the impact of these modifications.
- Grades 6-8
    - 1.A.1; 5.A.1; 5.B.1; 6.C.1; 7.A.1; 7.B.1 – Analyze why and how people modify their natural environment and the impact of those modifications.
    - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.
    - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.
    - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.
    - 4.E.1 – Explain that in any particular environment, the growth and survival of organisms and species depend on the physical conditions.
- Grades 9-12
    - 1.A.4 – The student will identify the appropriate methods for conducting an investigation (independent and dependent variables, proper controls, etc.)
    - 2.B.2 – The student will use models…to extend his/her understanding of scientific concepts.
    - 3.C.1; 4.B.1; 5.A.1; 6.A.1; 7.A.1 – The student will investigate how natural and man-made changes in environmental conditions will affect individual organisms…
    - 5.A.2; 5.B.1; 6.B.1; 7.A.1; 7.F.1; 8.A.1; 8.D.1 – The student will evaluate the interrelationship between humans and water quality and quantity.

Regulation Rummy (Grades 9-12)

- Grades 9-12
    - 1.A.1; 5.A.1; 5.A.2; 5.B.1; 6.B.1; 7.B.1; 8.C.1 – The student will evaluate the role of government in addressing land use and other environmental issues.
    - 7.B.1; 7.D.1 – The student will examine regulatory agencies and their social, economic, and political impact on the country, a region, or within a state.
    - 7.C.1; 8.A.1; 8.B.1; 8.E.1 – Evaluate the way national, state, and local governments develop policy to address land use and environmental issues.
    - 7.D.1 – Examine the impact of government decisions on individuals and groups, such as…environmental standards set by the Environmental Protection Agency (EPA), regulations set by the MD Department of the Environment.
    - 7.F.1 – Describe the purpose, roles, and responsibilities of regulatory agencies: Environmental Protection Agency (EPA).

A Rottin' Experiment (Grades 2-12)

Part 1: Model Composter

- Grades K-2
  - 1.A.1; 1.A.2 - Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
  - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations.
  - 1.A.5 – Develop reasonable explanations for observations made, investigations completed, and information gained…
  - 2.B.1 – Provide evidence from investigations to identify processes that can be used to change the physical properties of materials.
  - 2.B.2 – Examine a variety of physical models and describe what they teach about the real things they are meant to resemble.
  - 3.A.1 – Provide evidence from investigations that things can be done to materials to change some of their properties.
- Grades 3-5
  - 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which include…observing what things are like and doing experiments.
  - 1.A.1; 3.A.1; 4.A.1 – Recognize that materials continue to exist even though they change from one form to another.
  - 1.A.5 – Develop explanations using knowledge possessed and evidence from observations and…investigations.
  - 2.B.2; 4.D.1 – Examine and modify models and discuss their limitations.
  - 3.C.1; 4.B.1; 4.C.1; 4.D.1 – Explain ways that individuals and groups of organisms interact with each other and their environment.
- Grades 6-8
  - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.
  - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.
  - 4.E.1 – Explain that in any particular environment, the growth and survival of organisms and species depend on the physical conditions.
- Grades 9-12
  - 1.A.4 – The student will identify the appropriate methods for conducting an investigation (independent and dependent variables, proper controls, etc.)
  - 2.B.2 – The student will use models…to extend his/her understanding of scientific concepts.

Part 2: Plant Experiment

- Grades K-2
  - 1.A.1; 1.A.2 - Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
  - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations.
  - 1.A.5 – Develop reasonable explanations for observations made, investigations completed, and information gained…
- Grades 3-5
  - 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which include…observing what things are like and doing experiments.
  - 1.A.5 – Develop explanations using knowledge possessed and evidence from observations and…investigations.
  - 3.C.1; 4.B.1; 4.C.1; 4.D.1 – Explain ways that individuals and groups of organisms interact with each other and their environment.

Grades 6-8
    - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.
    - 4.E.1 – Explain that in any particular environment, the growth and survival of organisms and species depend on the physical conditions.
- Grades 9-12
    - 1.A.4 – The student will identify the appropriate methods for conducting an investigation (independent and dependent variables, proper controls, etc.)

Run for the Border (Grades 5-12)
- Grades 3-5
    - 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which includes…observing what things are like.
    - 1.A.1; 1.B.3; 5.A.2; 7.A.1; 8.B.1; 8.C.1; 8.D.1; 8.E.1 – Recognize and describe that people in Maryland … change… the environment.
    - 4.A.1 – Recognize food as the source of materials that all living things need to grow and survive.
    - 4.C.1; 5.A.1; 5.A.2; 7.A.1; 7.B.1 – Describe how people adapt to, modify, and impact the natural environment.
    - 4.E.1 – Explain the idea that in any particular environment, some kinds of plants and animals survive well, some less well, and some cannot survive at all.
- Grades 6-8
    - 1.A.1; 5.A.1; 5.B.1; 6.C.1; 7.A.1; 7.B.1 – Analyze why and how people modify their natural environment and the impact of those modifications.
    - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.
    - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.
- Grades 9-12
    - 1.A.5 – The student will analyze data to make predictions, decisions, or draw conclusions.
    - 3.C.1; 4.B.1; 5.A.1; 6.A.1; 7.A.1 – The student will investigate how natural and man-made changes in environmental conditions will affect individual organisms…

Run Off Race (Grades 2-12)
- Grades K-2
    - 1.A.1; 1.A.2 - Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
    - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations.
    - 2.B.2; 4.D.2 – Examine a variety of physical models and describe what they teach about the real things they are meant to resemble.
    - 5.A.1 – Recognize and describe that the activities of individuals or groups of individuals can affect the environment.
- Grades 3-5
    - 2.A.1; 2.B.1 – Cite and describe processes that cause rapid or slow changes in Earth's surface.
    - 2.A.1 – Describe ways that the following processes contribute to changes always occurring to the Earth's surface – weathering and erosion
    - 2.B.2; 4.D.1 – Examine and modify models and discuss their limitations.
    - 4.C.1; 5.A.1; 5.A.2; 7.A.1; 7.B.1 – Describe how people adapt to, modify, and impact the natural environment.
- Grades 6-8
    - 1.A.1; 5.A.1; 5.B.1; 6.C.1; 7.A.1; 7.B.1 – Analyze why and how people modify their natural environment and the impact of those modifications.
    - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.

        - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.
    - Grades 9-12
        - 2.B.2 – The student will use models…to extend his/her understanding of scientific concepts.
        - 5.A.2; 5.B.1; 6.B.1; 7.A.1; 7.F.1; 8.A.1; 8.D.1 – The student will evaluate the interrelationship between humans and water quality and quantity.

Salt Marsh Players (Grades 3-6)

- Grades 3-5
    - 1.A.1; 3.C.1; 4.B.1; 4.C.1; 4.D.1; 4.D.2 – Explain ways that individuals and groups of individuals interact with each other and their environment.
    - 4.A.1 – Recognize that some source of energy is needed for all organisms to grow and survive.
    - 4.A.1 – Recognize food as the source of materials that all living things need to grow and survive.
    - 4.B.1; 4.E.1 – Explain the idea that in any particular environment, some kinds of plants and animals survive well, some less well, and some cannot survive at all.
- Grades 6-8
    - 2.A.1; 3.B.2 – Cite evidence to explain the relationship between the hydrosphere and atmosphere.
    - 3.A.1; 4.A.1 – Explain that the transfer of matter and energy links organisms to one another and to their physical environment.
    - 3.C.1; 4.B.1; 4.C.1; 4.D.1; 4.D.2 – Give reasons supporting the fact that the number of organisms an environment can support depends on the physical conditions…
    - 4.E.1 – Explain that in any particular environment, the growth and survival of organisms and species depend on the physical conditions.

Soak It Up! (Grades 3-9)

- Grades 3-5
    - 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which include…observing what things are like and doing experiments.
    - 2.B.2; 4.D.1 – Examine and modify models and discuss their limitations.

- Grades 6-8
    - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.
    - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.
- Grades 9-12
    - 2.B.2 – The student will use models…to extend his/her understanding of scientific concepts.

Treatment Plants (Grades 2-12)

- Grades K-2
    - 1.A.1; 1.A.2 - Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
    - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations.
- Grades 3-5
    - 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which include…observing what things are like and doing experiments.
- Grades 6-8
    - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.

Tracking Plants and Keeping Track (Grades 5-12)

- Grades 3-5
  - 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which includes…observing what things are like.
  - 1.A.1 – Explain ways that individuals and groups of organisms interact with each other and with their environment.
  - 4.B.1; 4.E.1 – Explain the idea that in any particular environment, some kinds of plants and animals survive well, some less well, and some cannot survive at all.
  - 4.E.1 – Explain that in any particular environment, the growth and survival of organisms and species depend on the physical conditions.
- Grades 6-8
  - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained…

Water Purifiers (Grades 6-12)

Part 1: The Mechanical Method

- Grades 6-8
  - 1.A.1 – Identify and describe problems associated with obtaining, using, and distributing natural resources.
  - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.
  - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.
  - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.
  - 5.B.1 – Recognize and explain the impact of a changing human population of the use of natural resources and environmental quality.
  - 7.F.1 – Recognize that design usually requires taking constraints into account.
- Grades 9-12
  - 1.A.5; 1.B.1; 6.B.1; 8.C.1; 8.F.1 – The student will analyze the consequences and/or trade-offs between technological changes and their effect on the individual, society, and the environment.
  - 5.A.2; 5.B.1; 6.B.1; 7.A.1; 7.F.1; 8.A.1; 8.D.1 – The student will evaluate the interrelationship between humans and water quality…

Part 2: Wetlands: Nature's Filter

- Grades 6-8
  - 1.A.1; 5.A.1; 5.B.1; 6.C.1; 7.A.1; 7.B.1 – Analyze why and how people modify their natural environment and the impact of those modifications.
  - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.
  - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.
- Grades 9-12
  - 2.B.2 – The student will use models…to extend his/her understanding of scientific concepts.
  - 5.A.2; 5.B.1; 6.B.1; 7.A.1; 7.F.1; 8.A.1; 8.D.1 – The student will evaluate the interrelationship between humans and water quality...

Water Under Foot (Grades 4-12)

- Grades 3-5
  - 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which include…observing what things are like and doing experiments.
  - 1.A.1; 1.B.3; 5.A.2; 7.A.1; 8.B.1; 8.C.1; 8.D.1; 8.E.1 – Recognize and describe that people in Maryland depend on, change, and are affected by the environment.
  - 2.B.2; 4.D.1 – Examine and modify models and discuss their limitations.
  - 5.A.1; 5.A.2; 5.B.1; 7.A.1 – Describe how people adapt to, modify, and impact the natural environment.

- Grades 6-8
    - 1.A.4 – Design, analyze, or carry out simple investigations and formulate appropriate conclusions based on data obtained or provided.
    - 1.A.1; 5.A.1; 5.B.1; 6.C.1; 7.A.1; 7.B.1 – Analyze why and how people modify their natural environment and the impact of those modifications.
    - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.
    - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.
- Grades 9-12
    - 1.A.1; 1.B.2; 1.B.3; 7.A.1; 7.B.1 – The student will recognize that real problems have more than one solution and decisions to accept one solution over another are made on the basis of many issues.
    - 2.B.2 – The student will use models…to extend his/her understanding of scientific concepts.
    - 5.A.2; 5.B.1; 6.B.1; 7.A.1; 7.F.1; 8.A.1; 8.D.1 – The student will evaluate the interrelationship between humans and water quality and quantity.

Water We Have Here? (Grades 5-12; 2-4 with help)

- Grades 3-5
    - 1.A.1; 1.A.2; 1.A.4 - Gather and question data from many different forms of scientific investigations, which include…observing what things are like and doing experiments.
    - 1.A.1; 1.B.3; 5.A.2; 7.A.1; 8.B.1; 8.C.1; 8.D.1; 8.E.1 – Recognize and describe that people in Maryland depend on, change, and are affected by the environment.
    - 5.A.1; 5.A.2; 5.B.1; 7.A.1 – Describe how people adapt to, modify, and impact the natural environment.
- Grades 6-8
    - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.

Wetland Address (Grades 5-10)

- Grades 3-5
    - 1.A.1; 3.C.1; 4.B.1; 4.C.1; 4.D.2 – Explain ways that individuals and groups of individuals interact with each other and their environment.
    - 4.B.1 – Explain that individuals of the same kind differ in their characteristics, and sometimes the differences give individuals an advantage in surviving and reproducing.
    - 4.B.1; 4.E.1 – Explain the idea that in any particular environment, some kinds of plants and animals survive well, some less well, and some cannot survive at all.
- Grades 6-8
    - 4.E.1 – Explain that in any particular environment, the growth and survival of organisms and species depend on the physical conditions.

Wetland Metaphors (Grades 1-12)

- Grades PK-2
    - 2.B.2 – Examine a variety of physical models and describe what they teach about the real things they are meant to resemble.
- Grades 3-5
    - 2.B.2; 4.D.1 – Examine and modify models and discuss their limitations.
- Grades 6-8
    - 2.B.2; 4.D.1 – Analyze the value and the limitations of different types of models in explaining real things…

Wetland in a Pan (Grades 3-12)

- Grades 3-5
    - 2.B.2; 4.D.1 – Examine and modify models and discuss their limitations.
    - 4.C.1; 5.A.1; 5.A.2; 7.A.1; 7.B.1 – Describe how people adapt to, modify, and impact the natural environment.

- Grades 6-8
    - 1.A.1; 5.A.1; 5.B.1; 6.C.1; 7.A.1; 7.B.1 – Analyze why and how people modify their natural environment and the impact of those modifications.
    - 1.B.1 – Identify and describe that ecosystems can be impacted by human activities.
    - 2.B.2; 4.D.1; 4.D.2 – Analyze the value and the limitations of different types of models in explaining real things and processes.
- Grades 9-12
    - 2.B.2 – The student will use models…to extend his/her understanding of scientific concepts.
    - 5.A.2; 5.B.1; 6.B.1; 7.A.1; 7.F.1; 8.A.1; 8.D.1 – The student will evaluate the interrelationship between humans and water quality and quantity.

Wetland Tradeoffs (Grades 9-12)

- Grades 9-12
    - 1.A.1; 1.B.2; 1.B.3; 7.A.1; 7.B.1 – The student will recognize that real problems have more than one solution and decisions to accept one solution over another are made on the basis of many issues.
    - 1.A.1; 6.B.1; 7.B.1; 7.E.1 – Evaluate how the principles of economic costs, benefits, and opportunity cost are used to address public policy issues, such as environmental concerns.

Wetland Weirdos (Grades 4-12)

- Grades 3-5
    - 1.A.1; 1.A.2; 1.A.4 – Gather and question data from many different forms of scientific investigations which include reviewing appropriate print resources and observing what things are like.
    - 1.A.1; 3.C.1; 4.B.1; 4.C.1; 4.D.1 – Explain ways that individuals and groups of organisms interact with each other and their environment.
    - 4.B.1; 4.E.1 – Explain the idea that in any particular environment, some kinds of plants and animals survive well, some less well, and some cannot survive at all.
- Grades 6-8
    - 3.A.1; 4.A.1 – Explain that the transfer and transformation of matter and energy links organisms to one another and to their physical environment.
- Grades 9-12
    - 3.C.1; 4.A.1 – The student will demonstrate that matter cycles through and between living systems and the physical environment.
    - 4.E.1 – The student will provide examples and evidence showing that natural selection leads to organisms that are well suited for survival in particular environments.

Wetlands in the Classroom – Part 2 (Grades K-8)

- Grades PK-2
    - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations.
- Grades 3-5
    - 1.A.1; 1.A.2; 1.A.4 – Gather and question data from many different forms of scientific investigations which includes…observing what things are like.
    - 1.A.1; 3.C.1; 4.B.1; 4.C.1; 4.D.1 – Explain ways that individuals and groups of organisms interact with each other and their environment.

Wet 'n' Wild (Grades K-12)

- Grades PK-2
    - 1.A.1; 1.A.2 - Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
    - 1.A.3 – Describe things as accurately as possible and compare observations with those of others.
    - 1.A.4 – Use tools such as thermometers, magnifiers, rulers…to extend their senses.

        - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations.
        - 1.A.5 – Have opportunities to work with a team, share findings with others…
        - 3.C.1 – Investigate a variety of familiar places where plants and animals live to describe the place and the living things found there.
    - Grades 3-5
        - 1.A.1; 1.A.2; 1.A.4 – Gather and question data from many different forms of scientific investigations which include…observing what things are like.
        - 1.A.1; 3.C.1; 4.B.1; 4.C.1; 4.D.1 – Explain ways that individuals and groups of organisms interact with each other and their environment.
    - Grades 6-8
        - 4.E.1 – Explain that in any particular environment, the growth and survival of organisms and species depend on the physical conditions.

What a Boat! (Grades 1-5)

- Grades K-2
    - 7.C.1 – Observe and describe ways that people of different cultural backgrounds meet human needs and contribute to the community.
- Grades 3-5
    - 7.C.1 – Describe how environment and location influenced cultures and lifestyle.

Whose Clues? (Grades K-12)

- Grades PK-2
    - 1.A.1; 1.A.2 - Raise questions about the world around them and be willing to seek answers to some of them by making careful observations and trying things out.
    - 1.A.3 – Describe things as accurately as possible and compare observations with those of others.
    - 1.A.4 – Use tools such as thermometers, magnifiers, rulers…to extend their senses.
    - 1.A.4; 1.A.5 – Seek information through reading, observation, exploration, and investigations.
    - 1.A.5 – Have opportunities to work with a team, share findings with others…
    - 3.A.1 – Describe some of the ways animals depend on plants.
    - 3.C.1 – Investigate a variety of familiar places where plants and animals live to describe the place and the living things found there.
- Grades 3-5
    - 1.A.1; 1.A.2; 1.A.4 – Gather and question data from many different forms of scientific investigations which include…observing what things are like.
    - 1.A.1; 3.C.1; 4.B.1; 4.C.1; 4.D.1 – Explain ways that individuals and groups of organisms interact with each other and their environment.
    - 3.A.1; 4.A.1 – Recognize that materials continue to exist even though they change from one form to another.
- Grades 6-8
    - 3.A.1; 4.A.1 – Explain that the transfer of matter and energy links organisms to one another and to their physical environment.