MULTI Summer 2018 Water Pollution & Remediation

6/6/18

JANELLE JOHNSON MAY 23, 2018 01:44PM

What's the problem?

JANELLE JOHNSON MAY 23, 2018 02:04PM

PBL

How do we define clean water? How clean does water have to be to drink? To swim in?
How does the Platte get polluted?

How does pollution in our local storm drains affect our neighborhoods during heavy rain storms? — **LESLIE CORDOVA**

On 4th grade Colorado Academic Standards, there is a standard about the interaction and interdependence between and among living and nonliving components of ecosystems. B How does human made nonliving components (trash) affect the ecosystem of living organisms along the Platte river? — **B**

One PBL assignment would use NASA Landsat to view our lakes 15 years ago and present day view and have students develop a plan on how to reduce water pollution. — **NRAYNOR1**

A PBL for 3rd grade that would meet NGSS standards would be: How does pollution effect life cycles? — **ASHLEY GLENN**

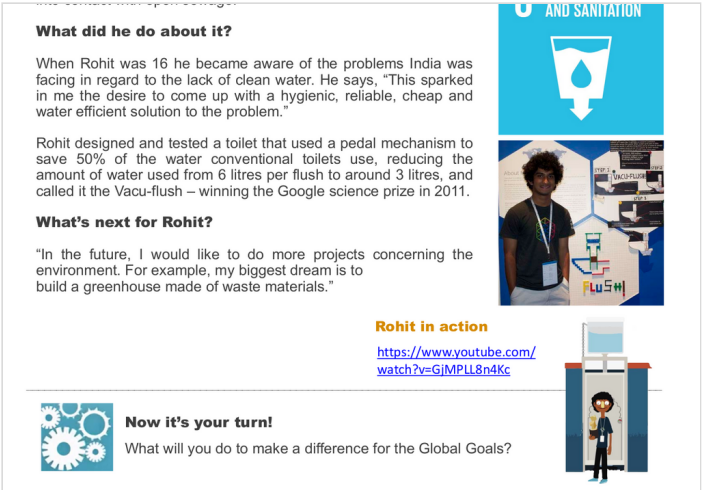
How does the pollution of the Platte affect local habitats? — **KATIE BARKSTROM**

How does weather/natural disasters affect clean water? — **AMANDA RIVERA**

JANELLE JOHNSON JUN 03, 2018 03:40PM

Fresh Water Availability

Taking action in India



Rohit-Changemakers-Take-Action2-2-4.pdf
PDF document
PADLET DRIVE

JANELLE JOHNSON JUN 03, 2018 05:23PM

Possible PBL on Wildlife Habitat loss

Loss of wildlife habitat and repercussions
Ducks unlimited video about loss
https://www.youtube.com/watch?v=bFGMoFIjKRM (2:22, The importance of wetlands as a habitat and an ecosystem. *Who relies on wetlands? What actions can be taken to restore and protect wetlands?*)

BRITTANY LANG JUN 06, 2018 08:22AM

Dying of Thirst

Understanding the effect of the world's availability to potable water has on the human population. Determine if water is a renewable or non-renewable resource.

Examine the causes of **water pollution, the scarcity of water, and the commercialization of this natural resource** and explains the effect(s)**these causes have on the human population**.

KAY BOLERJACK JUN 06, 2018 08:21AM

How might the quality of water be controlled with human actions and preserved for future use ?

KATYA SCHLOESSER JUN 06, 2018 08:17AM

How do wetlands response to more pollution due to increasing human impacts? Is there a breaking point?

TERRI_LIRA1 JUN 06, 2018 08:19AM

Can the purification of water be measured below the wetlands?

DEBORAH SHAWCROFT JUN 06, 2018 08:21AM

I think the Dr. Rust led me to a great PBL! How do forest fires affect river quality?

CATALINA VIZUETH JUN 06, 2018 08:24AM

Since we are having a big problem in my area because of industrial waste pollution, a possible PBL will be: How can industrial waste be turned into a useful resource if is a non hazardous waste? And if it is, how can it be properly disposed off instead of being dumped into rivers that are killing fish and aquatic life in general?

ANONYMOUS JUN 06, 2018 08:25AM

How does the pollution of our local sewer system affect our neighborhoods during heavy rain storms?

B JUN 06, 2018 08:49AM

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B
How does human made nonliving components (trash) affect the ecosystem of living organisms along the Platte river?

JESSIE PAPKE OSTENDORF JUN 06, 2018 02:10PM

PBL ideas

Water pollution, decide how to clean, etc.

ADi (argument driven inquiry) on a question, on a focus. To help push that design towards logical reasoning.

NRAYNOR1 JUN 06, 2018 02:19PM

HS Next Gen./PBL Lesson

Using the Next Gen standards HS-ESS2-5 Students will plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes. I us today activities to have my students conduct research on one of the tribal lakes. Students would draw a map of their site input the latitude and longitude into the GLOBE protocol.
By working with GLOBE I could use cross-teaching (math and art) in the lessons.

VECORRAL JUN 06, 2018 02:20PM

Removing dissolved metals using a wetland

Design a wetland, including specific plants and flow control, to study the ability of the wetland to remove metals by measuring the metal concentration after certain times.

DEBORAH SHAWCROFT JUN 06, 2018 02:22PM

PBL Ideas

I would love to do a huge PBL project on water to incorporate ALL of the things I have learned here! I think the water pollution problem could be associated to any river close to your community to incorporate the "Who polluted the Potomac?" activity. I loved it. Then when you have the nasty water sitting in front of the classroom pose the question... How do you clean it now? This could lead in so many different directions.

ANONYMOUS JUN 06, 2018 02:24PM

What are important factors needed in order for plant and fish species to survive and live well in a body of water? What happensto plants and animal when pollutants are introduced to those bodies of water

VECORRAL JUN 06, 2018 02:58PM

Same grade level collaboration

It would be awesome to have 2 or more schools working on the same PBL project and then have the students interact via zoom or other online platform and share their experiences, questions and troubleshooting.

CASSIE HAYTER JUN 06, 2018 02:13PM

Standards

Grade 3:
Std.1.PS.1: Matter exists in different states such as solids, liquids, and gases and can change from one state to another by heating and cooling

Grade 4:
Std.2.LS.3:There is interaction and interdependence between and among living and nonliving components of systems
Std.3.ESS.1:Earth is part of the solar system, which includes the Sun, Moon, and other bodies that orbit the Sun in predictable patterns that lead to observable paths of objects in the sky as seen from Earth
Connection: "orbits in predictable pattern in space influence seasons- connect seasons with discussion of weather changes/patterns

Grade 5:
Std.3.ESS.3:Weather conditions change because of the uneven heating of Earth's surface by the Sun's energy. Weather changes are measured by differences in temperature, air pressure, wind and water in the atmosphere and type of precipitation

Grade 6:
Std.1.PS.4.:Distinguish among, explain, and apply the relationships among mass, weight, volume, and density
Std.2.LS.1:Changes in environmental conditions can affect the survival of individual organisms, populations, and entire species

Grade 7:
Std.1.PS.1:Mixtures of substances can be separated based on their properties such as solubility, boiling points, magnetic properties, and densities
-could connect to talking about greenhouse gases
Std.2.LS.4: Photosynthesis and cellular respiration are important processes by which energy is acquired and utilized by organisms

Grade 8:
Std.1.PS.4: Recognize that waves such as electromagnetic, sound, seismic, and water have common characteristics and unique properties
Std.2.LS.1:Human activities can deliberately or inadvertently alter ecosystems and their resiliency
Std.3.ESS.1:Weather is a result of complex interactions of Earth's atmosphere, land and water, that are driven by energy from the sun, and can be predicted and described through complex models
Std.3.ESS.2:Earth has a variety of climates defined by average temperature, precipitation, humidity, air pressure, and wind that have changed over time in a particular location
Std.3.ESS.4: The relative positions and motions of Earth, Moon, and Sun can be used to explain observable effects such as seasons, eclipses, and Moon phases

High School:
Std.1.PS.2.Matter has definite structure that determines characteristic physical and chemical properties
Std.1.PS.5. Energy exists in many forms such as mechanical, chemical, electrical, radiant, thermal, and nuclear, that can be quantified and experimentally determined
Std.2.LS.2: The size and persistence of populations depend on their interactions with each other and on the abiotic factors in an ecosystem
Std.2.LS.9: Evolution occurs as the heritable characteristics of populations change across generations and can lead populations to become better adapted to their environment
Std.3.ESS.4: Climate is the result of energy transfer among interactions of the atmosphere, hydrosphere, geosphere, and biosphere
Std.3.ESS.6:The interaction of Earth's surface with water, air, gravity, and biological activity causes physical and chemical changes
Std.3.ESS.7: Natural hazards have local, national and global impacts such as volcanoes, earthquakes, tsunamis, hurricanes, and thunderstorms

NGSS Performance Expectations:

3-ESS2-1 Earth's Systems

Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
Grade: 3

3-ESS2-2 Earth's Systems

Obtain and combine information to describe climates in different regions of the world.
Grade: 3

3-ESS3-1 Earth and Human Activity

Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.*

Grade 3

4-PS3-2 Energy

Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.
Grade: 4

4-ESS2-2 Earth's Systems

Analyze and interpret data from maps to describe patterns of Earth's features.
Grade 4

5-LS1-1 From Molecules to Organisms: Structures and Processes

Support an argument that plants get the materials they need for growth chiefly from air and water.
Grade: 5

5-ESS1-2 Earth's Place in the Universe

Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.
Performance Expectation
Grade: 5

5-ESS2-1 Earth's Systems

Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.
Grade:5

5-ESS2-2 Earth's Systems

Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.
Grade:5

MS-PS1-4 Matter and its Interactions

Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.
Middle School (6-8)

MS-PS4-2 Waves and their Applications in Technologies for Information Transfer

Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.
Middle School (6-8

MS-ESS2-5 Earth's Systems

Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.
Middle School (6-8)

MS-ESS2-6 Earth's Systems

Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.
Middle School (6-8)

MS-ESS3-2 Earth and Human Activity

Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.
Middle School (6-8)

MS-ESS3-5 Earth and Human Activity

Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.
Middle School (6-8)

HS-LS2-6 Ecosystems: Interactions, Energy, and Dynamics

Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.
High School (9-12)

HS-ESS2-3 Earth's Systems

Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection:
High School (9-12)

HS-ESS2-4 Earth's Systems

Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
High School (9-12)

HS-ESS2-5 Earth's Systems

Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
High School (9-12)

SJOSSELYN1 JUN 06, 2018 08:19AM

How does agriculture affect the water quality of the Rio Grande River?

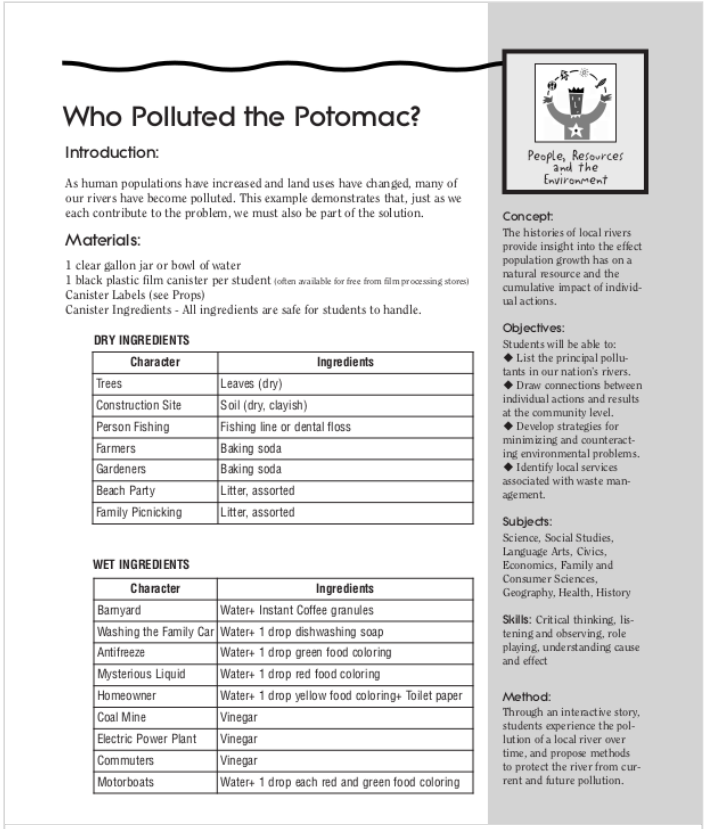
MARIA CROUSE JUN 07, 2018 06:52AM

HS Math PBL ideas

Statistics: Incorporate technology to demonstrate how environmental changes are impacted by population growth. We would utilize Landsat images and Gapminder.org (interactive statistics bank)to demonstrate the changes over time of student-selected regions of the world.
Number sense/Patterns: Math in nature! After introducing Fibonacci numbers to students, we could take a field trip outside to explore our surroundings to find Fibonacci.

Water Chemistry & Pollution

ROSEANN VIK MAY 30, 2018 01:34PM



Who Polluted the Potomac?

Introduction:

As human populations have increased and land uses have changed, many of our rivers have become polluted. This example demonstrates that, just as we each contribute to the problem, we must also be part of the solution.

Materials:

1 clear gallon jar or bowl of water
1 black plastic film canister per student (often available for free from film processing stores)
Canister Labels (see Props)
Canister Ingredients - All ingredients are safe for students to handle.

DRY INGREDIENTS

Character	Ingredients
Trees	Leaves (dry)
Construction Site	Soil (dry, clayish)
Person Fishing	Fishing line or dental floss
Farmers	Baking soda
Gardeners	Baking soda
Beach Party	Litter, assorted
Family Picnicking	Litter, assorted

WET INGREDIENTS

Character	Ingredients
Barnyard	Water+ Instant Coffee granules
Washing the Family Car	Water+ 1 drop dishwashing soap
Antifreeze	Water+ 1 drop green food coloring
Mysterious Liquid	Water+ 1 drop red food coloring
Homeowner	Water+ 1 drop yellow food coloring+ Toilet paper
Coal Mine	Vinegar
Electric Power Plant	Vinegar
Commuters	Vinegar
Motorboats	Water+ 1 drop each red and green food coloring

People, Resources and the Environment

Concept:
The histories of local rivers provide insight into the effect population growth has on a natural resource and the cumulative impact of individual actions.

Objectives:
Students will be able to:
◆ List the principal pollutants in our nation's rivers.
◆ Draw connections between individual actions and results at the community level.
◆ Develop strategies for minimizing and counteracting environmental problems.
◆ Identify local services associated with waste management.

Subjects:
Science, Social Studies, Language Arts, Civics, Economics, Family and Consumer Sciences, Geography, Health, History

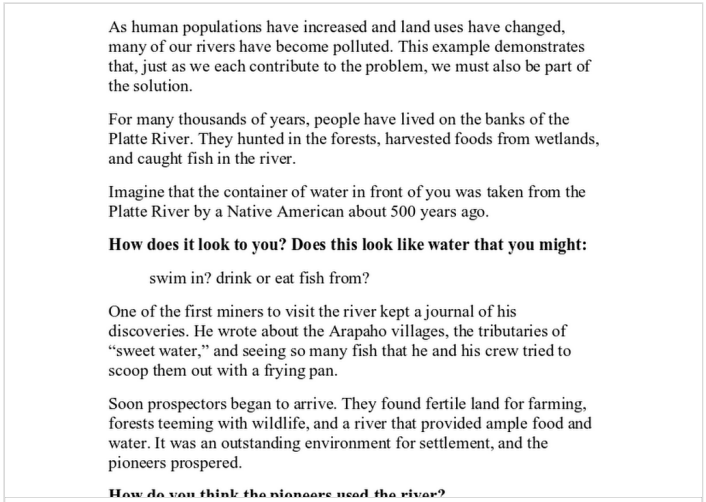
Skills: Critical thinking, listening and observing, role playing, understanding cause and effect

Method:
Through an interactive story, students experience the pollution of a local river over time, and propose methods to protect the river from current and future pollution.

whopollutedthepotomac.pdf
PDF document
PADLET DRIVE

Thank you for sharing!! SO great. — **NIKOLE CALMEYN**

ROSEANN VIK MAY 30, 2018 01:36PM



As human populations have increased and land uses have changed, many of our rivers have become polluted. This example demonstrates that, just as we each contribute to the problem, we must also be part of the solution.

For many thousands of years, people have lived on the banks of the Platte River. They hunted in the forests, harvested foods from wetlands, and caught fish in the river.

Imagine that the container of water in front of you was taken from the Platte River by a Native American about 500 years ago.

How does it look to you? Does this look like water that you might:

swim in? drink or eat fish from?

One of the first miners to visit the river kept a journal of his discoveries. He wrote about the Arapaho villages, the tributaries of "sweet water," and seeing so many fish that he and his crew tried to scoop them out with a frying pan.

Soon prospectors began to arrive. They found fertile land for farming, forests teeming with wildlife, and a river that provided ample food and water. It was an outstanding environment for settlement, and the pioneers prospered.

How do you think the pioneers used the river?

Who Polluted the Platte.docx
Word document
PADLET DRIVE

JENNIFER TAYLOR JUN 06, 2018 09:07AM

Where is Earth's Water?

USGS infographic that illustrates how scarce available freshwater is (only 1.2% of all water on our planet)!

The distribution of water on, in, and above the Earth

The Earth is a watery place. But just how much water exists on, in, and above our planet? About 71 percent of the Earth's surface is water-covered, and the hold about 96.5 percent of all Earth's water.

USGS

Another resource: https://archive.cnx.org/contents/c9e55045-eb05-4176-ae02-39e0ce01bf51@5/water-cycle-and-fresh-water-supply#id1167359686198 — **JENNIFER TAYLOR**

JENNIFER TAYLOR JUN 06, 2018 09:06AM

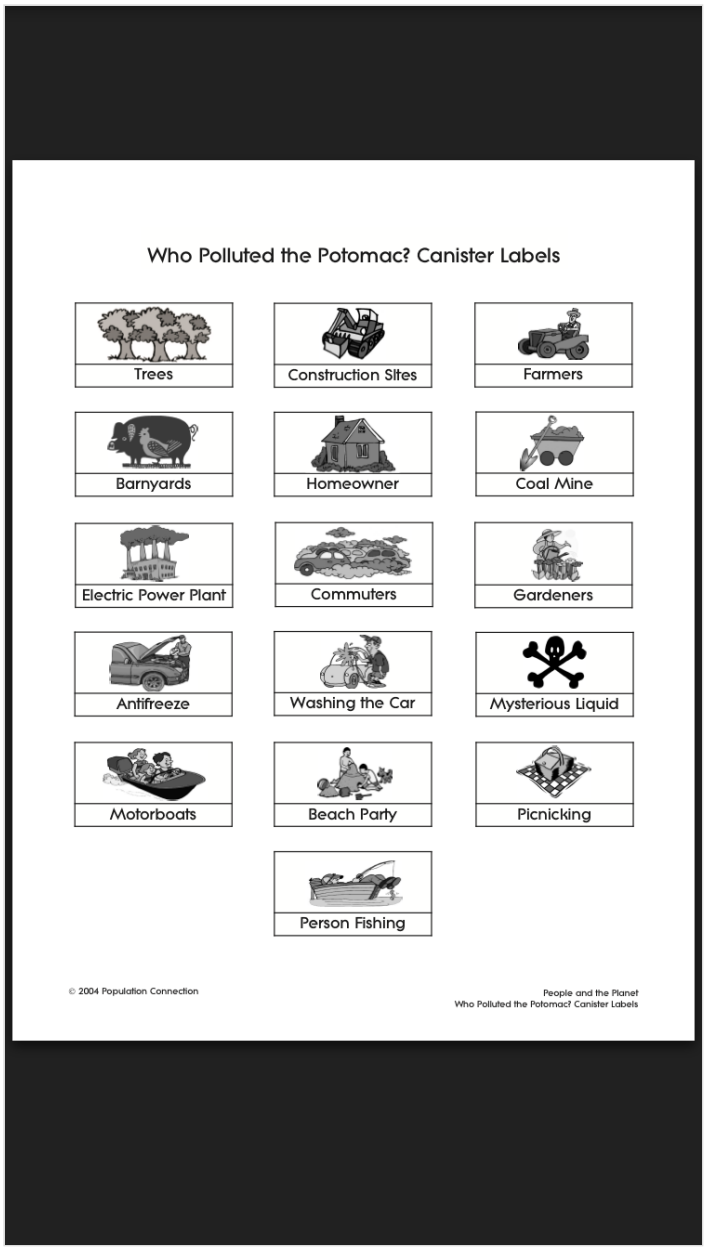
Activity: Can You Spare a Drop? Measuring Fresh Water

Students remove measured amounts of water from a five-gallon bucket, simulating the amount of fresh water available on earth.

Activity: Can You Spare a Drop? Measuring Fresh Water

Summary: Students remove measured amounts of water from a five-gallon bucket, simulating the amount of fresh water available on earth. You Need: 50 minutes 5-gallon bucket 2-cup transparent measuring cup 1-cup transparent measuring cup 1 eyedropper Download: Before class starts, fill the 5-gallon bucket with water.

UMICH



CASSIE HAYTER JUN 06, 2018 09:27AM

Englewood Community Open House Today

http://www.englewoodco.gov/Home/Components/News/News/5040/21?backlist=%2F

JESSIE PAPKE OSTENDORF JUN 06, 2018 09:36AM

Images/labels for Who polluted

CASSIE HAYTER JUN 06, 2018 09:51AM

Simpson's Acid Rain Clip

Can start at 1:34
https://www.youtube.com/watch?v=v09KnqiYi-c

CASSIE HAYTER JUN 06, 2018 09:54AM

Acid Rain Impact on Statues

https://sciencing.com/acid-rain-affect-buildings-statues-22062.html

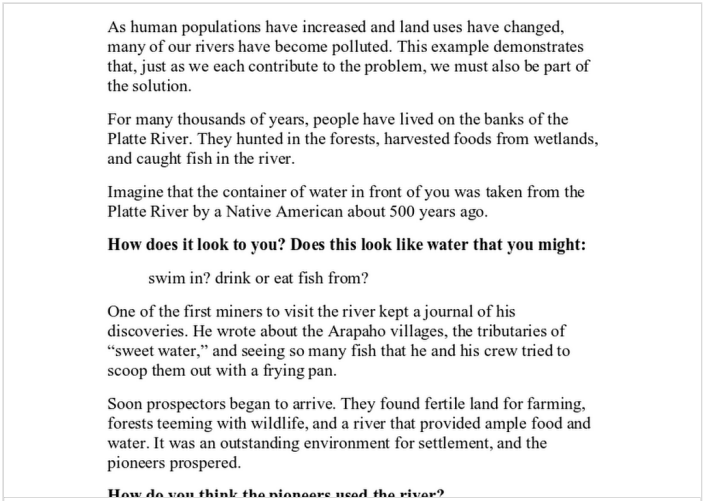
https://www.nps.gov/nama/blogs/acid-rains-slow-dissolve.htm

https://www.smithsonianmag.com/science-nature/acid-rain-and-our-ecosystem-20824120/

RANDI BRAZEAU JUN 06, 2018 10:20AM

Who Polluted the Platte?

Ideas from group: Use cooking oil for car/boat pollution; pH strips (or probes) to watch pH change with pollution addition; "Clean-up": How will you dispose of final container? Could you engineer a water filter or design a system to clean up the water?



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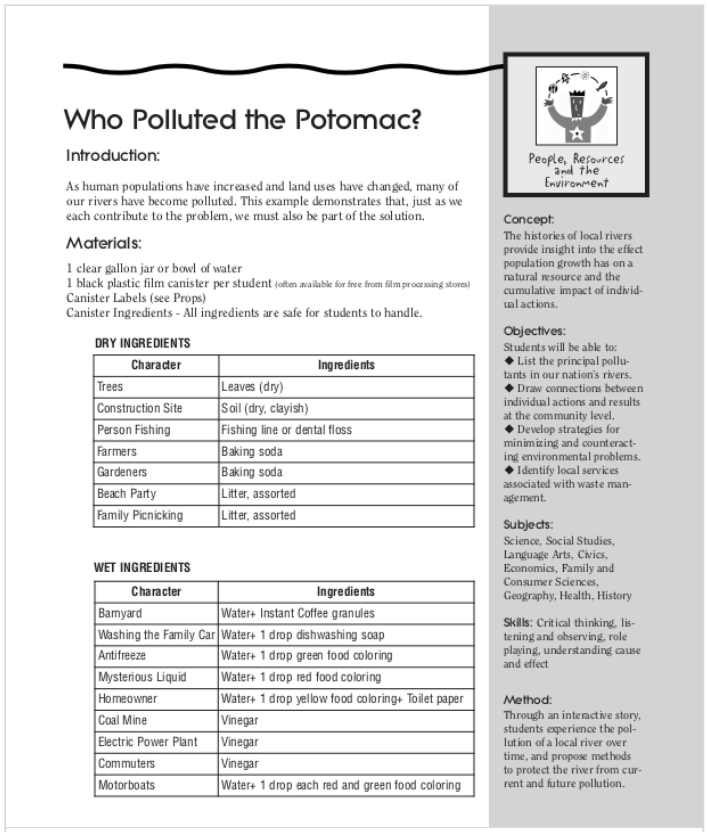

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whopollutedthepotomac.pdf
PDF document
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RANDI BRAZEAU JUN 06, 2018 10:21AM

Who Polluted the Platte/Potomac Supply List and Activity Guide

RANDI BRAZEAU JUN 06, 2018 10:23AM

Engineering Water Filters

This activity was adapted from a PBS Kids activity

Water Filter PD 3-6 final JJes.docx
Word document
PADLET DRIVE

Wetlands Talk

JANELLE JOHNSON JUN 03, 2018 05:25PM

Video on wetlands

Kid friendly (2 min.) https://www.youtube.com/watch?v=1WlmGyN9VXs

JANELLE JOHNSON JUN 03, 2018 05:25PM

Video resource

Designed wetlands
Cool edutopia video for ideas for teachers (8 min.):
https://www.youtube.com/watch?v=FY_eHUnoS6A&t=53s

JENNIFER JUN 06, 2018 02:58PM

Eco-Schools USA - Wetlands Pathway

file

NWF.ORG

RANDI BRAZEAU JUN 06, 2018 03:28PM

Sarah's Wetland Talk

WetlandsTalk.pdf
PDF document

PADLET DRIVE

Wetlands as Water Filters Field Exercise

JANELLE JOHNSON JUN 03, 2018 04:03PM

How do wetlands purify water?

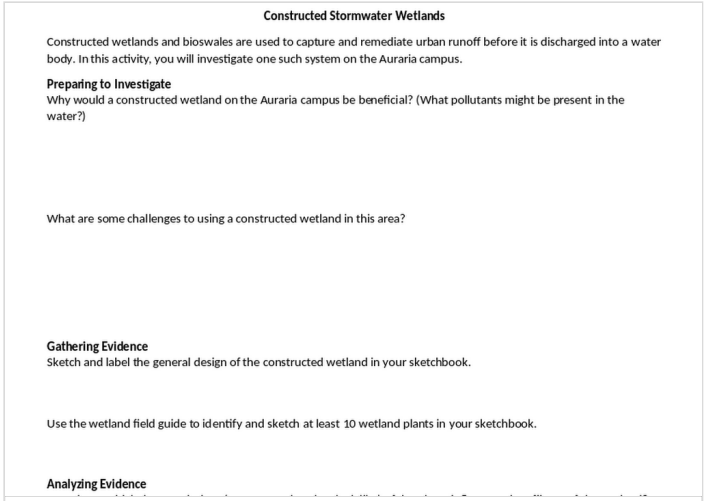
How Do Wetlands Purify Water?

Wetlands are not just soggy land unsuitable for farming. They are valuable ecosystems in their own right. They also purify water before it reaches the sea, which is of enormous importance for marine life, fishermen and aquaculturalists. Draining wetlands can have a devastating impact.

SCIENCING

RANDI BRAZEAU JUN 06, 2018 03:29PM

Wetland Identification Activity



Constructed Stormwater Wetlands

Constructed wetlands and bioswales are used to capture and remediate urban runoff before it is discharged into a water body. In this activity, you will investigate one such system on the Auraria campus.

Preparing to Investigate

Why would a constructed wetland on the Auraria campus be beneficial? (What pollutants might be present in the water?)

What are some challenges to using a constructed wetland in this area?

Gathering Evidence

Sketch and label the general design of the constructed wetland in your sketchbook.

Use the wetland field guide to identify and sketch at least 10 wetland plants in your sketchbook.

Analyzing Evidence

Constructed Stormwater Wetlands.docx
Word document

PADLET DRIVE

RANDI BRAZEAU JUN 06, 2018 03:31PM

Field Guide to Colorado's Wetland Plants

More information on wetlands can be found on the Colorado Wetland Information page. To help identify plants in the field, you can download the Colorado Wetlands free app book companion that lets you search by plant color and location.

Language, Literacy & Learning

CASSIE HAYTER JUN 06, 2018 10:45AM

Marsh/wetland

Peat, bogs, fens, mangrove — **CASSIE HAYTER**

JENNIFER BOURGEAULT JUN 06, 2018 02:00PM

Mapping with Children

David Sobel wrote a book on this focused on elementary school students.
https://www.heinemann.com/products/e00042.aspx
He also wrote a book on PBL.

David Sobel | Antioch New England

Received a BA from Williams College and an MEd from Antioch University New England. He was co-founder of the Harrisville Children's Center in Harrisville, New Hampshire, and has served as a publicly elected school board member in both Nelson and Harrisville, New Hampshire.

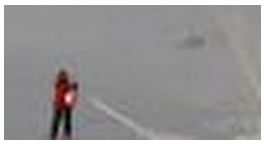
ANTIOCH NEW ENGLAND

JENNIFER TAYLOR JUN 06, 2018 03:35PM

Article: “Building” a Future in Science with Construction-Based Toys

Spatial skills higher among those who played with construction-based toys and video games in childhood

"Building" a Future in Science with Construction-Based Toys



Childhood play experiences strongly shape a person's spatial skills, according to a new CIRES-led study-those skills can be critical to success in fields like science and engineering. Young adults who played with construction-based toys such as Legos, or with certain types of video games outperformed other peers in tests of spatial reasoning-like the skill needed to mentally rotate objects.

COLORADO

Focal Students-Reflection

LUEVANON052010 JUN 06, 2018 02:18PM

I think it wold be fun to do the outside activity with my focal student because he loves being outside and coloring. He can move around and I can add a scavenger hunt for him to move around and find the plants.

> *I agree... just walking outside is a great brain break. The more we get them outside and the less with computers is always a benefit.* — **LICETTE SMITH**

CTDAHLE JUN 06, 2018 10:39AM

Still thinking about yesterday

I have several populations. I have my G/T kids and I have my STEM/Shop classes. These are more heterogeneous groups and includes low performing kids with a less than positive attitude toward schoo. Yesterday we saw a number of items that Dimitri created in his shop. It occurs to me that I can have these students design and build instruments and apparatus in my class. If these are then used for authentic demonstrations or data gathering in the science class and the students can have the experience of having the artifacts they create used for real science.

JESSIE PAPKE OSTENDORF JUN 06, 2018 01:45PM

Focal - EMJEE

Visual day today

Great application of vocabulary in learning, while learning.

Drawing, observation, touch and tear apart the wetland plant pieces.

Field guide is readable

PSA team work, accountability, conversation. Turn and talks, share outs.

KATIE BARKSTROM JUN 06, 2018 01:46PM

Focal Student Reflection

Today's activity in the constructed wetland was a terrific application of vocabulary in the real world. It was also a great opportunity to apply the observation portion of the scientific method, which can be particularly beneficial for students who might struggle with reading and writing in a more traditional classroom setting. Also provides a brain break for elementary students, which is something my focal students definitely benefit from.

NIKOLE CALMEYN JUN 06, 2018 01:59PM

Reflection

Today's morning activity would be amazing for all my students including my focal students. It is hands on and gets students moving. It is very visual so instead of just talking about how humans cause pollution, my ELL student will see a visual of what happens to the water after pollution. I am excited to adapt this to Kindergarten and use this activity to hit the standard about how humans impact the environment.

JENNIFER GRADY JUN 06, 2018 02:11PM

Focus

Student E and A would need specific vocabulary taught with pictures. For the activity of water pollution they would be able to understand that the water is polluted but they may struggle to apply it to their everyday. They would need to have a questions individually or as partners to draw out their understanding. It seems like the heavy vocabulary that would need to be frontloaded that these would activities would need to take place over time.
Drawing would appeal to E as she is a perfectionist but very visual. A. might need to take photographs or find photographs to match the vocab.

APRIL_KELSO JUN 06, 2018 02:07PM

Focal Reflection

My focal students loves art so the wetlands assignment would fit in well. I could get my focal student to draw but he would struggle to correctly identify the plants in a large manual. I thought about having a list of plants in the location ahead of time. Students could draw the pictures and then use their field guide to look up the list of pants that I provided to see if it is a match. This would help them find success a bit easier then just expecting them to go through the book themselves with no guidance.

KATYA SCHLOESSER JUN 06, 2018 02:21PM

Focal students for today

I feel like I"m saying the same thing about my focal students each day - but for today I think the Platte River activity was great, and would be fun to do in class. For students that are more quiet and/or struggle with listening, I would give all students copies of the story and have them read along. I might have students switch off reading so they all need to be actively engaged. For students that are more advance, I might ask them to write their own story, and/or create a way to make a filter to clean the water. I'd have students illustrate a cartoon or story that like to draw

TONI BROUGHTON JUN 06, 2018 02:17PM

Focal Students

This fieldwork lesson would be a significant activity to follow a lesson I am going to incorporate next year. This is a great way for my low level readers to express concepts.

Sketching for Observation
Scientific sketching is about looking at something so closely you notice something new.
CALIFORNIA ACADEMY OF SCIENCES

ROBIN STAKER JUN 06, 2018 02:21PM

Focus Students

Si

ALYSSA CASILLAS JUN 06, 2018 02:20PM

Focal Student

A focal student in mind would enjoy the drawing aspect of the wetlands activity. She enjoys drawing and it brings her comfort. At times it is difficult to get her to talk because she is a bit shy. Allowing her to draw her findings would make class engaging for her.

NRAYNOR1 JUN 06, 2018 02:25PM

Focal Student

I am thinking about not just one student, but my entire 1st period class. They are pretty bright students who at times think they have the answer to everything. This lesson could put them to the test of working with others and coming up with a plan . By giving them a problem and watching them work in teams to complete their projects, would be truly a award for them, because of the different altitudes that is involved in their research.

ASHLEY GLENN JUN 06, 2018 02:29PM

Focal student 1 and 2 would really benefit from the all of the hands on work we did today. Specifically the drawing aspect so these students who typically struggle with the writing component can visually show their knowledge.
Focal student 3 would struggle with the water pollution portion of the day. I envision a lot of chiming in and shouting out that would eliminate others think time. To accommodate for this, I think it would be a good idea to give them the task of handing out the materials and even recording the data and findings that the class observes.

DEBORAH SHAWCROFT JUN 06, 2018 02:24PM

My focal students could do the outside activity on their own and I know they love art to this is right up their alley. Fresh air and art yeah!

RYAN KELLEY JUN 06, 2018 02:29PM

Reflection

Many of the students that I chose to focus on would have been very satisfied today. There I would probably have a few more written reflections like we talked about with the water pollution talk. It helps my students to be able to write and practice using their new language before they start to communicate verbally.

JULIE PITZ JUN 06, 2018 02:30PM

I would like to incorporate some type of technology into the activity to identify the native plants. I might even have student V, who would not participate in the drawing, to design an app to identify plants or sketch using a tablet.

ROBIN STAKER JUN 06, 2018 02:36PM

Water Pollution Activity

Since the water pollution activity was a story telling type of large group activity. I think that my student with low reading and vocab would excel. My shy student would be asked to do an item that perhaps they can relate to. I might ask my highly advanced student to help me modify the power point presentation to the Arkansas River.

CATALINA VIZUETH JUN 06, 2018 02:52PM

My students will greatly benefit from having the hands on experience of researching, preparing a presentation, design and construct a wetland area in our school, so they can help mitigate or re-mediate the problem that we are having with classroom flooding during rainy episodes in our area. Thisi can

SJOSSELYN1 JUN 06, 2018 02:26PM

Focal student 1 would be difficult to engage in the drawing component. I do see him becoming engaged with the pollution activity, but not the wetlands drawing theme. Focal student 2 would be total drama over how gross the water is getting and wouldn't touch it to save her soul.

CHAD SNIFF JUN 07, 2018 02:43PM

The activities today were hands on activities so I think my students would have all been willing to participate. One modification I would make would be to gather the information for the plants they would be identifying and teach them how to identify those plants. Then I would have them find those specific plants and identify them rather than search through the book to find them.

MARIA CROUSE JUN 08, 2018 02:04PM

I have listed some PBL ideas to make today's activities more mathy for my classroom :)
I have been working on a "Math in Nature" PBL that allows students to get outside to look for sequences and patterns. I really enjoyed the afternoon activity today, and it reminded me of this PBL! I think Student J would be engaged with the little field trip outside. He would probably leave his headphones in his backpack because this would be something different from a 'typical' day in class. There would also be potential for this to really pull him in!

Career Connections

KATIE BARKSTROM JUN 06, 2018 01:47PM

Career Connections

landscaper, botanist, preservationist

AMALIA_SOLLARS JUN 06, 2018 02:11PM

environmental engineer, natural resource managers and technicians, environmental educators, bird/wildlife advocates, policymakers, city planning

ecological restoration — LICETTE SMITH

EPALMER99 JUN 06, 2018 02:23PM

Architect, civil engineer

DEBORAH SHAWCROFT JUN 06, 2018 02:24PM

Green house

NRAYNOR1 JUN 06, 2018 02:28PM

Career Connections

Land manager
Civil Eng.
Health services

CATALINA VIZUETH JUN 06, 2018 02:38PM

Water quality manager, ecologist, biologist, etc.

JENNIFER BOURGEAULT JUN 06, 2018 03:37PM

artist, scientific artist

Questions? Needs?

JANELLE JOHNSON JUN 06, 2018 08:24AM

Today's eval

KAY BOLERJACK JUN 06, 2018 08:32AM

South Platte Water Renewal Partners Community Open House

Wednesday, June 6, 3-7:00 p.m. 2900 S. Platte River Drive, Englewood

Community Members are invited to attend a Community Open House at the South Platte Water Renewal Partners facility on Wednesday, June 6 from 3 p.m. to 7 p.m. located at 2900 S. Platte River Drive in Englewood. This is an opportunity to learn about the water renewal process and how we can all be stewards of the South Platte River watershed.

The Open House will include educational stations, children's activities, special guests (Denver Zoo), tours, demonstrations, "touch-a-truck" station, food, and more! The event is free and open to the public. Limited parking is also available. Hog dogs, chips, and lemonade will be served. Guided bus tours of the facility will be provided. To register, please go to Signup Genius or register at the event. Learn more about the event at www.spwaterrenewalpartners.org.

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