SUSTAINABLE SCHOOLS

RE SOURCES FOR SUSTAINABLE COMMUNITIES

YOUNG WATER STEWARDS

2017 Worksheets

Contact:
Priscilla Brotherton, Sustainable Schools Program Manager
RE Sources for Sustainable Communities
priscillab@re-sources.org
(360) 733-8307 ext. 218
re-sources.org

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YOUNG **WATER STEWARDS**

Getting to Know Nonpoint Water Pollution

In-Class, Activity #1 Worksheet

What is the difference between point source and nonpoint source water pollution?

Why do we care about water pollution?

What are the four major categories of nonpoint water pollution?

1) Nonpoint Source Water Pollution Category:

_____

(*Write name of category*)

- How does this type of nonpoint source pollution end up in the water? Describe the process.

- What are the harmful effects of this pollutant for humans and/or aquatic species?

- Can you think of ways you directly or indirectly contribute to this type of nonpoint source pollution?

2) Nonpoint Source Water Pollution Category:

_____

(*Write name of category*)

- How does this type of nonpoint source pollution end up in the water? Describe the process.

- What are the harmful effects of this pollutant for humans and/or aquatic species?

- Can you think of ways you directly or indirectly contribute to this type of nonpoint source pollution?

3) Nonpoint Source Water Pollution Category:

_____

(*Write name of category*)

- How does this type of nonpoint source pollution end up in the water? Describe the process.

- What are the harmful effects of this pollutant for humans and/or aquatic species?

- Can you think of ways you directly or indirectly contribute to this type of nonpoint source pollution?

4) Nonpoint Source Water Pollution Category:

_____

(*Write name of category*)

- How does this type of nonpoint source pollution end up in the water? Describe the process.

- What are the harmful effects of this pollutant for humans and/or aquatic species?

- Can you think of ways you directly or indirectly contribute to this type of nonpoint source pollution?

Thinking Ahead:

Have you seen or heard about any solutions in our community to deal with nonpoint source pollution?

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Label the Parts

In-Class, Activity #2

On the following page, please label as many parts of the watershed as you can.

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Field Trip

Water Quality Station

Student Name:	Location:	Date:	Time:

Site Observations

Weather:

Healthy elements of the stream and riparian ecosystem:

Unhealthy elements of the stream and riparian ecosystem:

Water quality prediction:

Water Quality Measurement Results

Parameters	**Results**	**Analyze Results**		
Temperature		Between 5-13° C	Between 13-20° C	Above 20° C
Dissolved Oxygen		Between 6.5-8.5	Between 4.5-6.5 or 8.5-10	<4.5 or >10
pH		More than 9 ppm	Between 6-8 ppm	Less than 6 ppm
Turbidity		Less than 10 NTUs	Between 10-20 NTUs	More than 20 NTUs
		Excellent	**Medium**	**Poor**

Based on your data, what do you think the water quality at this creek is? Explain your conclusion.

What is one way we could help improve this creek?

Field Trip

Macroinvertebrate Station

Group	How many kinds of each group did you find?	Multiply Times	Equals (score each row)
T= Tolerant		**x 1**	
F= Facultative		**x 2**	
S= Sensitive		**x 3**	
		Total (add all three scores)	

Water Quality Rating:

___ Excellent (score of > 22)

___ Good (score of 17 – 22)

___ Fair (score of 11 – 16)

___ Poor (score of <11)

Data and Stewardship Worksheet

In-Class, Activity #4

Benefits of a Healthy Watershed

#1 _____

#2 _____

#3 _____

Water Quality Issues

1. _____
How does it influence water quality?

2. _____
How does it influence water quality?

3. _____
How does it influence water quality?

4. _____
How does it influence water quality?

What is a Best Management Practice (Best Management Practice)?

Urban BMPs

- _____
- _____

- _____
- _____
- _____

Rural BMPs

- _____
- _____
- _____
- _____

  _____

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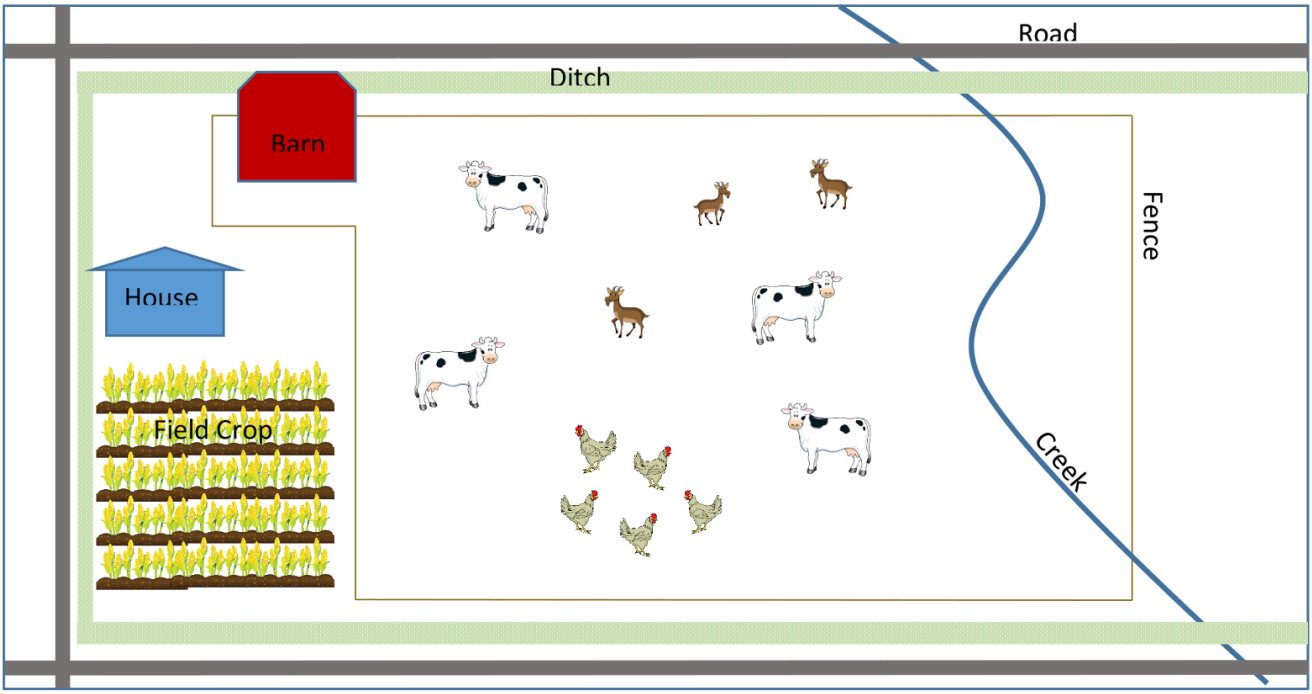
Scenario #1



You are a hobby farmer and have a creek meandering through your grazing field. You have a few cows, goats, horses and chickens that range freely through your field, with open access to the creek. There are a few trees near the creek but very few shrubs and the area around the creek gets very muddy in the wet months from your animals accessing the creek.

What are some best management practices you could implement to help protect the watershed?

What type of pollutant is each BMP helping with?

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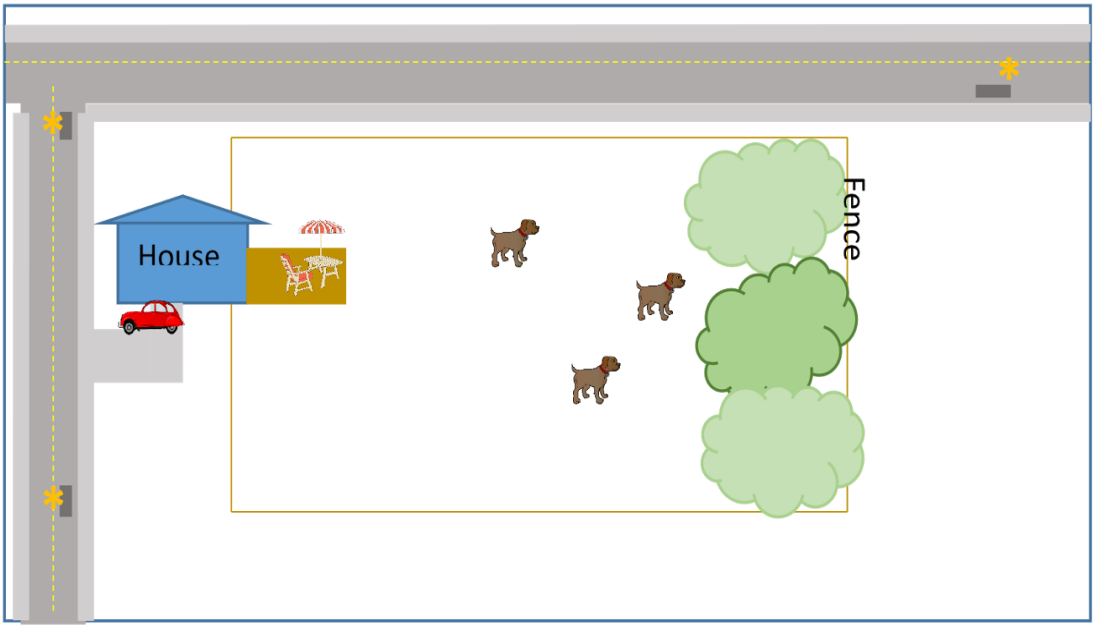
Scenario #2



You live in a small town and have 3 dogs. They spend much of their days in your large fenced backyard. You clean up the dog poop that accumulates near your home, because you use the space often, but you rarely head out the further reaches of your yard. You have a paved driveway and one of your favorite possession is your car, so you wash it every Sunday to keep it in tip-top condition, but it's an older model and probably needs some repairs.

What are some best management practices you could implement to help protect the watershed?

What type of pollutant is each BMP helping with?