

# Kids' Groundwater Festival

## May 3, 2017

The Kids' Groundwater Festival is an annual event for 4th grade students from Douglas County, Parkers Prairie and West Central elementary schools. Students have an opportunity for hands-on learning at 20 different learning stations covering all aspects of the water cycle. Presenters are volunteers and represent many of area businesses and government agencies.

### **Teacher Resources:** (external links)

[Drinking Water & Groundwater Kid's Stuff](#) - Classroom Lessons for Grades 4-8 (EPA)

[Water Sourcebook](#) - 324 activities for K-12 (EPA)

[MPCA Kid's Page](#)

[DNR Teacher's Resources](#)

[SEEK](#) - Minnesota's interactive directory of environmental education (EE) resources

[Prairie Wetlands Learning Center](#) - US Fish & Wildlife Service, Fergus Falls

Pictionary (see below)

Water Jeopardy (see below)

## Pictionary Words

Snow	Rain	Lake
Well	River	Skating
Wetland	Swimming	Groundwater
Ice Fishing	Water	Wash
Fish	Erosion	Ocean
Waterfowl	Drink	Pond
Dam	Boat	Thunderstorm
Swamp	Skiing	Shower
Sprinkler	Bath	Windmill
Flood	Wave	Irrigation
Ice	Landfill	Bass
Sunfish	Walleye	Snowmobile
Crappie	Northern Pike	Evaporation
Aquifer	Rain Gauge	Jetski
Faucet	Canoe	Watershed
Drought	Soil	Waterheater
Gallons	Watermelon	Waterfall
Lake Le Homme Dieu	Long Prairie River	Moisture
Septic System	Mist	Watercolor
Feedlot	Waterbug	Fresh Water
Steam	Runoff	Liquid
Salt Water	Acid Rain	Waterbed
Splash	Condensation	Conservation
Cloud	Cloudburst	Fire Hydrant
Water Pipe	Frog	Drip
Bridge	Fish House	Snail
Milfoil	Carp	
Zebra mussel	Hail	

## Water Jeopardy

### Definitions 1:

- 100 A hole in the ground used to extract water. (Well)
- 200 A wind-driven water pump. (Windmill)
- 300 An artificial lake used to collect and store water. (Reservoir)
- 400 The level below which the ground is saturated with water. (Water table)
- 500 The electricity produced using the force of falling water. (Hydroelectricity)

### Definitions 2:

- 100 The moisture on leaves and flowers in the morning. (Dew)
- 200 Natural disaster when river overflows its banks. (Flood)
- 300 Small streams that join larger rivers. (Tributary)
- 400 A flowing well. (Artesian well)
- 500 The land that is next to water. (Riparian land)

### Lakes:

- 100 Name three lakes in Douglas County.
- 200 What is the smallest of the Great Lakes? (Lake Ontario)
- 300 What percent of Douglas County is covered by lakes? (10%)
- 400 How many lakes are in Douglas County? (662)
- 500 How many lakes are there in the state of MN? (15,000)

### History:

- 100 What did the Titanic hit before it sank? (An iceberg)
- 200 What state claims to have invented water skiing? (Lake City, MN)
- 300 What were the first water pipes made out of? (Logs)
- 400 What was the name of the glacial lake that existed in northwest MN 1,000 years ago? (Agassiz)
- 500 What year did Charles Lindbergh fly over the Atlantic Ocean? (1927)

### Rivers:

- 100 Where does the Mississippi River start? (Lake Itasca)
- 200 What river drains the eastern 2/3 of the US? (Mississippi)
- 300 Name one river in Douglas County. (Long Prairie, Sauk, Chippewa)
- 400 A major river or body of water and the land area that it drains is called what? (Watershed)
- 500 How many miles of rivers, streams and ditches are there in MN? (92,000 miles)

### Properties:

- 100 What are the three forms of water? (Solid, liquid, gas)
- 200 What is the change of water to gas called? (Evaporation)
- 300 The change of water vapor to liquid is called what? (Condensation)
- 400 What temperature does water boil? (212 degree F)
- 500 How much does a gallon of water weigh? (8 1/3 pounds)

Wow, That's Big:

- 100 The largest inland salt lake is. . . ? (Great Salt Lake)
- 200 What is the largest lake in Douglas County? (Lake Miliona)
- 300 What is the world's largest aquifer? (Ogallala)
- 400 Which is the biggest lake contained entirely in MN? (Red Lake)
- 500 What lake in Douglas County has the most miles of shoreline? (Lobster Lake, 17 miles)

Air:

- 100 What causes bubbles in water? (Air)
- 200 What causes white caps on lakes? (Wind)
- 300 Which holds more water, warm air or cold air? (Warm air)
- 400 What stream has more air than water? (Jet stream)
- 500 The release of moisture from plants to air is called what? (Transpiration)

Name That... 1:

- 100 Name a sport that uses two forms of water. (Skiing)
- 200 Name the two sources of our water supply. (Ground and surface water)
- 300 Name the MN state fish. (Walleye)
- 400 Name one of the cloud groups. (Stratus, cumulus, cirrus, nimbus)
- 500 Name the canal that connects the Pacific and Atlantic Oceans. (Panama Canal)

Name That... 2:

- 100 Name two freshwater fish. (Walleye, bass, sunfish, crappie)
- 200 Name the famous geyser in Yellowstone Park. (Old Faithful)
- 300 Name 3 of the 7 processes in the water cycle. (Condensation, runoff, percolation, precipitation, infiltration, and transpiration)
- 400 Name 3 of the 5 oceans. (Antarctic, Atlantic, Pacific, Indian, and Arctic)
- 500 Name a watershed in Douglas County. (Sauk, Long Prairie, Chippewa)

Miscellaneous 1:

- 100 Rain, sleet, snow and hail are examples of what? (Precipitation)
- 200 Where does your well water come from? (Ground water, aquifer)
- 300 What is the universal solvent? (Water)
- 400 How much water should a person consume per day to maintain health? (8 glasses)
- 500 What percent of the earth's water is salt water? (97%)

Miscellaneous 2:

- 100 What is the scientific formula for water? (H<sub>2</sub>O)
- 200 True or False. Water is a good conductor of heat. (False)
- 300 When is the best time of the day to water your lawn? (Early morning)
- 400 How can wetlands improve ground water? (Filter and purify)
- 500 What percent of the human body is water? (66%)

### Miscellaneous 3:

- 100 What is the Spanish word for water? (Aqua)
- 200 How many personal floatation devices are required to be carried on your boat? (One per person on board)
- 300 Why does precipitation run off rather than soak in the cities? (More area is impervious)
- 400 How many seas are there? (7)
- 500 From what point in western MN does water flow N and S? (Browns Valley)

### It's Alive:

- 100 How long can a person live without water? (About one week)
- 200 What is one crop grown in water? (*Rice*, fish)
- 300 Name two types of vegetation that grows in water. (Cattails, reeds, milfoil, duck weed)
- 400 What insect needs water to survive? (Mosquito)
- 500 What aquatic plant is invading MN lakes? (Eurasian water milfoil)

### Pollution:

- 100 What is the most common contaminator of water? (Sediment)
- 200 How many gallons of gasoline does it take to contaminate the water supply for a community of 50,000 people? (1 gallon)
- 300 Name two sources of groundwater pollution. (Landfill, septic, underground gas tank, sedimentation)
- 400 Once water is contaminated, how long does it stay contaminated? (Thousands of years)
- 500 A single identifiable source of contamination is called what? (Point source pollution)

### Usage 1:

- 100 What is the average amount of water used by a person daily? (87 gallons)
- 200 How much water is used to wash your hands? (2 gallons)
- 300 How much water is used to get a drink of water? (114gallon)
- 400 How much water is used to take a bath? (30 gallons)
- 500 How much water is used to make a loaf of bread? (150-300 gallons)

### Usage 2:

- 100 How much water does it take for a shower per minute? (5 gallons/minute)
- 200 How much water is used to flush a toilet? (2-7 gallons)
- 300 How many gallons of water are used to wash a load of clothes? (25-30 gallons)
- 400 How many gallons of water are wasted if the facet is left running? (2-5 gallons)
- 500 How many gallons of water are used in a dishwasher? (15 gallons)

### Usage 3:

- 100 How could you tell if your water is hard or soft? (Test it)
- 200 What makes water hard? (Minerals)
- 300 What type of water causes a bathtub ring? (Hard water)
- 400 Name a common mineral found in hard water. (Calcium, iron, magnesium)
- 500 What is used in water softeners to soften water? (Salt)

## Aquatic Invasive Species (AIS)

1. This water dwelling creature has light and dark stripes on its shell and can attach to boats and docks. What is a Zebra Mussel?
2. This plant can grow in big patches in the water and can get stuck in the boat propeller if you drive through it. What is Eurasian Water Milfoil?
3. This fish can eat a lot of food that other fish want to eat and can also jump very high out of the water. What is Invasive carp/silver carp?
4. If you want to make sure your boat does not have any invasive plants or animals on it you should follow what three steps. What is clean, drain and dry?
5. If you want to get all of the water out of the boat you should pull this out of the boat. What is the drain plug?
6. Some invasive species are too small to see so it is important to get all of this out of the boat. What is water?
7. This creature had very sharp shells that can cut your hands and feet. What is Zebra Mussels?
8. A single Zebra Mussel can make this many eggs in a single year. What is one million eggs?
9. This is how Zebra Mussels come from Europe and Asia to the United States. What is ships?
10. Zebra Mussels need this to stay alive. What is water?