

SCIENCE FAIR PROJECT IDEAS

8th Grade Science NCSCOS Goal 3: Hydrosphere

- ❑ What is the effect of stormwater pollution on aquatic life?
- ❑ Determine how a community living along a creek affects the quality of the creek water.
- ❑ Explore how local waterbodies have been affected by pollution in Wilmington.
- ❑ Which location in town has the most pollution? What are some pollution solutions?
- ❑ Demonstrate the effects of a man-made structure on water quality of a stream.
- ❑ How do oil spills affect plant growth?
- ❑ Determine whether natural products could pick up spilled oil better than consumer products.
- ❑ Explore methods of cleaning oil spills other than the major methods used like burning, biotechnology, and the use of biological agents.
- ❑ Determine the effect of different car washing detergents on plant growth in streams.
- ❑ Develop a stormwater-friendly alternative to road salt.
- ❑ Discover the effect of rain barrel water on the growth of grass or other vegetation versus tap water.
- ❑ Develop a tool to survey citizen's environmental views and/or stormwater-friendly behavior changes.
- ❑ Compare the amount of cigarette pollution (i.e. using quad sampling) in a large area such as Wal-mart or mall/shopping area.
- ❑ Rain- measure the speed and force of raindrops. What is the effect on soil, with and without ground cover? Could you simulate the effect of rain?

- ❑ Determine the impact of stormwater pollutants on organism growth.
- ❑ Determine the effects of wetland filtration on pollution in water.
- ❑ Compare the water contamination rates of rural and urban areas.
- ❑ Which material (sand, charcoal, or gravel) will best filter waste from creek water?
- ❑ Determine the “top” pollutants impacting a local stream.
- ❑ Field Studies –determine the effects of herbicide spraying.
- ❑ The effect of phosphate and other pollutants on the oxygen level in pond water.
- ❑ Determine how limiting the amount of water applied to soil will affect the nitrification process from the over-use of nitrogen-based fertilizers.
- ❑ Study the effects of absorption of pollutants and pesticides in different soil types.
- ❑ Determine if different flow rates affect the dissolved oxygen, pH, turbidity, and temperature in a stream.
- ❑ Does the pH in a stream change as it travels down its course?
- ❑ Is there a relationship between the surface water temperature and salinity of a stream?
- ❑ Does decreasing filter particle size cause less water turbidity?
- ❑ The effect of slope angle on the amount of material eroded by water.
- ❑ Testing different soils/ soil mixtures to see if erosion is worse in clay/sand/silt with and without different types of "cover".
- ❑ How does an area with a buffer compare to an unvegetated area on pollution uptake and sedimentation control?