

# Western UP Science Fair- Tuesday March 27, 2012

## Environmental Science Project Ideas *to get started...*

### **Animals**

- Which leaf species do various species of stream insects prefer?
- Does stamp sand runoff from sanded winter roads impact diversity of stream organisms?
- Do pike strike worms or minnows more?
- Do different fish species eat the same foods?
- Do nightcrawlers like the light?
- Do night crawlers like to eat leaves of some trees more than others?
- Do deer like to bed down more under hardwoods or conifers?
- What conditions do sow bugs prefer? (light v. dark, wet vs. dry,...)
- Which animals are active in winter (bait and examine winter tracks)?
- What's the favorite food for over-wintering birds?

### **Plants**

- Does road salt affect seedling growth?
- Do soils with plants hold onto more nutrients than soils without plants?
- How do trees/plants form branches or shoots and what controls the growth? (auxin experiment)
- What amount of heavy metal (copper or other solutions) is toxic to aquatic plants?
- What amount or type of fertilizer has greatest impact on seed growth?
- What is the effect of roof runoff on gardens, yards, forests?

### **Plant-animal Interactions**

- Do snowshoe hare eat some plants more than others?
- Do worms aid in plant growth?

### **Microbes/ecosystems**

- Does temperature affect rate of decomposition?
- Is there life in the soil in winter?
- Does freezing kill decomposers?
- Does salt slow decomposition?
- Does acidity affect bacteria and fungi differently?
- Do some types of leaves decompose faster than others?
- Do leaf litter extracts increase or decrease plant growth?

### **Water**

- Are icicles off of the roof made of clean water? Does the type of roof make icicles clean water or polluted?
- Does carbon dioxide help plant growth?
- At what temperature do various tree species' buds open?
- In which soil do seeds germinate best?
- At what temperature do tree leaf buds open?

### **Pollution**

- What's the best material for absorbing oil spills or wiping oil off of fur/feathers?
- Is there more salt in some lakes or some streams than others?
- Does soot make snow melt faster?

### **Physical environment**

- Is snow more or less acidic than streamwater?
- Is the snow deeper under hardwoods or conifers? Is the temperature different under hardwoods and conifers?