

# Wood Frog

## Freezing from Death!

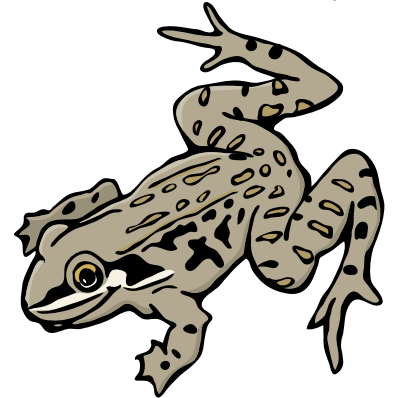
### What you need!

- A few insects or spiders
- Film canister or medicine vial
- Fridge
- Bug field guide

Wood Frogs do something absolutely incredible to survive the Canadian winters. They freeze solid. Now, they aren't the only animals in Canada to survive the snow in that way - insects and spiders do too.

### What you do:

1. Go out and collect some insects or spiders.
2. Place them in a film canister or a medicine vial.
3. Place the canisters in your fridge for a few hours. Do not place them in the freezer - this might kill them.
4. After a few hours, take the bugs out of the fridge and take them outside.
5. Watch what happens!



### Ask yourself:

- What happens to the bugs when you first take them out of the fridge?  
Record the time you take them outside. Record the temperature of your fridge.
- Identify and sketch the bugs.
- Open the vials and watch what happens.
- How long does it take for the bugs to begin moving around?
- Is it the same time for all bugs? Which move first?

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### What you find out:

Bugs, fish, reptiles and amphibians are poikilotherms, which means they don't need to invest energy in producing body heat. In addition, bugs and some animals like Wood Frogs, have the ability to produce antifreeze in their blood when it gets cold.

### Specific Learner Expectations (SLE)

**Grade 1 Topic B:** Seasonal Change.

SLE 2 : Identify and describe examples of plant and animal changes that occur on a seasonal basis: changes in form and appearance; changes in location; changes in activity; i.e. students should recognize that many living things go into a dormant period in winter and survive under a blanket of snow as a seed, egg or hibernating animal.

**Grade 2 Topic E:** Small Crawling and Flying Animals.

SLE's 1-10: Describe the general structure and life habits of small crawling and flying animals: e.g. insects; spiders; worms; slugs; and apply this knowledge to interpret local species that have been observed.

**Grade 5 Topic E:** Wetland Ecosystems.

SLE 5: Identify and describe adaptations that make certain plants and animals suited for life in a wetland.