

# Pine River Library Program in a Bag: DIY Hummingbird Feeder



## Did you know?

- Hummingbirds need the most energy to survive of any warm-blooded animal. Compared to all other birds, hummingbirds have the highest body temperature, the largest brain and heart proportional to their size, the fastest heart rate, and the fastest wingbeats!
- They can fly as fast as 25 to 30 miles per hour during regular flight. When males dive downward during courtship flights, they can reach speeds of up to 60 miles per hour!
- Since hummingbirds have such high metabolisms, they need to feed throughout the day to keep up- it has been estimated that a hummingbird visits up to 3,000 flowers during a single day! If humans tried to match this consumption rate we would have to eat 70 times what we normally do!
- Hummingbirds have a unique quality- they can go into a trance-like state called "torpor" that helps them survive cool temperatures and inactive periods- for example when they sleep at night. They experience a significant drop in body temperature and their heart rate and metabolism slows to conserve energy- their metabolic rate is as little as 1/50th of their usual rate when active!
- It's not the hummingbird's feathers that are such bright and beautiful colors, instead their hues are created by how light reflects on the tiny particles that make up their feathers. The colors we perceive when we look at them are constantly changing in tune with the angle of light hitting them!
- When hunting for nesting material female hummingbirds steal strands of spider webs! They also may eat the insects caught inside the webs.
- Hummingbirds and the plants they pollinate have evolved together. They probe their beaks into the blossoms to consume the nectar, picking up pollen at the same time. Botanists and evolutionary biologists have identified over 150 native plants species that have evolved tube-shaped flowers that can fit the beaks of hummingbirds- it's a win win for both the birds and the flowers!



## Materials

Items with an asterisk are included in the kit

- An empty and cleaned used or new wine bottle of your choice
  - Need a wine bottle? Ask at the front desk of the library!
- Copper wire\*
- A hummingbird feeder adapter tube made for wine bottles\*
- Pliers
  - Need pliers? Check out a pair from the library!
- Hummingbird nectar, see recipe included

## Instructions

Starting with one end of the wire, make a hook shaped bend in the wire using the pliers- this will be the first coil around the neck of the bottle. Then wrap the copper wire around the neck of the bottle at least three times. You can wrap more tightly first as pictured, but then spread the rings out after.



Then, as you hold the neck with the wire wrapped around it, start to wrap the wire down the rest of the bottle in a spiral pattern, making enough rings around the bottle to firmly hold it but still leaving enough wire to make a hook at the bottom of the bottle. TIP: You can use some temporary electrical tape to hold the wire to the bottle for the next step.



Finally, make a hook at the bottle's bottom, which will be at the top when you fill and turn the bottle upside-down to hang!



## NOTES

- You can place the bottle anywhere you can hang a plant: along a fence, under an overhang, on a trellis, under an arbor, etc.
- Before filling your bottle with nectar clean the inside of the bottle thoroughly (see cleaning below).
- Be sure to fill the bottle all the way to the top rim of the bottle. Push the tube and adapter into the bottle in a twisting motion. Some nectar will overflow and come out of the tube but this will keep air out of the adapter and tube, then your feeder is ready to go!
- Clean your feeder out once a week to prevent mold, especially during sunny, warm weather. Feeders made of glass and plastic should be cleaned with a vinegar solution. After placing vinegar solution inside the bottle, use a bottle brush to clean debris and then rinse with warm water.

## Hummingbird Nectar Recipe

- Mix 1 cup granulated sugar with 4 cups water.
- Bring to a boil.
- Let cool to room temperature before filling your feeder(s).

Remember: Never put red dye, jello, brown sugar, honey, or fruit in the nectar you make—these are all harmful to hummingbirds!

Thanks to [www.containerwatergardens.net](http://www.containerwatergardens.net) for the instructions and hummingbird nectar recipe!

## Resources:

- [www.birdwatchersdigest.com/bwdsite/learn/hummingbirds/amazing-facts-hummingbirds.php](http://www.birdwatchersdigest.com/bwdsite/learn/hummingbirds/amazing-facts-hummingbirds.php)
- [www.containerwatergardens.net/make-wine-bottle-hummingbird-feeder/](http://www.containerwatergardens.net/make-wine-bottle-hummingbird-feeder/)