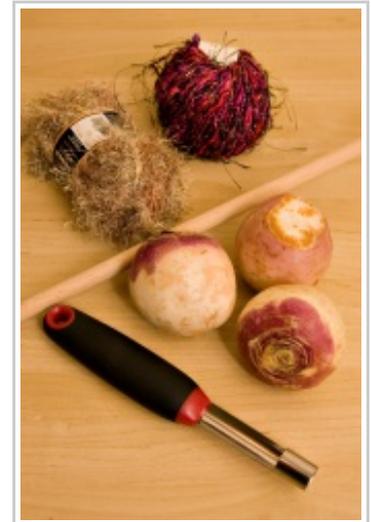


## Make a Drop Spindle - With a Turnip!

The spinning wheel wasn't invented until 1000 AD, but before that, people needed to use something to spin fiber into thread. So what would they use? A drop spindle! In this activity, kids learn how to make a drop spindle with a handy vegetable. It may seem like a challenge to use a drop spindle, but people have been doing it for thousands of years. In the Middle Ages, kids started spinning with a drop spindle when they were only four years old!

A drop spindle has 3 parts, the shaft, the whorl, and the hook. The shaft is made from a long dowel with a pointed end at the bottom. The hook goes on the top of the dowel, opposite of the pointed end. Finally, the whorl is a round weight that sits on the shaft. The purpose of the whorl is to add weight to help the spindle spin more easily. Historical whorls were made of stone, wood, metal or clay, but vegetables are so much easier to work with!



### What You Need:

- Wooden dowel, 1/2" diameter
- Fine sandpaper
- Several turnips or beets
- Apple corer
- 2 wide rubber bands
- Pencil sharpener
- Cup hook screw
- 2 balls of hairy lightweight yarn

### What You Do:

1. Choose a vegetable. It must be 4" to 5" wide, weigh between 4 and 6 ounces, and be of uniform roundness at its widest point. Allow plenty of time for finding a perfect turnip! Buy extras for do-overs.
2. Prepare the shaft. Have your child make a point on one end of the dowel with a pencil sharpener. He should use sandpaper to sand the shaft smooth, then screw the cup hook into the flat end.
3. Now it's time to prepare the whorl. He'll use the apple corer to make a hole through the center of the turnip, so that he can stick the dowel through it more easily. Before he gets started, make sure he knows that the apple corer must enter and leave straight through the center. Too much angle between enter and exit will make the spindle wobble rather than spin. He should stick the corer in the bottom, turning it like a screwdriver as he pushes down and out the other side.
4. Once the hole is made, assemble the drop spindle. Have him push the whorl a few inches up the shaft from the pointed end.
5. Next, he'll need to test the angle to make sure it will work. Have him place the point on the ground, spin the shaft between his palms and let go. It will spin a moment if the hole is true. If not, it will topple immediately. If it needs adjusting, he can re-core to straighten the hole, trim the turnip edges to change the balance, or start over.
6. When he's satisfied with the spin, have him twist rubber bands above and below the turnip to hold it in place.
7. Before he starts using the spindle, it can be helpful to see someone else using it. If you're an accomplished spinner, you can show him yourself. Otherwise, search for a video on the internet

that clearly shows how to start thread on the spindle.

8. Once he's ready, encourage him to give it a try! Tie both yarn ends together around the shaft right above the whorl, on the hook side. Wrap yarn down, from over to under the whorl, half-way around the shaft. You don't need to wrap a full loop around; just so it "catches" the whorl. Then pull the yarn up and through the hook. Have him stand, lightly holding the yarns with one hand, so yarn can pass through his fingers. He should give the whorl a clockwise spin with the other hand and let the spindle "drop" as the yarns entwine.
9. When the point hits the floor, have him slip the plied yarn out of the hook, wind it clockwise, then re-wind it evenly around the shaft below the whorl. Re-thread and spin another length.

Using the drop spindle can be tricky at first, and it takes a bit of practice, but encourage him to keep trying. It'll get easier and easier each time he tries it, and once he gets the hang of it, he'll gain the confidence that comes from learning a new skill!

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