

Spirals

Shannon and Ian Jacobs

To make coils and springs with bottle plastic (PET) you need an empty cylindrical sprite bottle.



Cut a large flat rectangle of bottle plastic.



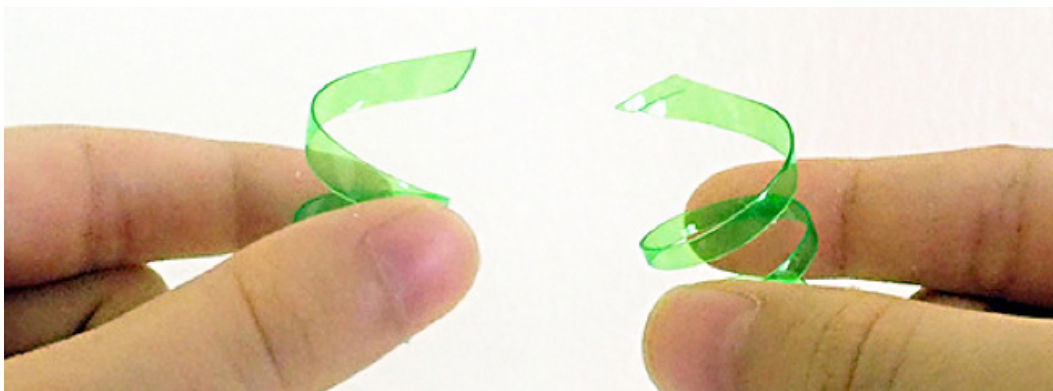
Cut narrow strips from the plastic rectangle along the dashed lines (at 45° to a vertical line on the bottle).

Fill a jug with water (a few cm from the top) and plug it in. The water temperature needs to be about 90°C. If you don't have a thermometer, boil the water and wait five minutes until it's cooled down a bit: still much too hot to drink, but not boiling.

Being careful not to get burnt, hold the end of a thin plastic strip with long scissors and dip it in the hot water.



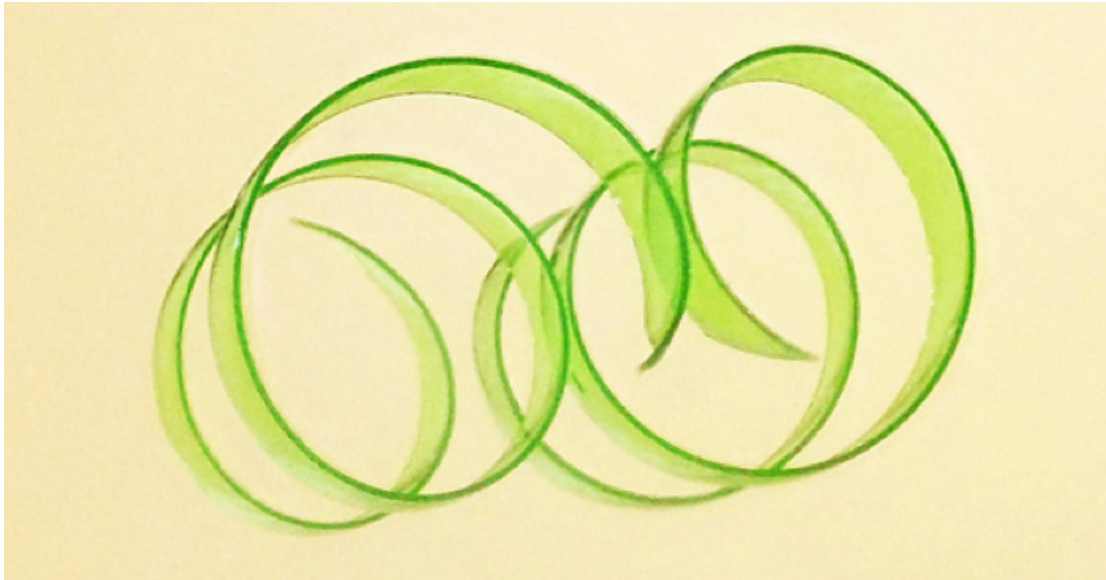
Take the plastic out of the water. If the water temperature was about 90°C the plastic will be coiled, like the strips below.



The plastic coils left or right depending on the angle along which it was cut from the rectangular sheet.

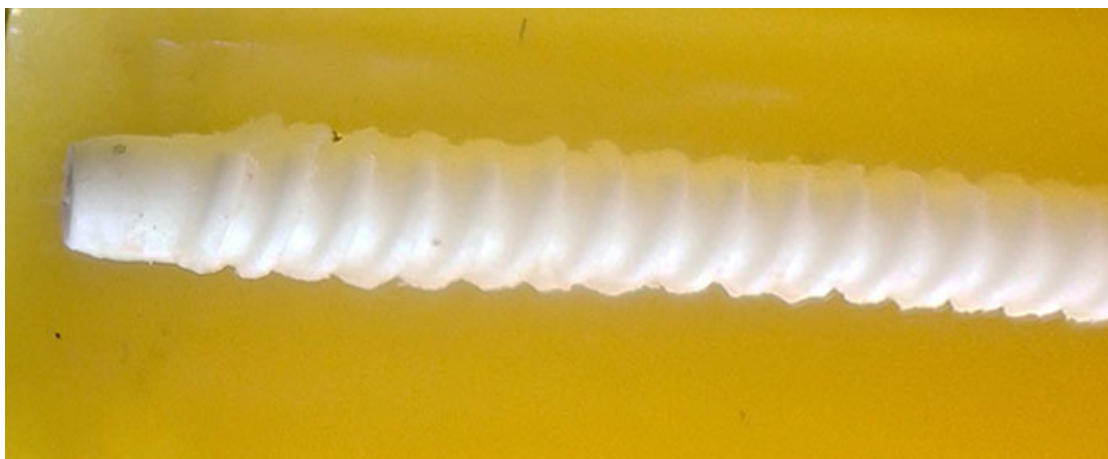
Left and right spirals

In the image below a left-hand spiral is on the left and a right-hand spiral is on the right.



Most wood screws and bolts have right-hand threads so workers and mechanics don't get confused. Wood screws go in when the head is turned in a clockwise direction.

A common exception to that rule might be hiding in your pencil case. The plastic shaft that turns along the axis of a gluestick has a left-hand thread.



As the base is turned clockwise the stick of glue is pushed *out*, not drawn *in*, as it would be if the thread up the middle of the glue was a right-hand thread. *Do that and think about it.*

Reflecting right-hand spirals (and right hands) in a mirror converts them to left-hand versions.



A right-hand coil in a my hand (on the left) becomes a left-hand coil in a left hand when reflected in the mirror.

Make a coil and do that yourself.