

# **How to make a pinwheel from a plastic milk jug**

## **Instructions & pictures**

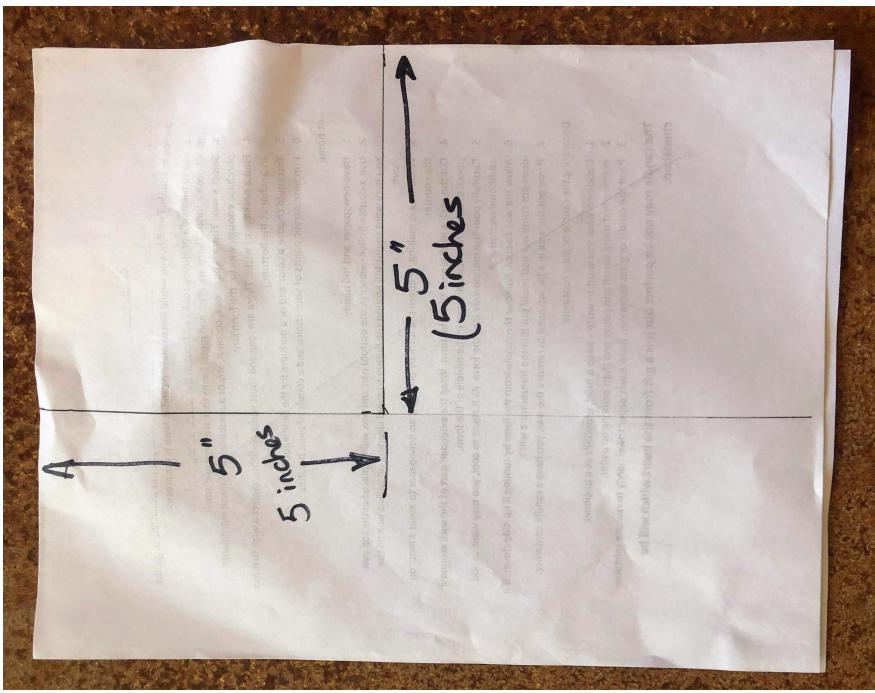
By Global Warming Express Mentor Beverly Williams

In My Light, on the fifth (including title page) two-page spread, the left-hand page talks about a dam and turbines and the right-hand page shows a picture of the turbine. The seventh two-page spread describes and shows wind turbines. The eleventh two-page spread describes and shows the turbines pushed by the steam made by heating water at coal-burning power plants.

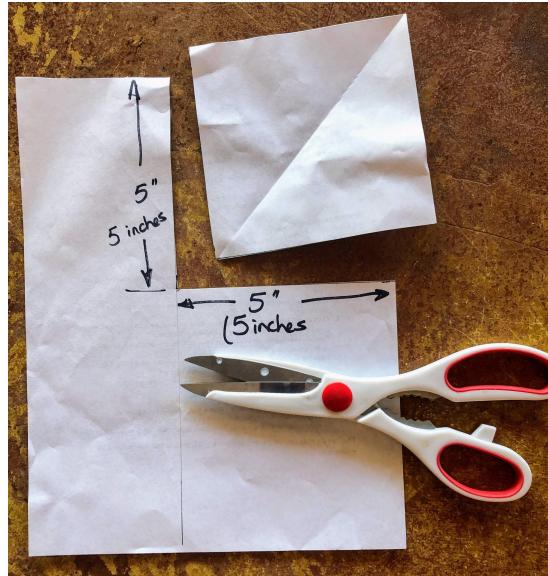
Pinwheels are facsimiles of turbines. Once children have made them, they can try them out in “wind” by blowing on them or running while holding them outside, or creating a “turbine field” outside the classroom. Then, you can have them place them under running water to simulate a turbine in a hydroelectric dam



Gather materials:  
milk jug(s), scissors,  
ruler, hole punch,  
sharpie, bamboo  
skewer with point,  
tape, scrap paper



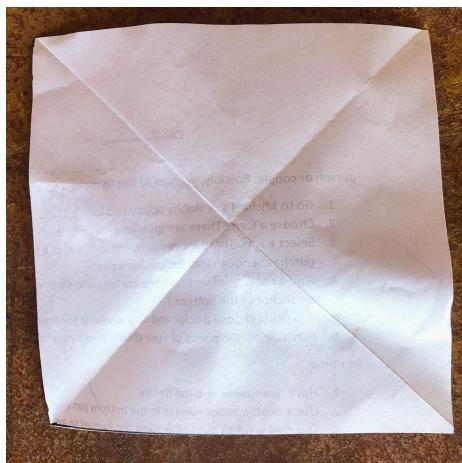
Measure a 5 inch by  
5 inch square on  
your scrap paper



Cut out square with scissors.

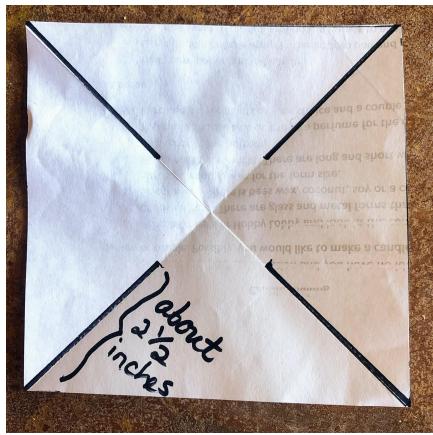


Fold square in half diagonally and then in half again on the other diagonal to make a triangle.



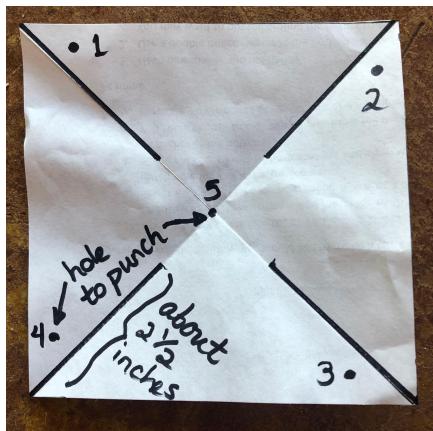
So that unfolded, it looks like this.

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Draw lines along the diagonals, each about  $2\frac{1}{2}$  inches long.

Draw five dots: one in center, and then one on only one side of each diagonal, as shown.



You now have a pattern for your pinwheels.

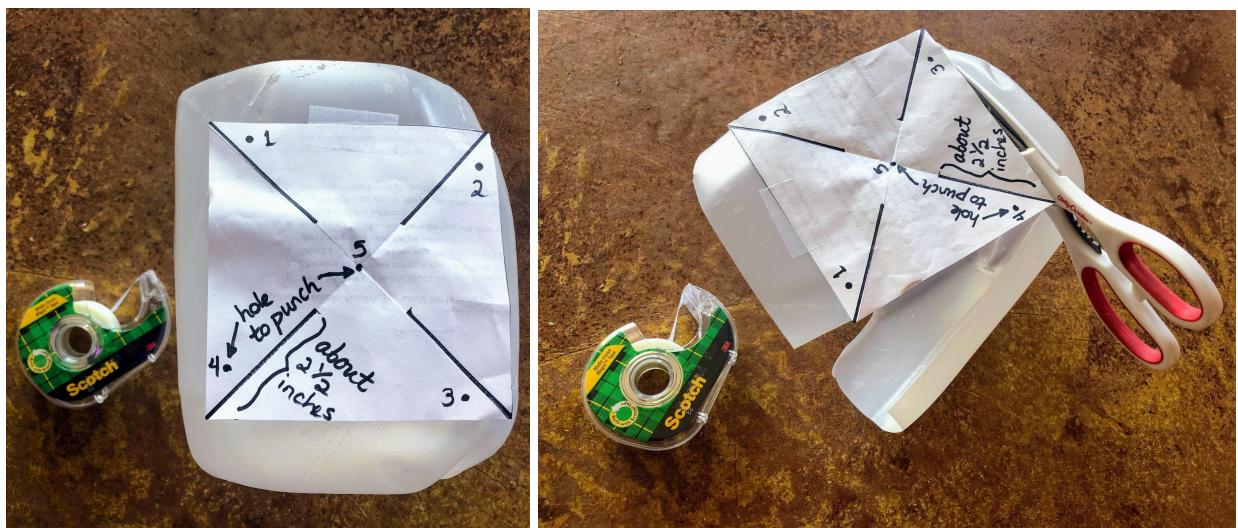
Time to cut the milk bottle. Pierce at the base of the handle with scissors and cut around to remove handle and spout:





Recycle or reuse the handle/spout.

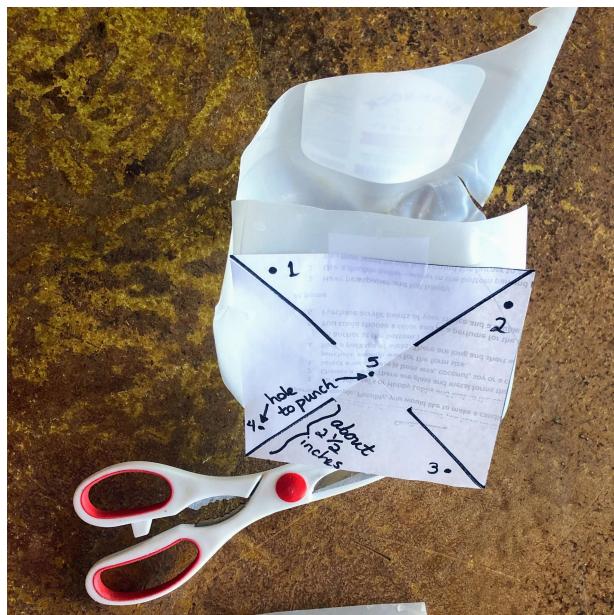
Tape the marked square onto one of the two bigger sides of the remaining milk jug bottom. Cutting around the pattern, cut out a square of milk jug.





Ta-Da! One square cut!

Tape on remaining side and following the pattern, cut a square from that side as well.

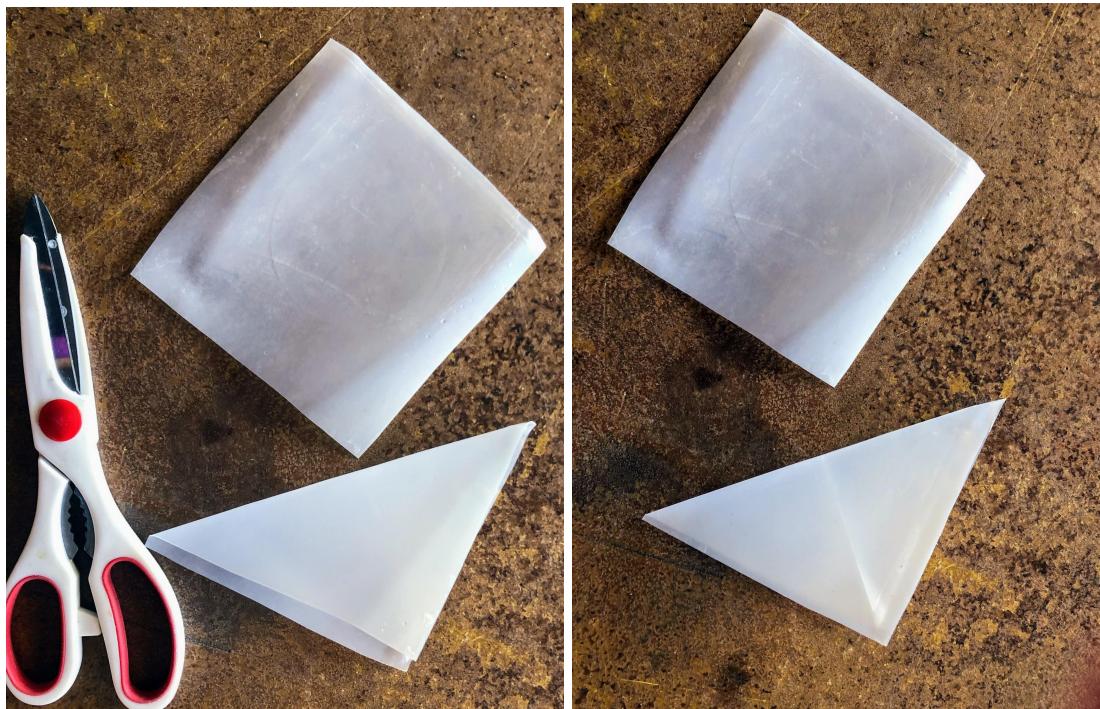




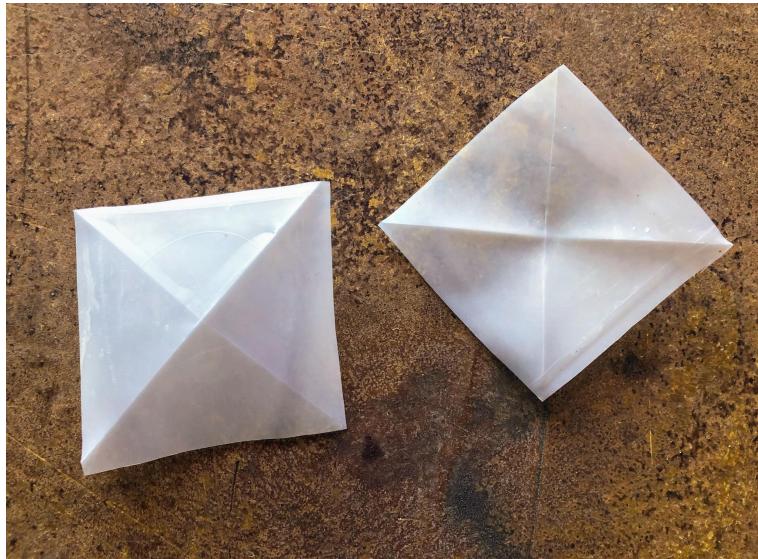
Now you have two squares cut from the milk jug.  
Congratulations!

(Please reuse or recycle the non-square pieces of the milk jug.)

As you did with the paper, fold each plastic square along the diagonals in both directions. You might need to press it hard with the side of your scissors to make a crease. This makes the next step easier.

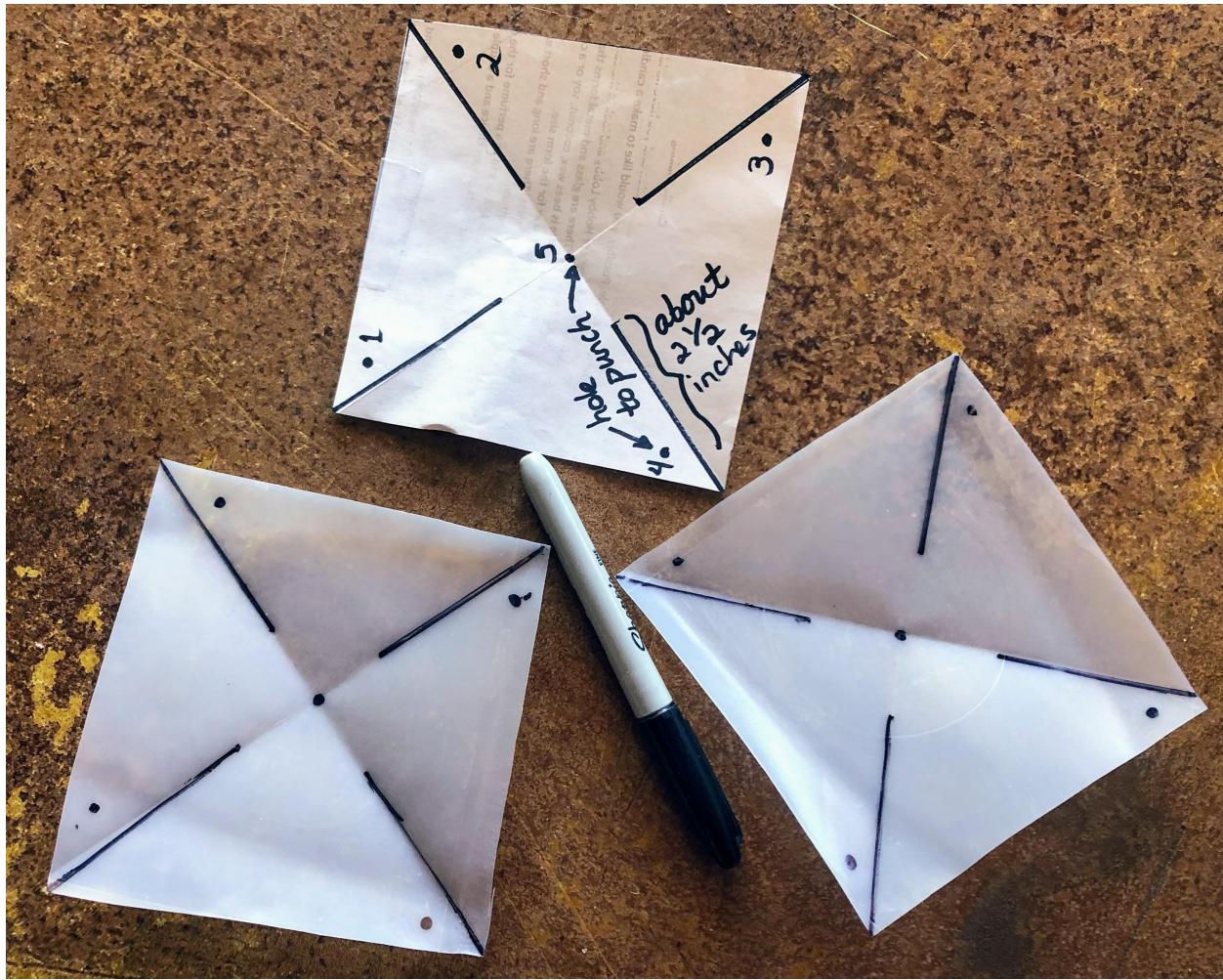


You can see mine is not perfect. Don't worry about making it exact.



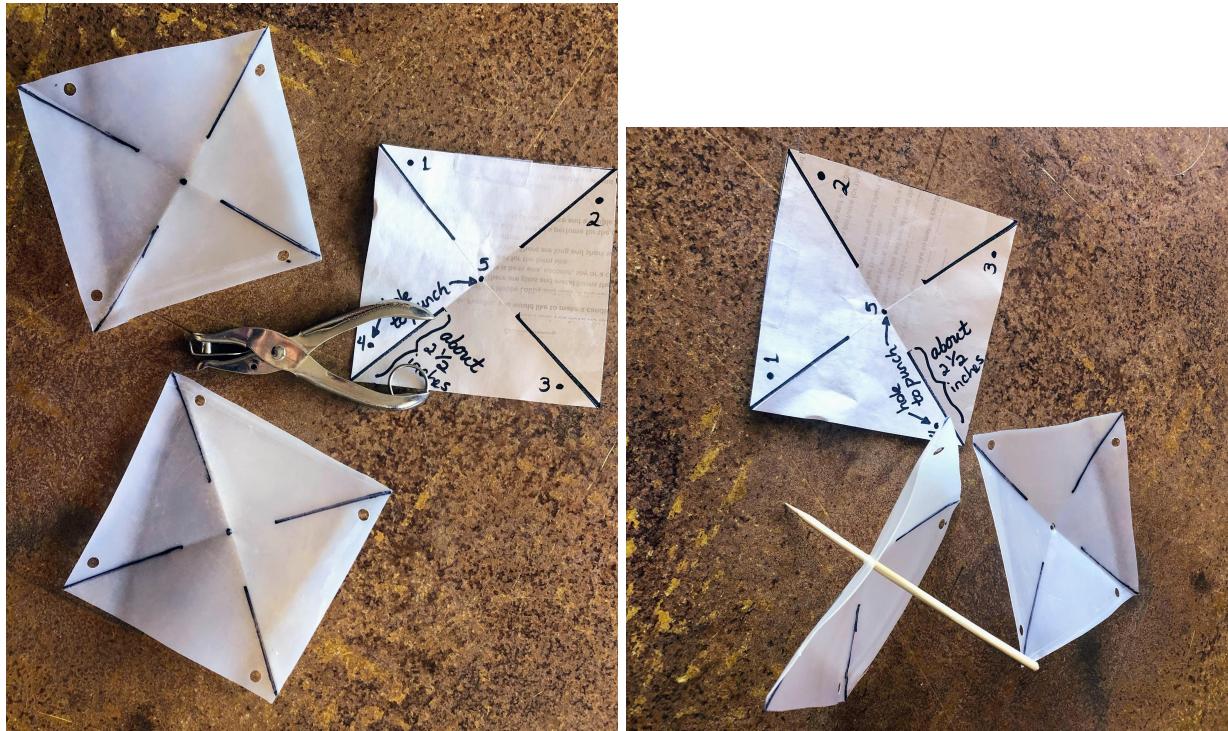
Once folded and creased, unfold and mark with  $2\frac{1}{2}$  inch lines along diagonals and dots for the holes as you did on the paper.

Once again, you can see I'm not exact. It's OK for this project to not be perfect.



Before you get to class, punch the holes with a hole puncher and pierce the center with a bamboo skewer.

(You DON'T want to have to punch holes during GWE and you certainly don't want a pointed bamboo skewer at your program.)



At your GWE program, have your children cut along the diagonals.

Provide each with pointless skewer (I cut the points off at home. I also only provide about 6 inches of skewer, not the full length--discourages sword fights...not that that has ever happened... ;-).

Thread like so (but use unpointed skewer! Yikes!):

