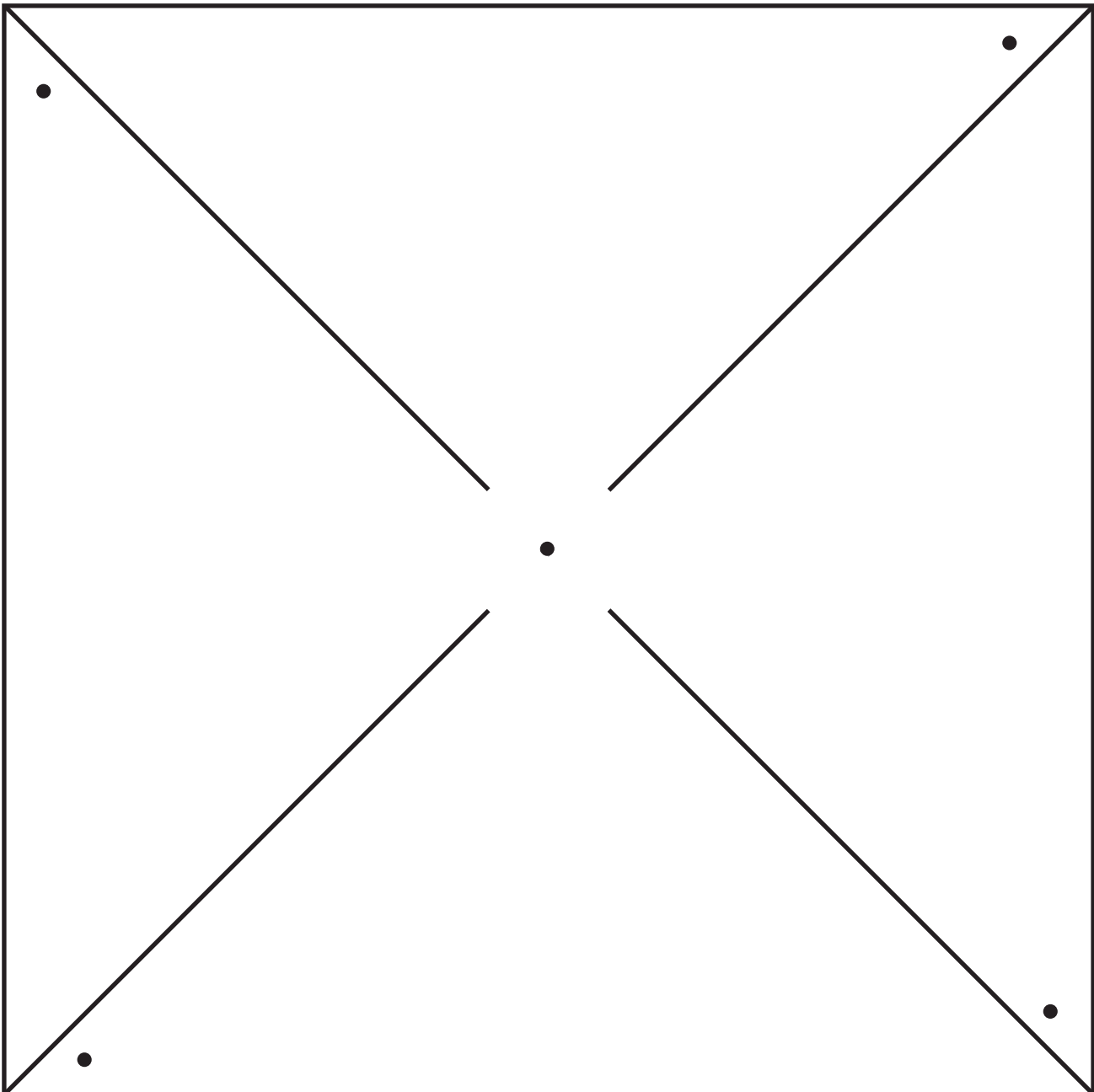


ADDITIONAL DOCUMENTS

Template: Making a Windmill

MATERIALS NEEDED:

- 1 empty water bottle (1.0 or 1.5 liter)
- Water, sand, or gravel (enough to fill bottle halfway)
- 1 large-diameter straw
- 1 small-diameter straw
- 1 brass paper fastener
- 1 sheet of card-stock (heavy) paper
- Ruler
- Pencil
- Compass, pen, etc. with sturdy tip (to puncture the paper)
- Scissors
- Tape
- ~1.5 meters of heavy thread

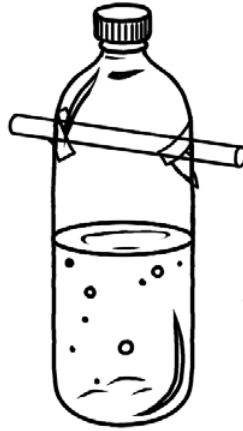


ADDITIONAL DOCUMENTS

Template: Making a Windmill

INSTRUCTIONS:

1. Cut two holes in your bottle for the large straw. Place them opposite each other and at least 16 cm from the bottom of the bottle.



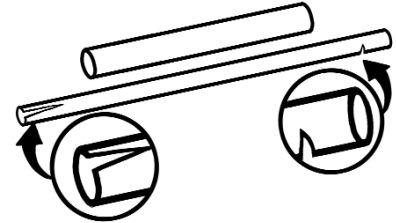
2. Fill your bottle 1/3 to 1/2 full with water or sand.

3. Cut the tip off your large straw so that it is 5 cm shorter than your thin straw. Center the large straw in the holes and tape it in place.

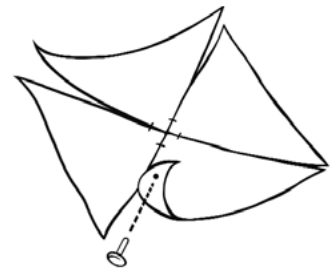
5. Cut out the square. Also cut along other solid lines.

6. Punch a tiny starter hole at each "•" (with a compass, pen, or other tool).

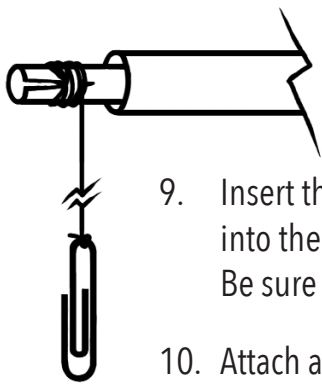
7. Gently flex each of the four corners toward the center. Put the brass paper fastener through each corner hole and then the center hole.



4. Cut slits at the ends of the thin straw.



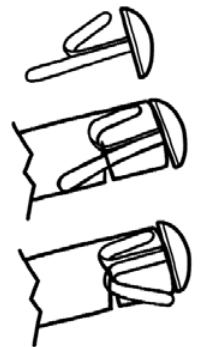
9. Insert the thin straw into the large straw. Be sure it turns freely.



10. Attach a thread to the other end of the thin straw.

11. Place your windmill near the edge of a table so the thread hangs free to the floor. Attach a large paperclip to the thread where it touches the floor.

8. Attach the pinwheel on the end of the thin straw. (First bend one prong of the paper fastener into a "U". Wedge it into the thin straw, with the straight prong through the slit. Then bend back that prong too.)



12. Make weights with pennies and small paperclips.

