

MAKING PINWHEELS

Teacher Preparation: Share pictures and information about pinwheels—toys that use wind to work. Ask students to share experiences they may have had with pinwheels or places they have seen them.

Be prepared to use electric fans or hair dryers if there is no wind to test the pinwheels.

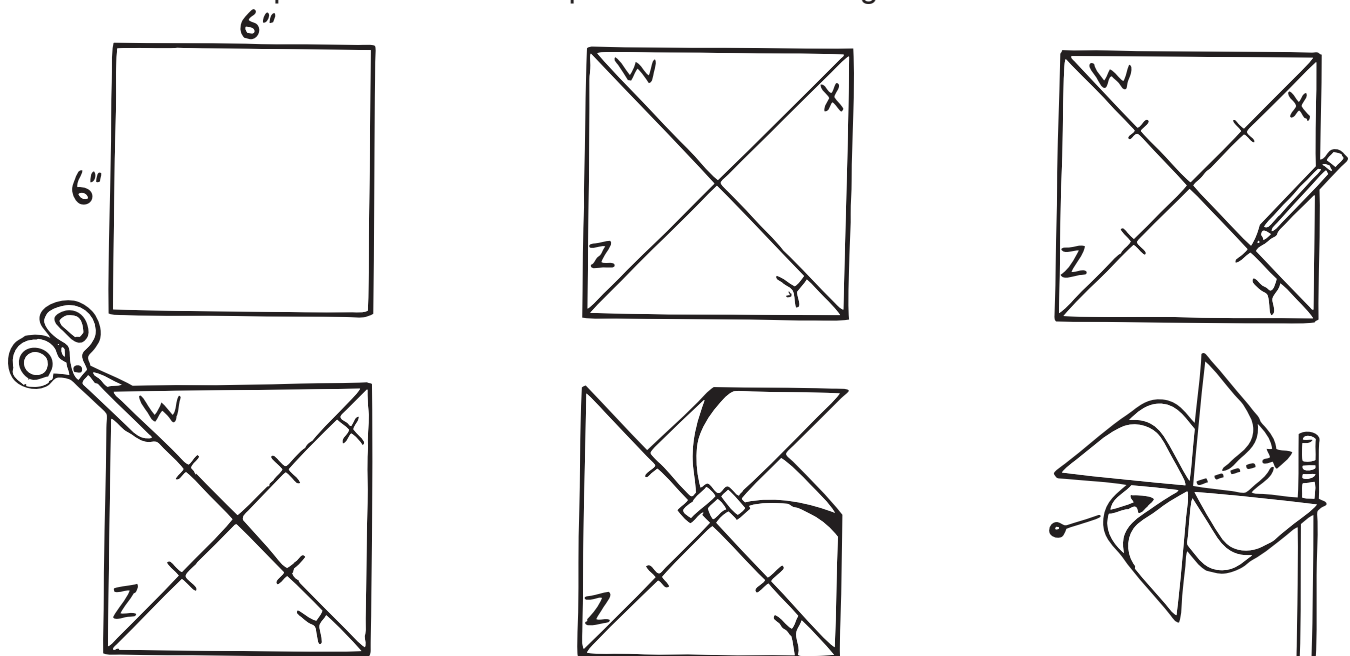
TEAM MATERIALS

- heavy paper
- large straws or pencils with erasers
- markers
- rulers
- scissors
- straight pins
- tape

Optional: Electric fans or hair dryers if needed due to lack of wind

MAKING A SIMPLE PINWHEEL

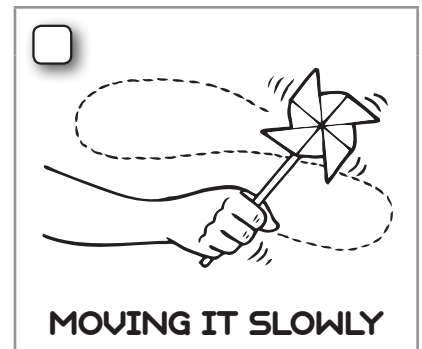
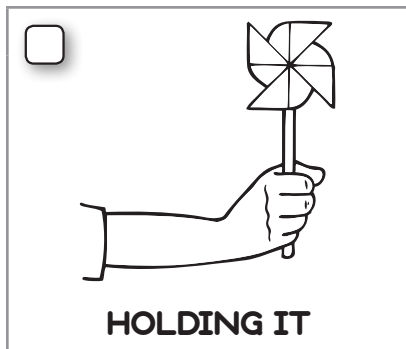
1. Use a ruler to measure a 6" square on a piece of heavy paper.
2. Cut out the 6" square. Draw two diagonal lines from the corners. The lines should cross, forming four right angles (90°) in the center of the paper.
3. Use the sample below as a guide when labeling the corners of the square. Each triangle should have the letter placed in the same angle. Label the first corner **W**, and continue with **X**, **Y**, and **Z**.
4. Use a ruler to measure 3" from the outer corners along each line.
5. Cut along each line to the 3" point.
6. Pull corner **W** down to the middle of the paper and tape it to form a loop. Then pull corner **X** down and tape it. Do the same with corners **Y** and **Z**. Do not fold the corners.
7. Push a straight pin through all the taped corners in the center of the model wheel and then stick the pin into the side of a pencil eraser or a large straw.



MAKING PINWHEELS

TESTING THE PINWHEEL

1. Take the pinwheel outside and hold it up into the air to see if the wind catches the loops and makes it whirl around.
2. Try running so that a moving stream of air created by your movement catches the loops of the pinwheel and makes them whirl.
3. Try standing in one place and slowly moving the pinwheel through the air in different directions.
4. Which of the three activities worked best for you today? Check the box for your choice.



Why? What were the wind conditions? _____

5. Use arrows to draw the direction of the wind towards your pinwheel in the box you checked that worked the best.

PINWHEEL ACTIVITIES

1. Work with a partner to try to get both of your pinwheels to move at the same time and speed. If the wind is not blowing, use a fan or a hair dryer.

Try different methods such as holding them side-by-side or back-to-back.

Which method worked best? _____

2. Try blowing on the wheels at the same time. Can you and your partner get both wheels moving at the same time and speed?

YES NO

How did you do it? _____

3. Use four different-colored markers to draw on the four sections of the pinwheel. Put the pinwheels in motion in the wind or with a fan. Be careful not to flatten or fold the loops.

What happens to the designs when the pinwheel is in motion? _____

MAKING PINWHEELS

JOURNAL ENTRY

1. Describe which method of moving the pinwheel worked best for you. _____

2. What method worked best, when working with a partner, to get both wheels moving at the same speed?

3. Draw the wind blowing your pinwheel in the frame:



4. Which direction did you get the wind blowing your pinwheel to make it work the best?

IN FRONT BEHIND ON THE SIDE ABOVE

5. What ideas did you get about making a pinwheel of your own design?

DESIGN PROCESS REVIEW—MAKING PINWHEELS

Share your observations, journal entries, and other documentation about your experiences in building and using your pinwheel with your classmates in a discussion led by your teacher.