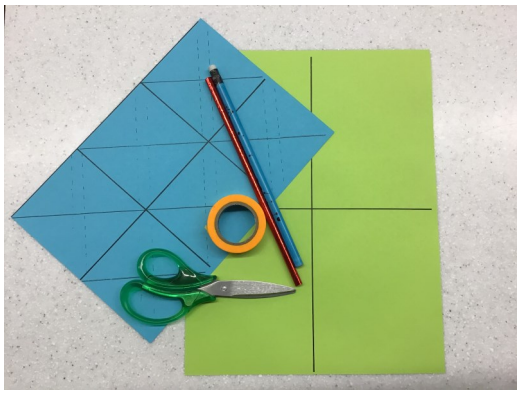
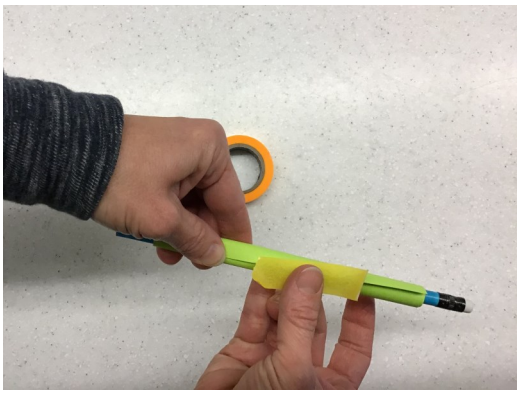
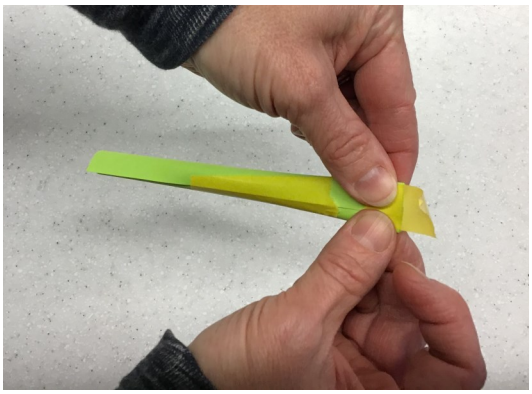
Paper straw rockets

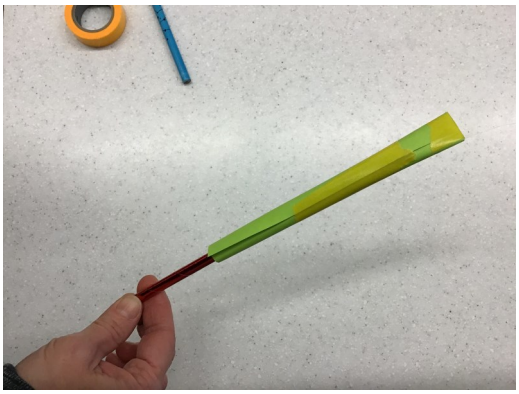
1. Follow the solid lines to cut 4 rectangles, use one per rocket.
2. Wrap one paper rectangle around a pencil to form a cylinder, with the long edge of the paper along the length of the pencil.



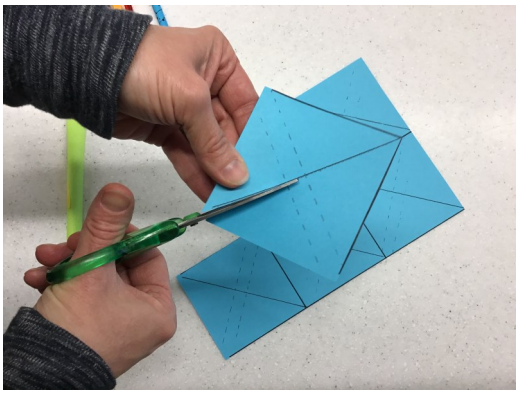


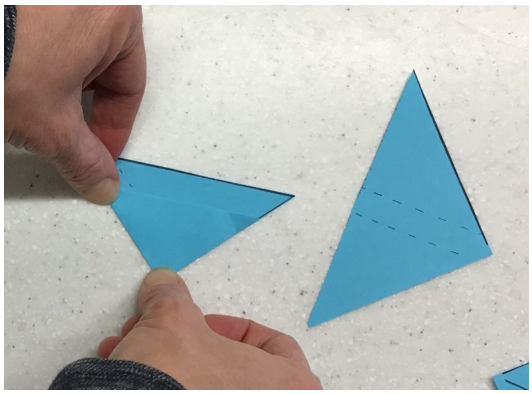
3. Tape the cylinder closed so it does not unravel (but do not tape it to the pencil).
4. Slide the cylinder off the pencil. Pinch one end of the cylinder shut and seal it with tape. (This is the "front" end of your rocket.) Leave the other end open.
5. With plenty of room in front of you- and no obstacles, such as furniture or people- prepare to launch your first rocket! Slide it over the paper straw.
6. Aim the straw forward, then blow into it as hard as you can. Watch your rocket as it flies. *How far does it go? *Does it fly straight or does it tumble in midair?



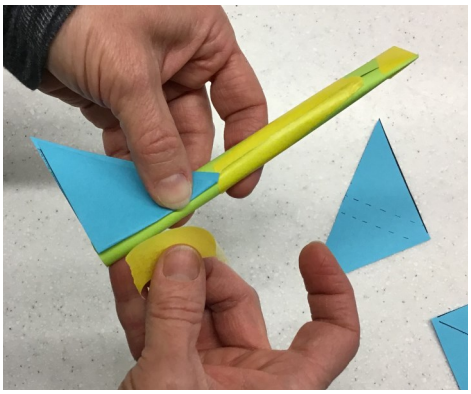


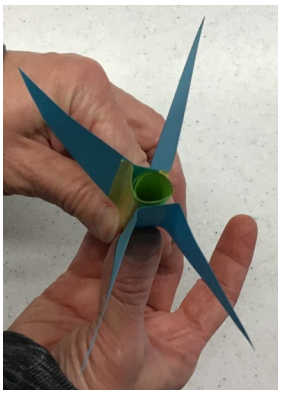
7. To add fins, cut out one square and cut it into 2 triangles.
8. Now, fold one triangle along the two dotted lines. The result should be two triangles sticking up in the air (the fins), with a flat part connecting them in between.

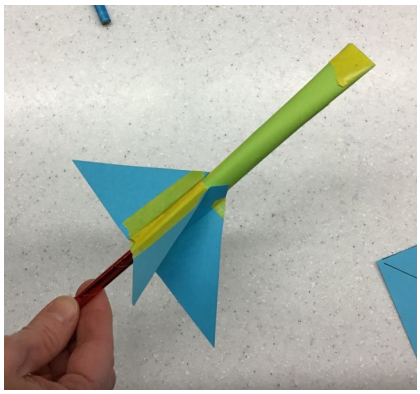




9. Tape the flat part to the side of your cylinder, toward the open end (the base, or bottom, of your rocket).
10. Repeat these steps for the other triangle, and tape it to your cylinder on the opposite side of the first one. The result should be four fins that form a "+" shape when you look at the rocket from either end. If necessary, bend the fins so they are spaced out 90 degrees apart from one another.







11. Slide the new rocket onto the drinking straw and launch it. *How far does this rocket go? How does its flight compare with your first 'finless' rocket? Does it go farther? Does it tumble or does it fly straight? Do you think fins help the stability of your rocket?*
12. Try other rocket designs and decorate your rockets if you wish!
    *Do you have anything around your house that you can add to the rockets?
    *How does that change the flight? Have fun!