Special thanks to Lourdes Rodriguez
for photography and videography skills.

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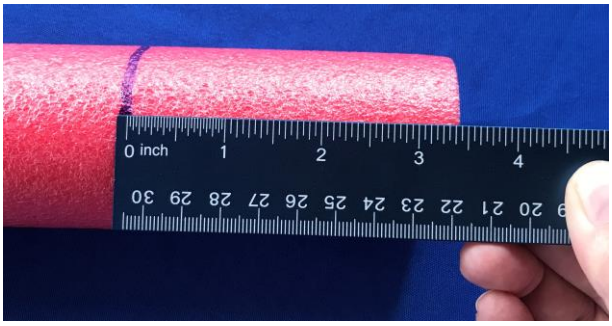
Pool Noodle Rocket

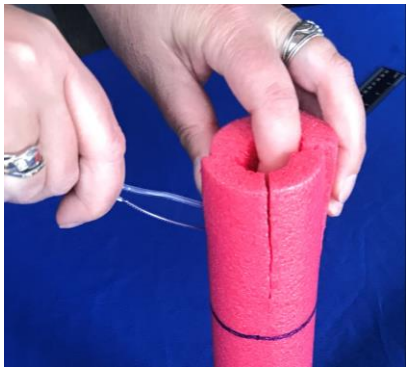
Adapted by Amanda McPherson, DaNel Hogan, and Kapua Ioane

Materials: Pool Noodle, Duct Tape, Assorted Rubber Bands, Scissors, Cardboard from cereal box (or similar), Sharpened Pencil, Plastic Knife, Rocket Fin Template, Ruler, Sharpie, String (not yarn or cotton), and a wooden bead or pony bead

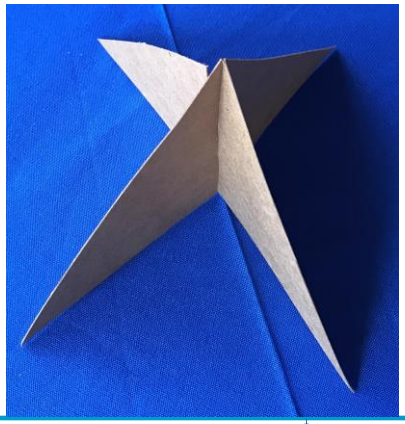
Directions:

1. Cut an 11” section of a pool noodle. Then, mark a line at 3.5” from one end. Cut four fin slits at 90 degrees from each other into the rocket body, as shown below.





2. Cut out the fin templates from cardboard from a food box (like a cereal box or similar. Then, nest them together as shown below on right. Insert the fins into the fin slits and secure with a rubber band around the end of the rocket body.



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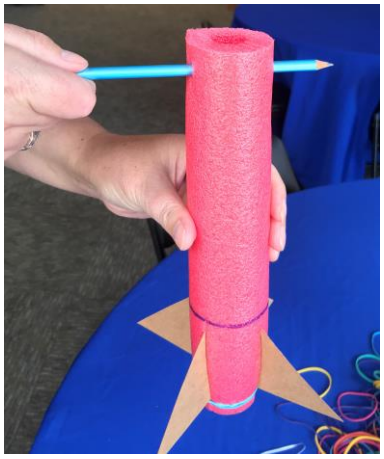
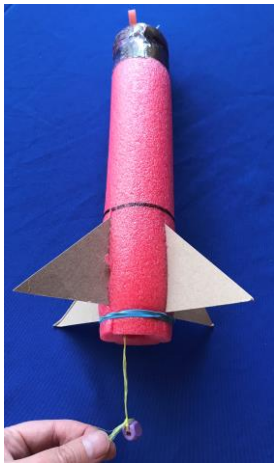
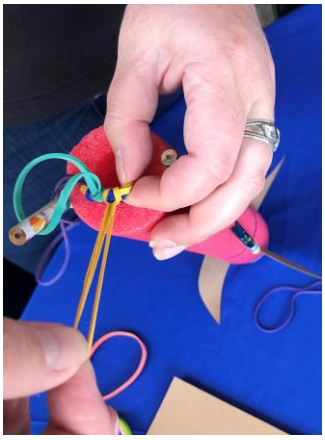
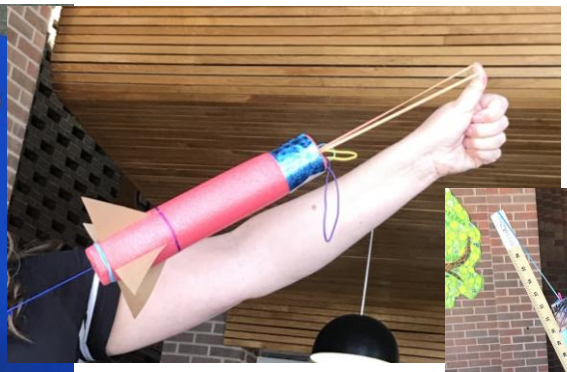
3. Stick a pencil through the top of the rocket body about one inch below the top. Feed a rubber band through the holes (attaching a paper clip to the rubber band makes this easier). Then put pencils or something else through the ends so they don't slip back through. Tie a 20" string to the middle of the rubber band as shown in second picture below. Then feed that through the rocket body and tie a bead to it with a double knot as close to the rocket body as you can get. Then loop rubber bands over the band going through the rocket as shown in picture on right below.



4. Finally, remove the pencils one at a time and loop the rubber band going through the middle up over the top of the pool noodle. Do this for each side. Then, secure the rubber bands around the top by adding a piece of duct tape. You are now ready to launch. Hook your thumb under one of the rubber bands at the top, pull back on the bead, and then release the bead to launch. It takes some practice to get it to launch right – be patient and keep trying! You can also launch it using a meter stick, as shown on right.



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Challenges

- How far can you launch your rocket?
- Can you improve the rocket design?
- Should the rocket body be longer? Shorter?
- Which rubber band is the best for launching the rocket?

Fin Template