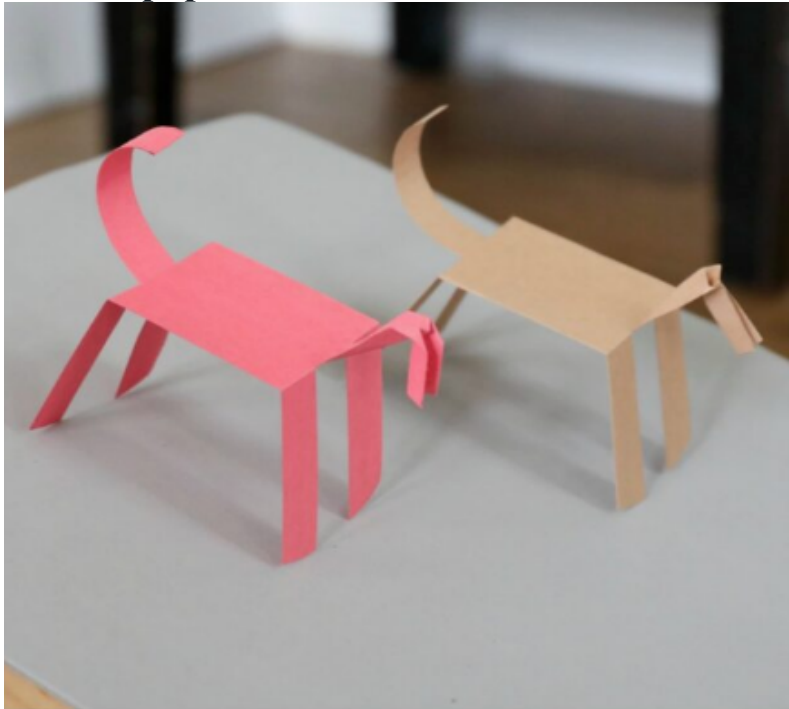


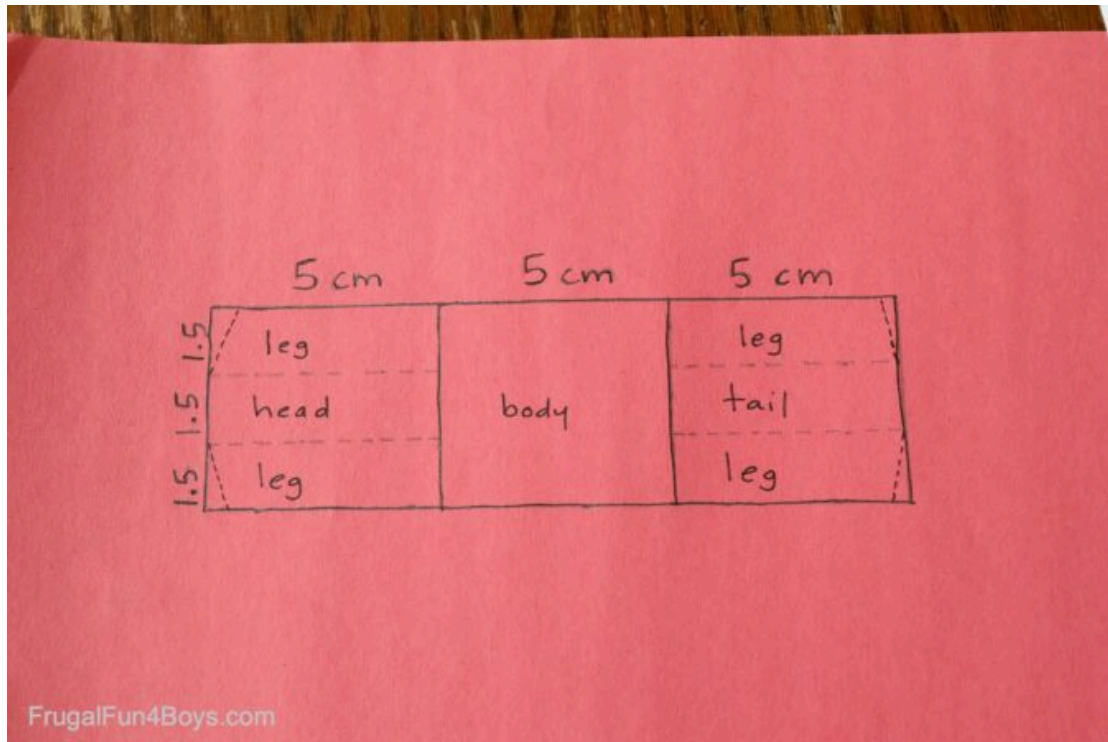
Make a paper horse that walks on its own!



The project takes a little fiddling, but it's SO FUN when you get your horse walking! Amazing!

This project has some really great PHYSICS LEARNING to it! Definitely a great STEM project.

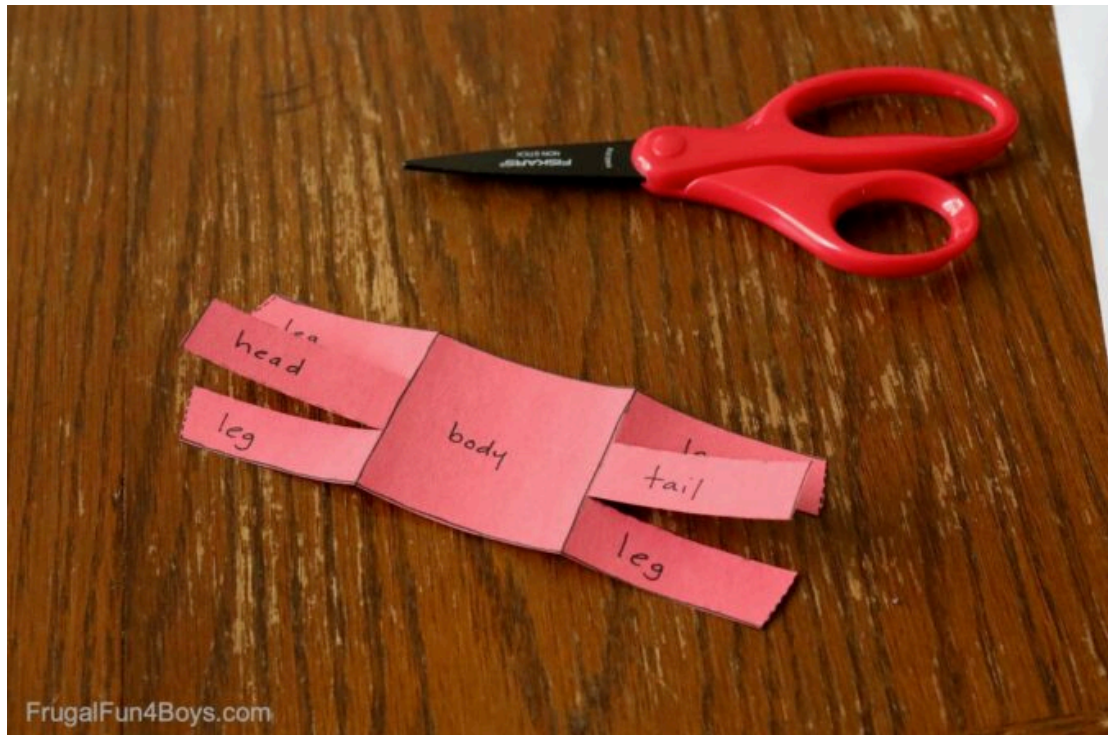
We made our horses out of paper. You can cut 2 or 3 out of one piece of paper.



Use a ruler to draw the shape below. Start with a rectangle that is 15 cm by 4.5 cm. Then divide it up as shown. Cut around the perimeter of the rectangle. Then cut the DOTTED LINES inside the rectangle.

The legs, head, body, and tail are labelled for your benefit, but you don't need to do that!

Cut out your horse as shown.



Curl the tail (I know horses tails aren't curled like that, but it seems to make it balance better) and fold the head.

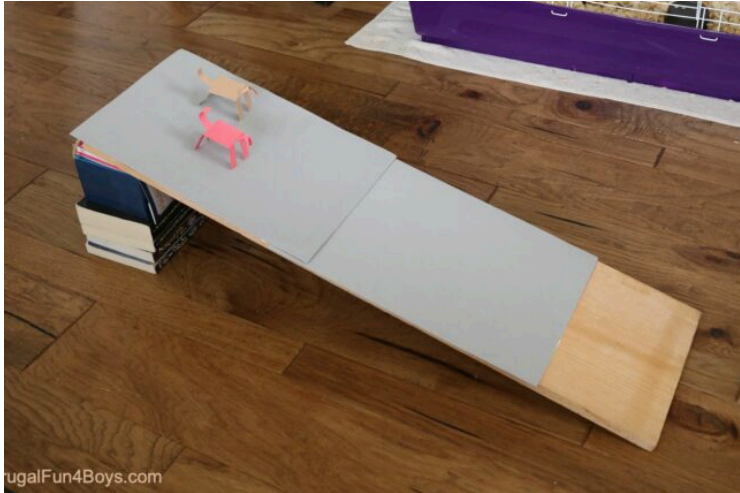


Now it's time to make your horse walk!

Here's how it works:

The paper horse walks by rocking back and forth on its curved feet. As the horse rocks from one foot to the other, gravity pulls the feet down the incline.

So it rocks to the right, and the left foot (which is no longer touching the board) moves forward. It rocks to the left, and the right foot moves forward.



The surface that the horse walks on is important! It needs to have enough friction, but not too much.

Try making the horse walk on paper, card or cardboard from a cardboard box.

Your ramp doesn't need to be this long! A shorter ramp will still allow the horse to do plenty of walking.

If you have problems:

If you can't get your horse to walk, make sure that the legs are nice and straight.

Try adjusting the height of the head. For whatever reason, our horse walked the best when his head was up high.

Adjust the height of your slope. If the horse won't walk, make it higher. If the horse tips forward, make it lower.

If your horse is not rocking back and forth smoothly, **try trimming the feet to make them rounded.** They should work like **rocking chair runners! The outside edge should be the highest point.**

(Taken from FrugalFun4boys)