

Turkey Balloon Race

Materials

- Balloons (turkey colored)
- Construction paper
- Feathers
- Stick on googly eyes
- String
- Straws
- Tape
- Clips

(Not included)

- Scissors
- Glue
- Anchor points - could be chairs, tables



When you blow up the balloon you are filling it up with air that is under pressure. When the air escapes from the balloon the escaping air exerts thrust or force on the balloon which propels it forward. The air escapes backward – the balloon races forward. Action – reaction. Or more formally known as Newton's Third Law of Motion.

NEWTON'S THIRD LAW OF MOTION: FOR EVERY ACTION, THERE IS AN OPPOSITE AND EQUAL REACTION.

During the Turkey Races you can play with physics by testing different directions of thrust. So what would happen if you hold the balloon really straight before releasing it? What happens if you pull down on the Turkey tail a bit before releasing? What if you pulled it to the side? It will be fun to see how it affected the travel of the Turkey down the line!

You can see physics in action and how the direction of the thrust altered the movement and travel patterns of the turkey.

Instructions

- The first thing you need to do is blow up your balloon and use a clip to close off the end so the air doesn't escape while you are decorating your balloon. It's best to twist the end before adding the clip to make it really airtight.
- Now decorate your balloon. You can add tail feathers, googly eyes, and some construction paper for the beak. You can use a combination of glue and tape to decorate your turkey.
- Set up your race course. To do this you need two anchor points.
- If your straw is a bendy straw, clip off the bendy part. Or if it is really long, cut it in half. You only need about 4 inches of length. Place the straw on a piece of string and tie it off on each of the anchor points. Pull the straw back to your starting point on your string (which ever anchor point you want to be the starting line), then tape your turkey to the straw.
- When you are ready to race, remove the clip while keeping the end firmly pinched in between your fingers to prevent air getting out.
- Then on the count of three, let go!
- Watch your turkey race to the finish! At the end it will look very silly.
- To reset, carefully blow your turkey back up, pull it back to the start, and release again!
- Try changing the direction of your thrust by releasing the balloon differently each time. Pull down a bit or to the side to see how your turkey would look like racing towards the the finish.
- Have fun!