Funabilism, better known as tightrope walking, is the skill of walking along a thin line or wire high in the air. Gaining popularity in the 1300s, it has a long history across many cultures as part of traditional festivals and celebrations. Some tightrope walkers use tools or props to help balance, while others are able to walk freehanded, using only their body for balance.

Congratulations!
You have been hired by Girlstart as a physicist to design a prototype of a tightrope walker that can balance on the high wire! Use your creativity and knowledge of forces and gravity to design a tightrope walker that can successfully make it across the line at the testing stations.

Design Your Prototype Here:

Which material(s) will you use to help your tightrope walker balance?

Does your tightrope walker do any tricks?

Design Tips to Consider:

- Will it be easier for your tightrope walker to balance holding a prop or move down the line freehanded?
- How can you adjust your prototype to move its center of gravity (the point all of its mass is centered around) closer to the wire?
- Which material can you use in your design to counteract torque, the rotational force that pulls tightrope walkers in a sideways direction off the wire?
- Does the mass of your prototype impact how easily it falls off the line?

Famous Female Funabilists:
- Spelterini was an Italian tightrope walker who was the first female to cross Niagara Falls on July 8, 1876 as part of a celebration of the U.S. Centennial. She crossed it three more times in the following two weeks, once blindfolded!
- Madame Saqui was one of the most famous tightrope walkers of the late 1700s. She often performed in the middle of fireworks, ran her own circus, and walked between the towers of the Notre Dame cathedral.
- The record for the longest highline walked by a woman is 728 feet long at 1,312 feet high by Mia Noblet in British Columbia, Canada on August 24, 2016.

Slacklining:
Slacklining is a popular hobby similar to tightrope walking that anyone can try! Slackliners balance along a suspended length of wide, flat webbing that is typically anchored between two trees about 2-5 feet above the ground. Slacklines have less tension than tightropes so they bounce and stretch allowing people to do tricks or use them as a source of exercise. Because slacklines are portable and easy to set up, you’ll often see slackliners practicing at a park or beach.

Materials:
- 1 pipe cleaner
- 1 straw
- 1 wooden clothespin
- 2 pieces of wire
- 2 washers
- Materials for decorating

Resources:
www.guinnessworldrecords.com
www.pinterest.com/pin/193936327677403202/

www.girlstart.org