

Science of Tension



Ever played tug-of-war? It's when two teams tug on the ends of a rope, until one team can pull the other team over to its side. Victory!

Tug-of-war isn't just fun — it's also a great example of **tension** in action.

What's tension?

Tension is the pull force of a rope, a cable, or even the pull strings and elastic from your crate.

A rope at rest is slack, loose, and kind of noodly-looking. But what about when you tug on a rope that's attached to something on the other side? The pull force from your hands moves through the whole rope, and the rope becomes **taut**. **That's tension at work.**

If you pull hard enough, you can use the tension in the rope to move something (or someone!) **toward** you. That's how you can win a game



of tug-of-war! Can you think of other places we use tension to lift or move things?

eggy faces

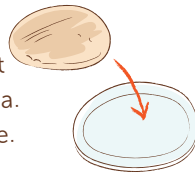
Tension isn't just good for tugging – try this recipe to use a pulled-tight string like a knife!



You'll need:

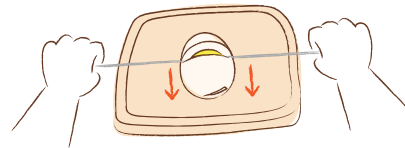
- pita
- hard-boiled egg
- assorted veggies (like shredded carrots, avocado slices, cherry tomatoes, or celery sticks)
- plate
- waxed, unflavored dental floss
- string cheese (optional)
- salt and pepper

- 1 Ask a grownup assistant for help toasting the pita. Place the pita on a plate.



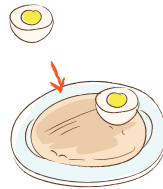
- 2 Place the egg on a hard surface. Hold the dental floss tightly between your hands, then push it through the egg to slice it in half.

CUTTING WITH TENSION



Make sure to pull the floss really tight, and go slowly to make a clean cut!

- 3 Use the two egg halves to add eyes to your pita face.



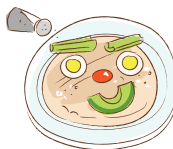
- 4 Add veggies to complete your face.



How about . . .

- shredded carrot hair?
- a cherry tomato nose?
- any other veggies you like!
- celery stick eyebrows?
- a sliced avocado mouth?

- 5 Sprinkle with salt and pepper to add freckles, then eat and enjoy!



Dental floss can slice through soft cheeses, too. Try it with some string cheese!