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## Candle seesaw

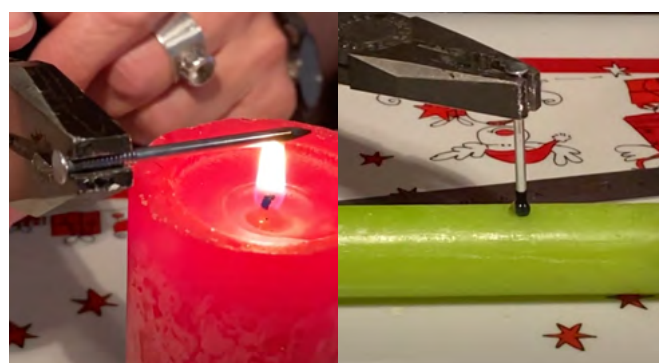
We're reaching the darkest time of the year. But it is also a time for coziness and candlelight! And a few exciting experiments will make those long winter evenings go by much faster. Whenever doing experiments with candles, you should always have an adult with you to make sure nothing goes wrong. And if you have long hair, it's best to tie it back and make sure you don't get too close to the flame.

### What you'll need:

- a straight candle
- a cut-resistant surface
- a knife
- a ruler
- a nail
- a wooden skewer or knitting needle
- a second candle or tealight
- a pair of pliers to hold the nail
- two cups or glasses of equal height
- a protective surface to catch the melting wax
- matches or a lighter
- a fire blanket, just in case

### Instructions:

- First of all, prepare the candle so that you have a wick at each end:
- Place it on a cut-resistant surface. At the end without a wick, cut all around the candle using the tip of the knife, and then simply pull away the bottom piece of the candle.
- Measure the candle with a ruler and make a mark in the center using the nail.
- Light the second candle, and heat the nail in the flame while holding it with the pliers. Use the candle to poke a hole in the center of the candle, without pressing too hard. Heat the nail again and make the hole a little deeper, repeating until it goes all the way through (in the middle of the candle you'll have to get past the wick; this may take a while, but don't press too hard or the candle will break).
- Push the wooden skewer through this hole.
- Now you'll need a fireproof environment like the kitchen sink, and an adult to help you.



- Place the two glasses on the protective surface that will catch the dripping wax. Balance the wooden skewer across the two glasses.
- If you want a gently rocking seesaw, place the wooden skewer on a rough surface so that it is resting on two points on each side (example with the grey cups). If you want a wider range of movement, the skewer should have as little contact with the supporting surface as possible (example with the glass). For maximum movement, the candle should be short enough that it does not reach the surface below it.
- If the skewer is positioned exactly at the center of the candle, it should now be close to horizontal. If it isn't, you'll need to remove some wax from the heavier side.
- Now light both ends of the candle.
- If it still hasn't started moving after some time, you can give it a gentle tap at one end.
- When the flames get close to the middle of the candle, blow them out.



#### What happens and how does it work?

- As the candle burns, wax begins to drip off.
- The candle will start to rock (if it doesn't, you can give it a gentle tap).
- More wax drips off the end of the candle that is pointing downward. The position of the flame in relation to the candle also changes, melting even more wax, which flows off the candle. As a result, this end becomes lighter.
- The lighter end rises, and the heavier end dips. The same thing happens again: more wax drips off the end pointing downward, so it becomes lighter and rises once again.
- And so on and so on.
- You can see the wooden skewer turning on the glass. The smaller the point of contact between the skewer and glass and the smoother the surface is, the more freely the skewer is able to move, allowing the candle to rock further.

