



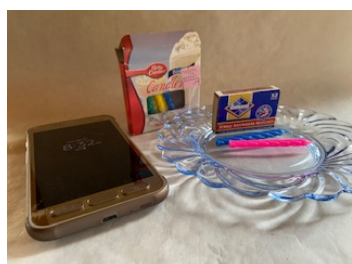
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Birthday candle investigation

Remember your favorite birthday? The cake and the candles were always a memorable part of that special day! Remember the cake being carried to the table with the candles blazing away? The question today is: how long does a birthday candle burn? Now to be sure, we are talking about the small think TRADITIONAL birthday candles that come in the little box! You will need two birthday candles (all I have are the bigger, spiraled ones), matches and a plate for a base. Because you need candles, this is something you need to do with an adult. Light one candle and drip some wax onto the plate. Quickly place the second candle upright in the melted wax to secure it, so it stays upright. You will also need some kind of timer. You can use the stopwatch on your cell phone or watch or maybe you have a stopwatch. Even old “retired” cell phones will work, if they still have a charge. Once you have some way of timing the candle, all that remains is to PREDICT how long a birthday candle takes to completely burn. A prediction is your best guess. Write your prediction down. Be sure to label your prediction, so you know whether it is minutes or seconds that you are predicting. Get everyone in the family involved. Call a couple of friends or relatives and record their predictions. Once everyone has made their prediction, light the test candle and start the stopwatch. Keep watch of your investigation, both for safety and because you need to watch for the exact time that the candle burns to the bottom. Record that number from the stopwatch. How long does it take? Is the answer seconds or minutes? Which person’s prediction was the closest to the actual time? If you have different sizes of birthday candles, try them all, predict for each and compare. Candles with wicks have been around since Roman times beginning about 500 BC (or BCE). These were dipped candles and made from tallow (animal fat) or beeswax. Paraffin or wax candles are newer. Before candles, people used oil lamps in which a wick rested in a container. Enjoy this scientific investigation of birthday candles!



1 Birthday candle supplies



2 Candle in place



3 Light candle & start timer



4 Stop timer when flame gone