



# Let's Crash the Bottle by Air Pressure



**Let's crash the bottle by chemistry power!**



**Point**

**Air pressure**



**Material**



- Aluminum bottle (Big )
- PET bottle (500mm)
- Hot water (90°C)
- Working glove



## \*Preparation for MAGIC\*

- 1 Pour hot water in the aluminum bottle (about 3cm deep)



- 2 While the bottle is open, shake and warm it up for 20 seconds.



- 3 Throw away the water.



- 4 Close the bottle tightly and quickly.



**\*Let's do MAGIC\***

1	Bring the bottle in front of the audience. Act as if you will crash the bottle using telekinetic power!		
2	Wait for seconds ...bewitched!		
The time before the bottle will crash after closing it is approximately 20–30 seconds. So you still have time to act like a magician!!!			

## \*Progress\*

Let's try it with any PET bottle. How about big cans? Can you guess what happens to PET bottle when warm up?

		
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### 💡 Information



- 💎 The amount of air pressure in the ground is about 10 tons per 1 m<sup>2</sup> (1kg per 1cm<sup>2</sup>).
- 💎 You cannot feel the air pressure in the atmosphere.
- 💎 The steam in the bottle became water vapor when it became cold after the bottle is closed. Air pressure inside the bottle becomes less than the air pressure outside so it was crushed by the greater air pressure.
- 💎 The water can be crushed more by adding more hot water which is not less than 50° Celsius..

