



Pressure Around Us

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What is pressure?

Pressure is how much something pushes at a given point on a surface.



Changing Pressure Activity

Decreasing Volume

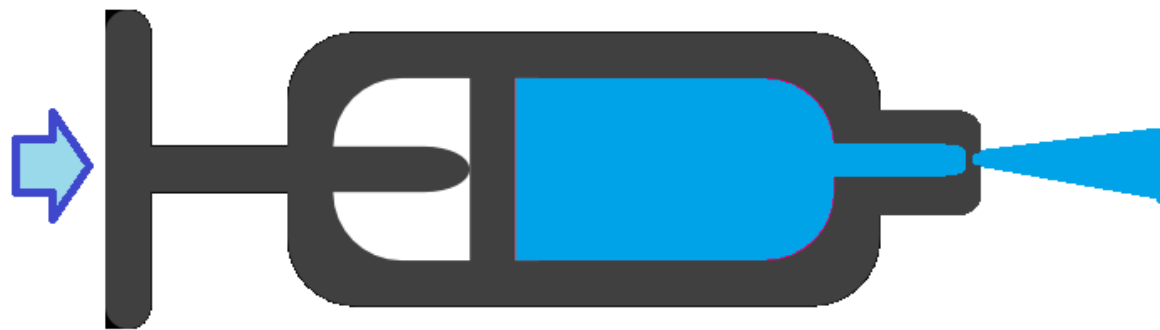
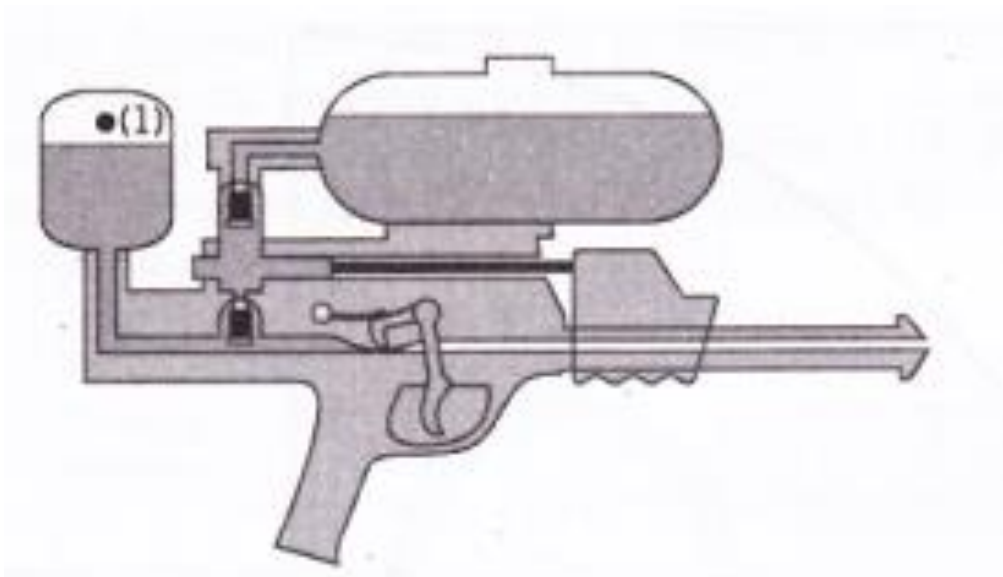
<https://www.youtube.com/watch?v=UOwH18YdN7s>



Water Guns



Water Guns



Increasing Air Particles

https://www.youtube.com/watch?v=OTpsR-d_sOc&t=12s



Adding Heat

<https://www.youtube.com/watch?v=4rPMikN5fR4&t=27s>



DEMONSTRATIONS

Wood Vs. Newspaper

Poking Bottles

Upside-down Flask

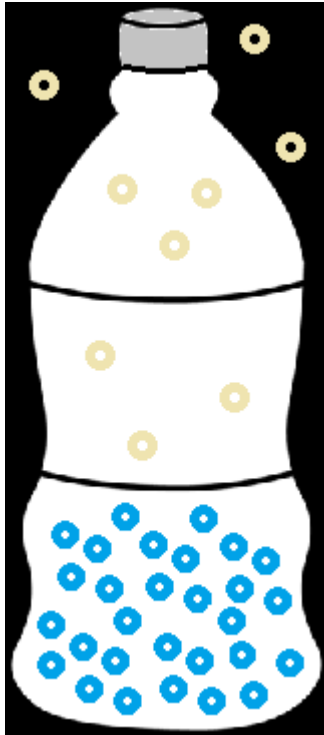
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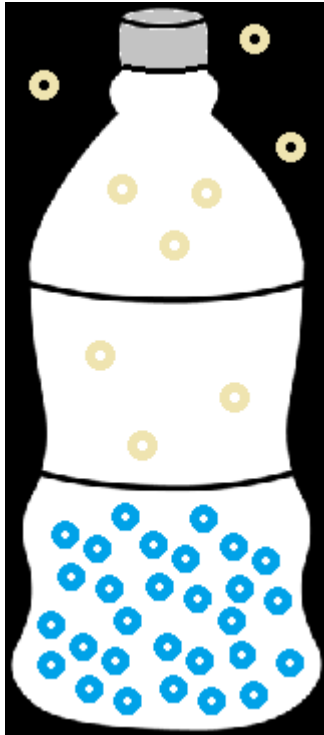
Poked Bottle



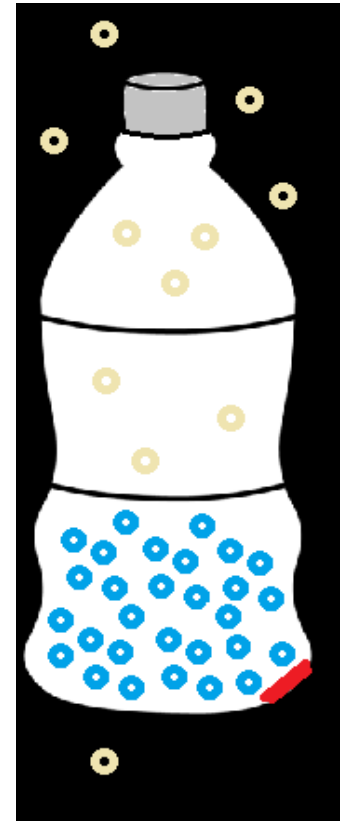
Poke a Hole



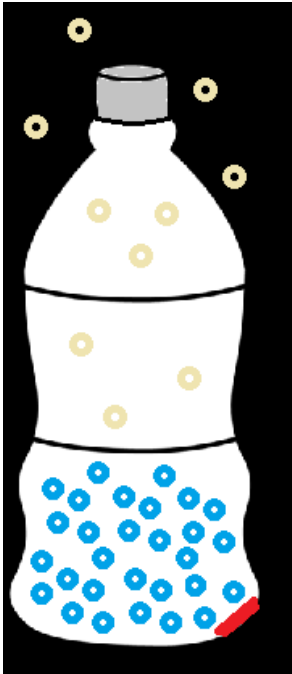
Poked Bottle



Poke a Hole



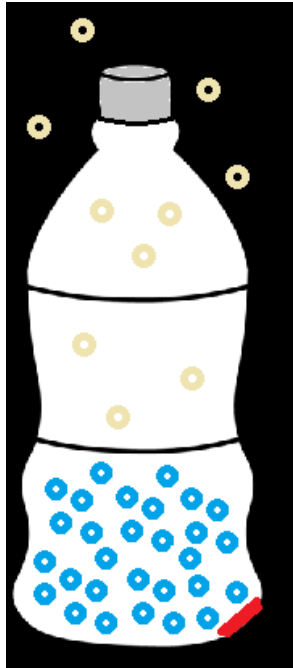
Squeeze Bottle



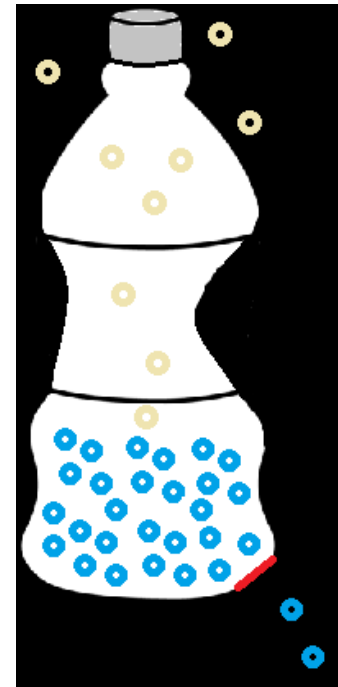
Squeeze the Bottle



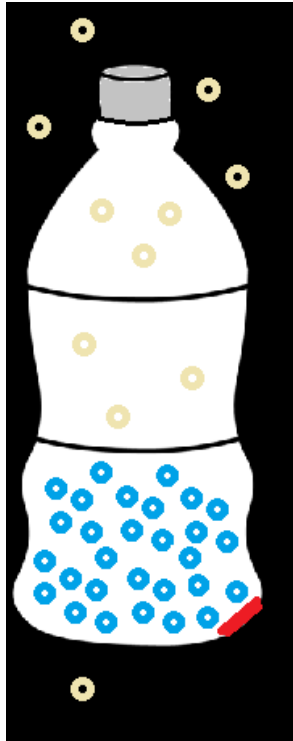
Squeeze Bottle



Squeeze the bottle



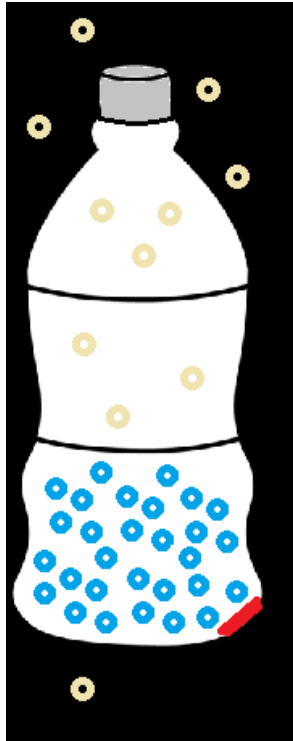
Open Lid



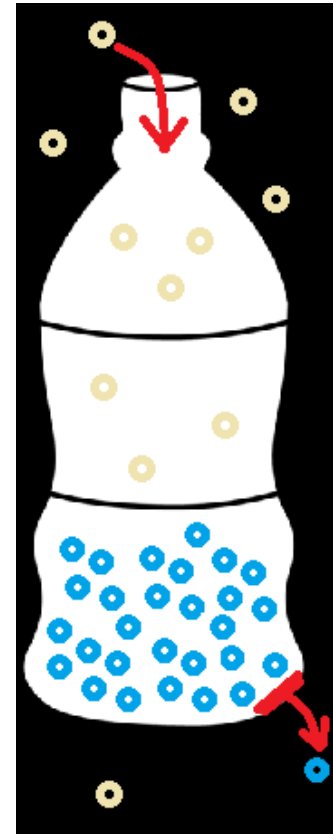
Remove the cap



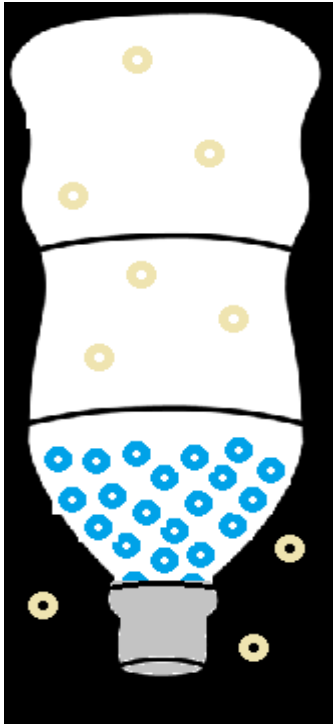
Open Lid



Remove the cap



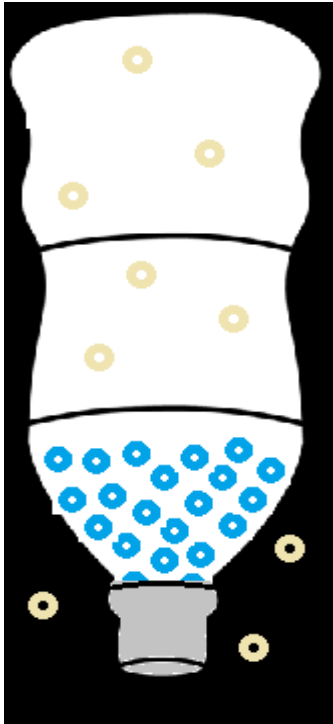
Larger Holes



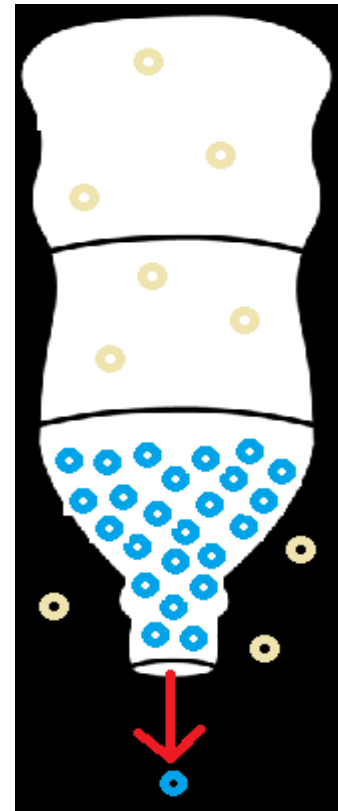
Remove Cap



Larger Holes



Remove Cap



DEMONSTRATIONS

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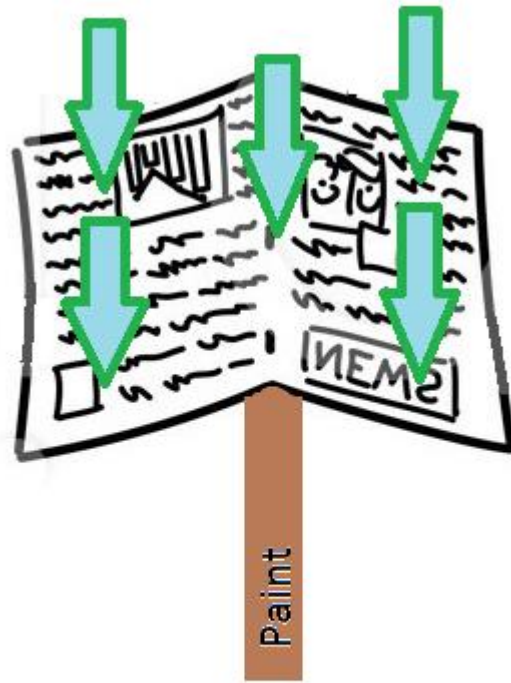
Poking Bottles

Upside-down Flask

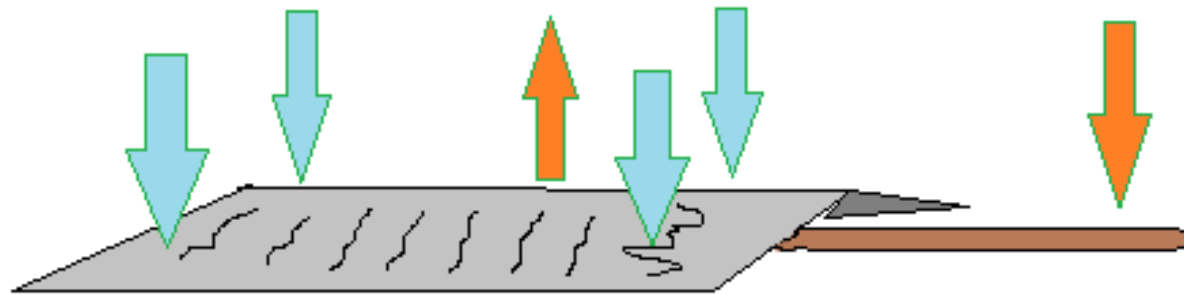


Atmospheric Pressure!

Atmospheric Pressure



Atmospheric Pressure



DEMONSTRATIONS

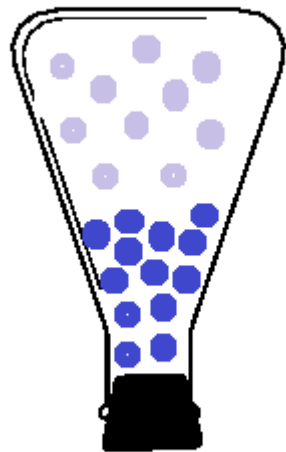
Wood Vs. Newspaper

Poking Bottles

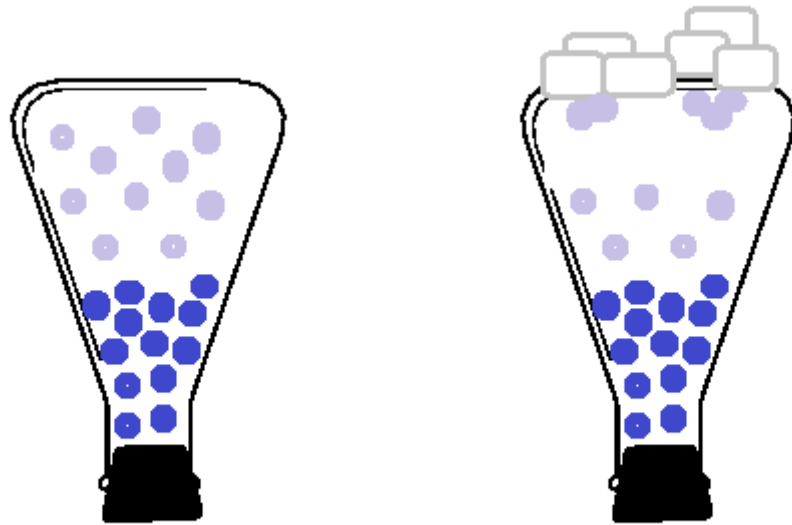
Upside-down Flask

Vapor Pressure

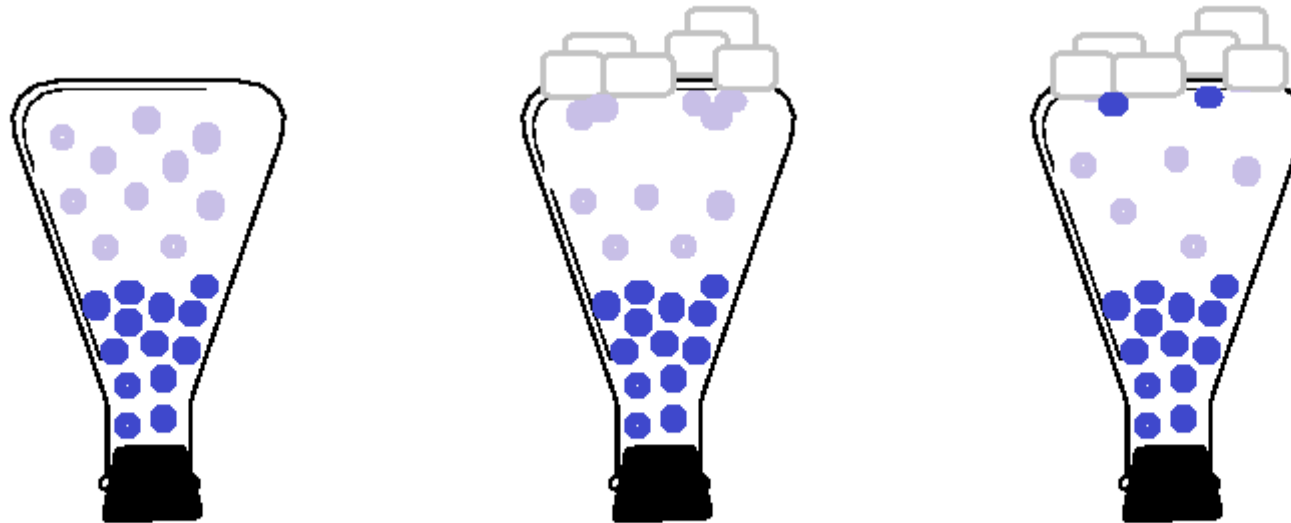
Higher Pressure




Lower Pressure

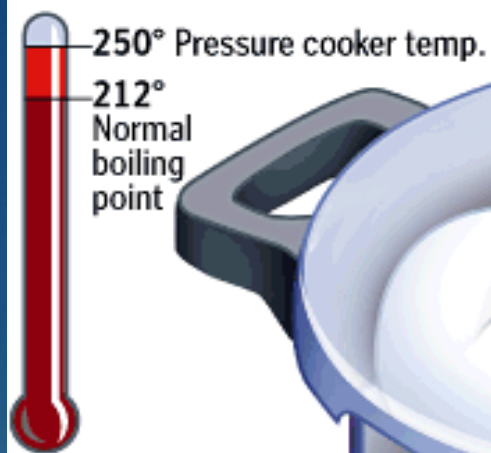


Lower Pressure



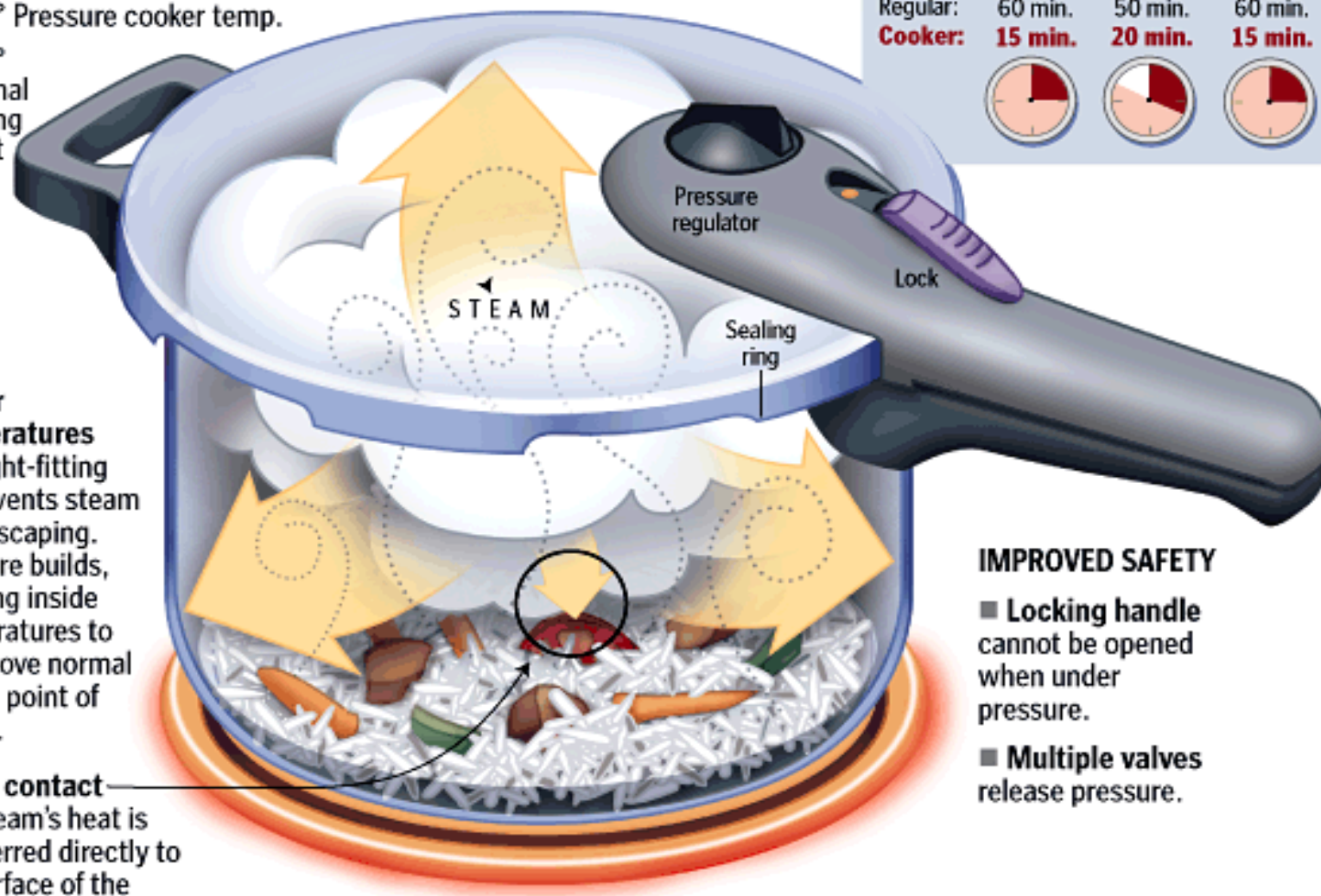


Application: Pressure Cooking



1 Higher temperatures
The tight-fitting lid prevents steam from escaping. Pressure builds, allowing inside temperatures to rise above normal boiling point of 212°F.

2 Direct contact
The steam's heat is transferred directly to the surface of the food.



COOKING TIMES
(approximate)

	Whole chicken	Brown rice	Black beans
Regular:	60 min.	50 min.	60 min.
Cooker:	15 min.	20 min.	15 min.



IMPROVED SAFETY

- Locking handle cannot be opened when under pressure.
- Multiple valves release pressure.