

### Concept Definition

Study the primary definition of this concept, broken into general, basic, and advanced English definitions. Also see the mathematical definition and any requisite background information, such as conditions or previous definitions.

#### General Science

Pressure always wants to be the same inside and outside.

#### Basic

Different pressure areas will try to equalize.

#### Advanced

Regions of different pressure will always move towards equilibrium, where possible, such that the pressure is the same on both sides of a barrier.

### Mathematical Definition

### Background Information

#### Ideal Gas

An "ideal gas" is a gas in which:

- All collisions are totally elastic (particles always bounce off each other)
- There are no intermolecular attractions (a particle can only change direction when it collides with another particle)
- The molecule is infinitely small (particles will come all the way together before they collide)

What does this mean? An ideal gas is a collection of bouncy-balls.

### Real World Application

Discover processes or disciplines in the natural or man-made worlds that employ the concept.

Soda can explodes: pressurized  $\text{CO}_2$  inside the can goes to the relatively low-pressure in the room.

Balloon pops: air pressurized by the stretch of the balloon goes quickly to the low-pressure in the room.

Gun fires: super-hot air behind the bullet pressurizes very quickly, has to expand to the low-pressure of the room, does so by shoving the bullet out in front.

### Vocabulary

Learn important vocabulary for this concept, including words that might appear in assessments (tests, quizzes, homework, etc.) that indicate the use of this concept.

Important Vocabulary	Term	Context
	Flexible	
	- a flexible barrier	

### Computer Animations

Experience computer simulators or animations that illustrate the concept discussed here. Many simulators or animations come with worksheets for use in class.

[http://phet.colorado.edu/simulations/sims.php?sim=Balloons\\_and\\_Buoyancy](http://phet.colorado.edu/simulations/sims.php?sim=Balloons_and_Buoyancy)

[http://www.bqlearning.org/ospdb/ospSearch.php?physlet\\_id=168](http://www.bqlearning.org/ospdb/ospSearch.php?physlet_id=168)

## Summary

Read a summary of the concept, indicating the enduring understanding students should retain after class.

Summary

Pressure on two sides of a barrier or membrane will push or pull until they are equal.