

## SCUBA Web Quest and Infographic Project

### Introduction:

You work for a diving company and need to develop an informational poster that lets new divers know the dangers of SCUBA diving. You will be researching SCUBA diving and creating a poster that uses the gas laws such as Dalton's Law, Henry's Law, Boyle's Law, Charles' Law, Gay-Lussac's Law, and the Ideal Gas Law to explain what happens to divers when they SCUBA dive.

### The Task:

1. Determine what SCUBA stands for and how it works
2. Define the terms: "The Bends", oxygen toxicity, air embolism
3. Research the physiology, symptoms, and treatment of "The Bends", oxygen toxicity, air embolism.
4. Determine which gas law(s) apply to Scuba Diving
5. Create an Informational Dive Poster for your Dive Shop.

### Resources:

Gas Laws <http://www.chemtutor.com/gases.htm>

The chemistry of scuba

<http://www.chm.bris.ac.uk/webprojects2001/meeraus/physicallaws.html>

The Bends and decompression sickness <http://adventure.howstuffworks.com/outdoor-activities/water-sports/question101.htm>

Oxygen toxicity <http://www.howstuffworks.com/question493.htm>

Pressurized Gases

<http://science.howstuffworks.com/framed.htm?parent=question493.htm&url=http://www.iantd.com/rebreather/phys.html>

Scuba 101 [http://scuba.about.com/od/scuba101/Scuba\\_101\\_Learn\\_to\\_Scuba\\_Dive.htm](http://scuba.about.com/od/scuba101/Scuba_101_Learn_to_Scuba_Dive.htm)

Diving in Antarctica [http://www.ecophotoexplorers.com/antarctica\\_diving.asp](http://www.ecophotoexplorers.com/antarctica_diving.asp)

Scottish Diving Medicine [http://www.sdm.scot.nhs.uk/scuba\\_diving/](http://www.sdm.scot.nhs.uk/scuba_diving/)

Marine Medical Systems [http://marinemedical.com/articles/scuba\\_response.htm](http://marinemedical.com/articles/scuba_response.htm)

### Grading: Total points possible: 25 points

- Defines SCUBA and explains what is involved in breathing underwater) (5 pts)
- Contains "The Bends", Air embolisms, Oxygen Toxicity. (5 pts)
  - Definitions Physiology Symptoms Treatment
- Explanation of chemistry of behind the danger, specifically using **one or more gas laws** (5 pts)
- Interesting and appealing graphics (5 pts)
- Notes page that shows the information you gathered having to do with SCUBA diving including Resources (5 pts)