

# Gas Pressure, Water Pressure

## PreTest



1. One day after a snowfall you walk outside and find your feet sink into the snow. You go back inside and put on snow shoes like those shown in the picture above. You find you can then walk on top of the snow. Explain using science words how the snowshoes help you to walk on top of the snow.

---

---

---

---

---

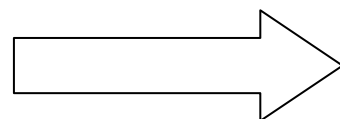
---

---

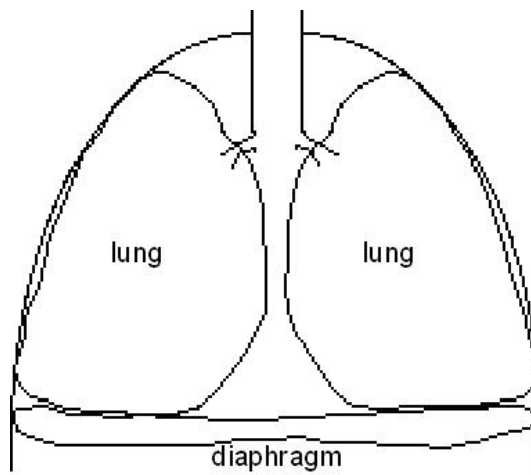
---

---

---



2. What happens to the size of a balloon as the air pressure increases when you drive down a mountain?
- A. The balloon will get bigger.
  - B. The balloon will get smaller.
  - C. The balloon will stay the same size.



3. The figure above shows the diaphragm and the lungs in the human body. Describe how the diaphragm and lungs work together to get air INTO the lungs.

---

---

---

---

---

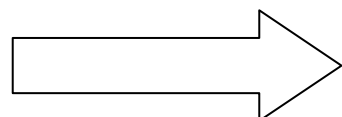
---

---

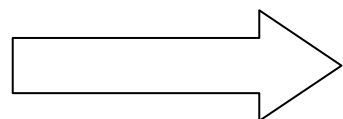
---

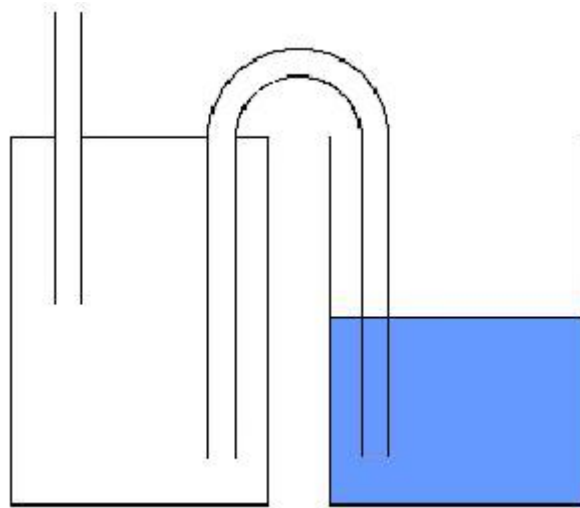
---

---



4. A small flotation device contains 400cc of air at a pressure of 150kPa. The device is compressed, changing its volume to 200cc. What is the pressure of the air in the device if the temperature does not change? Show your calculations.





5. A U-shaped tube connects an air-filled sealed jar with an open glass of liquid. The sealed jar has a straw coming out of the top. If you sucked on the straw, what do you think would happen to the liquid?
- A. Once all the air is sucked out of the sealed jar, the liquid will begin to move up the U-shaped straw and into the sealed container to replace the air.
  - B. Nothing will happen to the liquid because the two straws are not connected, so sucking on the straw does not affect air pressure.
  - C. Sucking on the straw will lower the air pressure in the sealed container. The liquid will move up the U-shaped straw and possibly into the sealed container.
  - D. Air bubbles will form in the liquid at the base of the U-shaped straw, but the liquid will not move.

