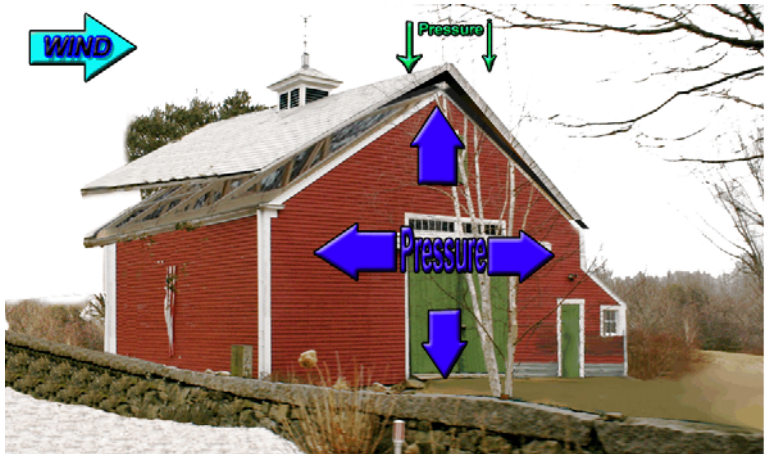


# Bernoulli's Principle

Bernoulli's principle says when the speed of a fluid increases, the pressure exerted by the fluid decreases. This means, for example, that if the wind is blowing, smoke will rise faster in a chimney than in still air due to the decrease in pressure above the chimney. A more serious example is high wind damage. High winds in a hurricane can reduce the pressure over a house causing a roof to come off.

It may seem that during a big storm, the wind just blows the roof off, but it's not that simple. First of all, the wind does not need to get *under* the roof to blow it off. So what really happens?

Air pressure inside and outside the house presses equally in all directions during calm weather. The forces are balanced. When it is windy, however, the pressure above the roof decreases, while the pressure inside does not. As a result, the pressure inside the house becomes greater than the pressure over the roof. The forces become unbalanced. This causes the roof to come off.



Answer the questions below based on the reading above and on your knowledge of physics.

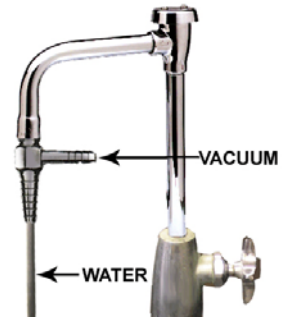
1. The diagram to the right shows a faucet aspirator. When the water is turned on, it creates a vacuum. How does it work? \_\_\_\_\_

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2. You blow between two pieces of paper that are hanging down as shown to the right. What happens? Explain. \_\_\_\_\_

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3. Why do houses often lose a roof during a high wind? \_\_\_\_\_

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