The Squished Cup: Is Water Pressure Unidirectional or Omnidirectional?

(Reinforcement Activity)

The picture below is a "before and after" shot of a Styrofoam cup that was brought to a depth of 1770 ft. in the waters off the Gulf of Mexico on September 28, 1994. Have your students carefully examine the picture. Then ask the discussion questions.

Before **After**

Follow-up Questions for Class Discussion

- What do you notice about the cup that was brought underwater? *(It is squished in from all sides.)*
- What might have caused the changes that you notice? *(Water pressure.)*
- Does this suggest that water pressure behaves unidirectionally or omnidirectionally? *(Omnidirectionally.)*
- Do you think that water pressure is analogous (similar in key respects) to air pressure? *(Yes.)* Why or why not? *(Its molecules exert pressure in all directions.)*