Bone is the primary component of our skeletal structure.  Without the skeletal structure, the human body would not be able to achieve its specialized locomotion.  Our bones and teeth share a comparable structure and makeup.  Therefore, by testing dentin, the results are nearly identical to the results of actually testing bone.  Most scientists believe that the structure of dentin is similar to a substance such as honeycomb, which compress when pressure is exerted.  Others may argue that it is a completely solid with very little or no elasticity.  We hope our project will give insight into the answer of this problem.

Problem:

To determine an improved model for structure of dentin based on the velocity of sound through dentin under pressure.

Hypothesis:

If pressure exerted on the dentin increases, then velocity of the ultrasonic waves traveling through the dentin will increase because the density of the medium will increase.