The general public has numerous common misconceptions about the science in everyday life. My introductory physics students explored this intersection of science with society by researching a common misconception, performing a survey, and creating an educational website (see instructions attachment). The students chose a topic from a list of common misconceptions to research (see questions attachment). One such student explored the idea of the speed of sound in different media (air, water, and steel). After researching the chosen topic the student came up with a question to test an individual’s ideas on the misconception and three follow up questions to challenge the common misconception to see if the student can directly affect the outcome of the misconception. The same student above asked the following questions:

1. Does sound travel fastest through air, water, or steel?

2. In some movies, people can be seen putting their ears to a rail to hear a train coming, even though there is no train in sight. Why is that?

3. Why do closely stacked dominoes fall faster than dominoes that are spaced farther apart?

4. If you have ever rested your head on your hand and placed your elbow on a table you could easily hear if someone was tapping their hand or pencil on the other end of the table immediately, as well as loud and clear. Why is that?

This student was able to get 14 of the 20 people surveyed to get the correct answer compared with only 6 before the follow-up questions. After researching and performing the survey the students presented their research and study in a non-traditional format by using weebly, an educational site, to develop an informative website. This educational website was evaluated based on the given attached assessment sheet.

This was the first semester having the students perform this project. The students seemed more interested in the project due to the creation of the website. There were also many students showing surprise by the common misconception. For example, a student showed disbelief that the majority of people surveyed thought the sky was blue due to the reflection of the oceans. The students are currently providing feedback on the project to be incorporated into future semesters. The major concerns which need to be addressed in the future are the emphasis on the basic science of each misconception, more oversight to the exact survey questions and in-class time for personal feedback on the site development.

The example above showed the ideal outcome from this project. That is, the student directly related the misconception before and after the follow-up questions, which was not prevalent in the majority of the class. I have included the list of webpages for all the students in my physics classroom.