

Running Head: ALTERNATIVE ASSESSMENT IN HIGH SCHOOL PHYSICS

ALTERNATIVE ASSESSMENT IN THE SECONDARY PHYSICS CLASSROOM

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Alternative Assessment in the Secondary Physics Classroom

Assessment is an area all teachers deal with and must take seriously as these assessments determine whether or not a student has met proficiency in a subject area. In recent years, assessment has meant high stakes standardized tests as chosen by the state. Students must take these tests, usually in either on paper or on computer. The student performance then determines if they are proficient enough in the core content areas. These standardized tests have come at much resistance from teachers as the tests do not work for all students and the fear of teachers having to teach to a test. When comparing teachers from Mississippi to Tennessee, Vogler (2008) found that in Mississippi where a high stakes test is graduation, 83.2% of teachers spent class time preparing students for the test with 61.9% spending more than two months preparing for the test. The Tennessee teachers, where a high stakes test is given but not required, 54.8% of teachers used class time to prepare for the test and 14.1% used more than two months to prepare for the test.

The reasons for these standardized tests not working as well range from cultural differences to differences in cognitive abilities. This is especially true if the student has a documented disability that requires alternative forms of assessment. For these students, who would not benefit from a standardized test, a form of alternative assessment would be appropriate.

Crist and Scullen (2008) define alternative academic assessment as a class of procedures that are commonly used to assess student progress within the context of the curriculum to inform instruction. These assessments can include: art projects,

presentations, or other oral reports done by the student that allows them to convey their knowledge in a way other than taking a test.

According to Hoffman, Assaf, and Paris, (2001) research is showing that high stakes testing may be coming at a cost of quality teaching in the classroom. High stakes test make teachers forego some of their original strategies and activities because they now feel they must teach to a test. If an alternative assessment had been used, the student's abilities could still be measured while allowing the teacher to use diversified teaching. However, the teacher must still comply with school, district, and state guidelines (Hoffman, Assaf, and Paris, 2001).

Students have much to gain through alternative assessment and are not bottles to be physically filled up with knowledge. While the teacher is in charge of instruction, it is the student who does all of the work in retaining and using the knowledge. Alternative assessment allows students to put forth work and actually enjoy what they are doing. According to Wasserstein (as cited in Janisch, Liu, and Akrofi, 2007), these assessments require students to evaluate what they are doing and to set goals. Students also take ownership of their projects in alternative assessments and set personal goals in completing their projects according to Hansen, et. al. (as cited in Janisch, et. al., 2007). Learning becomes the responsibility of the student and the relationship between the teacher and the student is more collaborative according to Wasserstein (as cited in Janisch et al., 2007). Using these alternative assessments, teachers become facilitators of learning.

Meta-cognitive awareness is another outcome of alternative assessment.

Alternative assessment allows students to understand how they personally learn which

can promote their academic growth (Janisch, et. al., 2007). Once students learn their weaknesses and abilities, they can have better control over their own academics.

Alternative assessment does have its own obstacles. These can include lack of parent involvement, lack of administrative help, and the importance placed on test scores (Janisch et al., 2007). Many schools do not have an alternative assessment plan in place to measure student abilities; instead they have a standardized test that the students would take at the end of the year. Administrators of schools that are labeled as failing schools will not be as supportive of any assessment that is not directly going to help a student pass a test. Teachers may also run into problems with other teachers who may be hesitant to do alternative forms of assessment. This causes inconsistency in the building which can be a detriment to student learning.

Other obstacles include student motivation, time, money and resources (Janisch et. al., 2007). One of the keys of alternative assessment is that it is student-directed learning. If the student is unmotivated to work, then the final project will suffer. These students would most likely not succeed with standardized tests either, so a foundation must be put in place that allows the students to be self-motivated and allows them to unlearn the opinion they hold of: "I'm not going to get this, so I won't try." Money and resources are important factors in problems with alternative assessment. Many forms of alternative assessment are project-based learning exercises, where the student has to build or create something that goes along with their project. If the student does not have the money, and resources are not available in the classroom, then the final product of the student will suffer or not be completed at all. This is especially important because the biggest variance that comes from standardized test scores comes from socioeconomic

status. (Janisch et al., 2007). Students have to have access in order to complete their project; this goes back to having support from administrators and parents.

The Project

I used a form of alternative assessment as a means to assess what students had learned during a specific nine week grading period. The purpose of these assessments was to compare alternative assessments to tests taken in the classroom. The students were made up of two physics honors classes composed of 38 students. Fourteen of the students were juniors and 24 were seniors. Fourteen were female and 24 were male. The students participating in this project were all Caucasian, and come from upper middle class homes. The school system is considered to be in the urban fringe of a large city and the students are on a Block 8 class schedule (Indiana Department of Education, 2009).

The assigned project was for students to take a topic that had been covered, or that would be covered during the nine week grading period, and expand upon it, doing an independent study of that subject. The project itself was worth 25% of the student's nine week grade. To go forward with a project, the students had to have a project proposal turned in before the mid-term of the nine weeks. The proposal was to have details of what subject they were covering and what they were doing for their project. If needed, I would make corrections or suggestions on the proposals to help the students create a better project. I also made the proposal worth 30 points of regular class credit. Regular class credit outside of the project was strictly based off point accumulated during the nine week grading period. Because of this, each grading period had a different amount of total points possible. Students that did not turn in a proposal lost 10% off of their proposal grade for every day it was not turned into me. Students were allowed to work in groups

for the first three grading periods; I did not allow this during the last grading period where I made the most changes to the requirements of the project.

The potential themes for the projects were endless. The students could do puppet shows, write a story, give a presentation, build something, artwork, etc. Some students went for more formal reports, while others went above and beyond in creativity for their projects. It was still important that the projects be related to what was covered during the nine week grading period and those projects were not a repeat from the previous grading period where some subject areas could overlap between two grading periods.

The projects for the first three grading periods followed a rubric (Appendix A) that had the following areas: Amount of Information, Sources, Quality of Information, Physics, and Creativity. The Amount of Information was in place to make sure that the students did not just skim the surface of their subject area. Quality of Information was used to make sure that the students did not stumble upon junk science or used information that was not a legit source. For Sources, students were required to make a sheet of all of their cited sources. Physics was an area on the rubric to make sure the student understood the physics behind what they were presenting, arguably the most important part of the rubric. Creativity was an area on the rubric, but was still subjective by me. Each area could receive a score from one to four, but I did allow for half grades to come in place such as a 2.5, or a 3.5 if I felt the student was straddled between two of the scores. The total point value for the project was 20.

The First Nine Weeks

The first nine week grading period is important, but there were some outside influences that may have affected the student scores. The first influence being that the

students are new to having me as a teacher, so they are learning my policies and expectations for them. While these are put forth on the first day of class, there is still an adjustment period. The second influence was the Hurricane Ivan wind storm that hit southern Indiana and Kentucky. The students were out four days from school because the wind storm had knocked out power to most of southern Indiana, including schools. The nine weeks was not lengthened to accommodate for this lost time. Being out of the classroom that length of time does not help any student, and while I would like to think they all worked on their project while they were home, I know this was not the case since many of them did not have power to their homes. I tried to take these factors into account while grading the first nine weeks projects. It should be noted that during this nine weeks there are 37 students required to complete the project, but only 34 completed a project. A paper was handed out to all students that had possible subject areas, a rubric, as well as important dates of when the project was due as well as when their proposals were due.

The subject areas covered during this nine week grading period included: one dimensional motion, vectors, two dimensional motion, and Newton's laws of motion. Some highlights of projects were having two groups of students build catapults. During their presentations the students talked about catapult history and then followed with a demonstration of their own homebuilt catapults. The catapults were designed in such a way that they could be adjusted for angle and firing speed. One group that did the catapult project did a very good job at dividing tasks in terms of who built the catapult (Figure 1), designing a tri-board, and giving a presentation.

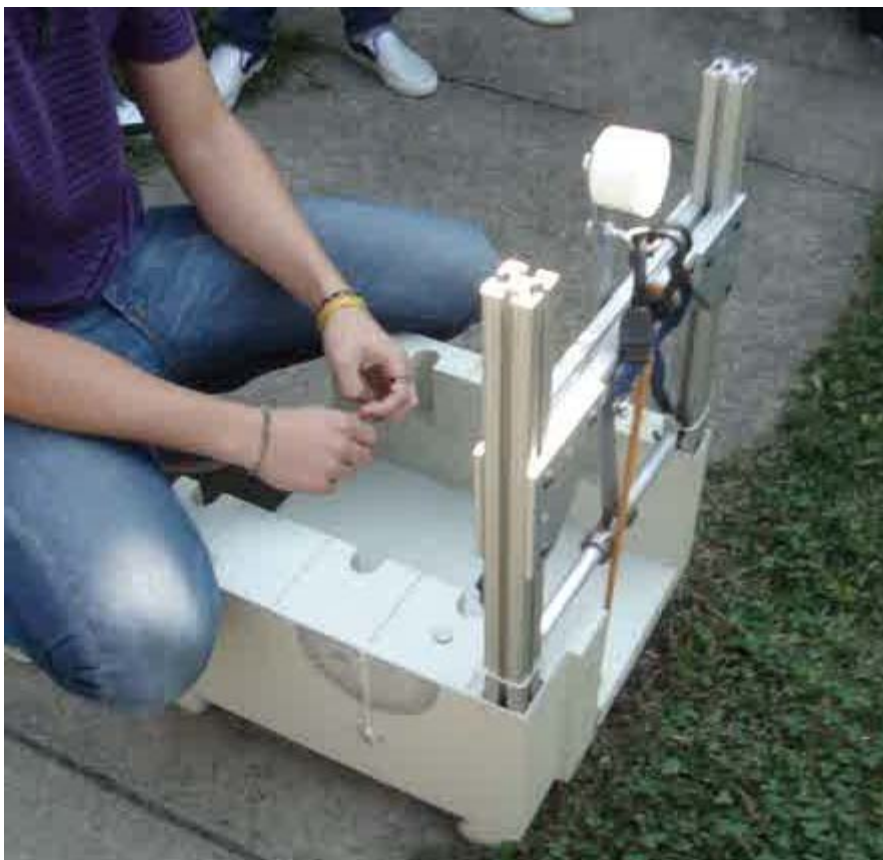


Figure 1. Catapult.

Another group put on a puppet show over trig functions. The two students designed their own sock puppets and used my desk as a stage for their presentation. While I would not doubt the puppets were created the evening before, their presentation was well scripted, humorous, and engaging. It was something that could be presented to other students, who were not enrolled in physics, and they would be able to grasp certain concepts.

The average grade for both classes and all students who were required to complete the project was 17.33 out of 20. For students that completed the project, the average grade was 18.86 out of 20. As I said earlier, I tried to take into consideration that it was the beginning of the year and the students were still adjusting to having me as a

teacher as well as having the wind storm. I tried not to be as strict on the first round of grading.

The Second Nine Weeks

The second nine weeks grading period started with immediately handing out their project sheets that contained a rubric, possible topic areas, and important dates of when projects and proposals were due. The rubric was the same as the previous grading period. In addition to this info, I included a sheet with a diagram of Gardner's Eight Intelligences (Appendix B). The purpose of handing out this diagram was to give the students a direction to follow of what they were good at, and then relating that back to physics. Some of the concerns I was hearing from students at the time was they did not know where to start. This diagram gave them a starting point and hopefully related physics back to something they already enjoy or had an interest. There were no natural disasters or anything else that could interfere with the second nine week grading period.

The subjects that students had to choose from for this grading period included: Newton's laws of motion, conservation of energy, momentum and collisions, and circular motion. The students were allowed again to work in groups. One group combined physics and the popular game Jenga into what they called Phyzinga (Figure 2). The object of the game was similar to Jenga, in that you remove blocks without knocking the tower over, but once a block was removed, you would have to answer a physics question. The students made their own game box, blocks, rule sheet, and question cards. Again, this was something very practical that could be used in classroom setting with students who were not familiar with physics and have them comprehend the subject.



Figure 2. Phyzinga, a combination of Physics and Jenga.

Several projects involved sports such as football or tennis. This came about because several of those students were involved in those sports. One student did a project over efficiency of the human body while running because she was involved in cross country.

A very practical project came from two female students that were studying coefficient of friction. They measured the force of friction of several different types of shoes, from running to high heels, and measured the coefficient of friction for each shoe. They have a very well put together presentation as well as demonstration for the class.

The most humorous project from this nine week grading period was a comic that a student created starring me as Mr. Physics (Figure 3). This student normally spent most of his time drawing in class, but was still very competent in the subject matter. It just so happened he put the drawing to good use by having me drawn up as a super hero using my knowledge of physics to fight crime. My only disappointment was that he drew me as pudgy as I am in real life. It would have been nice to see me in a more heroic look.

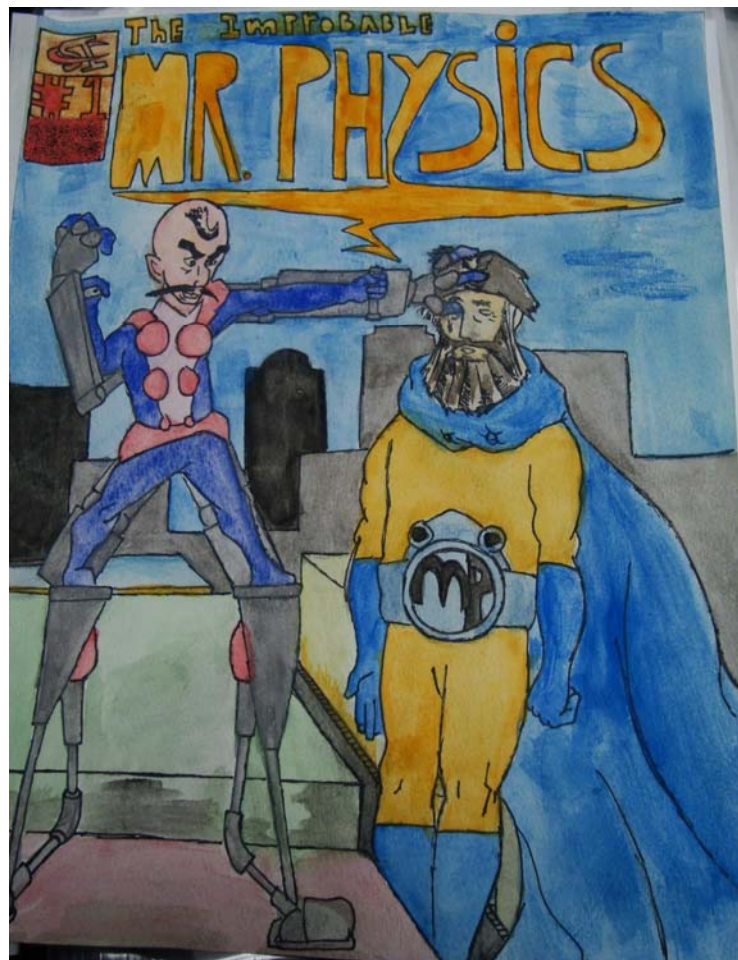


Figure 3. Mr. Physics, a comic loosely based off me.

As with the previous nine weeks, there were 37 students required to complete the project with 36 actually turning in a project. The average grade for all students that were required to complete the project was 16.68 and the average for all students that completed the project was 17.16. Some of the reason for lower grades this nine week grading period can be attributed to me being stricter about grading their projects. The students did not miss any school and were well aware of what was expected of them.

The Third Nine Weeks

There were some student changes between fall and spring semesters. Five students dropped the class and one student moved into our school and started taking my class. Of the students that dropped, four were seniors and one was a junior. Also, three were male and two were female. This left 34 students total responsible for completing a project.

Another natural disaster struck our area that, again, made the students miss four days of school. An ice storm followed by a snow storm hit southern Indiana and northern Kentucky. Power again was out across the area to include the school. While the time out of the classroom did not help the students, the nine week grading period was extended to make up for time that was missed. This allowed me to extend the due date for student projects.

The subject areas for this grading period included: Circular Motion, Electricity, Fluids, and Heat. One of the most practical projects came from a student that was measuring the effectiveness of different types of insulation used in hunting clothes. This was an area he has an interest in and was able to collect data on how well each material prevented the transfer of energy.

Another group took the heat subject a little further than what is covered in the classroom and studied distillation. I had some old distillation devices in my room that they cleaned up and were able to successfully distill isopropyl alcohol from a mixture of alcohol and water. While they were limited to qualitative information, what was presented worked very well as a demonstration.

Another group of students, who were very interested in skateboarding, decided to go more into depth with circular motion. There is a local skate park that has a 24 wide full pipe, meaning it is a complete circular pipe as opposed to half-pipes that are popularly used. Their project was going to be to see what it would take for a skateboarder to make it all the way around the pipe without falling. They were not going to attempt this for safety reasons, but they were to give a presentation on how it would be possible. I mention this project because—at the end—I felt that the projects could have been much more than what they presented. The students had not done the amount of research I would have wanted them to do and their presentation was not as comprehensive as it should have been. This, in combination with other factors, led me to change the how the projects are graded for the final nine week grading period.

Of the 34 students that were required to turn in a project, 32 turned in a project. The average grade of all the students that were required to complete the project was 17.09. The average grade of students that completed the project was 18.21

The Fourth Nine Weeks

I decided to change how the projects were graded for this nine week grading period. From previous nine week projects, I had decided that one of the biggest reasons for low quality projects was procrastination. Another reason was working in groups hurt

some students while carrying others. It was hard for me to tell who was responsible for the work. Since this was the final nine weeks, and a majority of my students were seniors who are very susceptible to “senioritis,” I needed to put something in place to make sure they were on task. There were no natural disasters again, but the seniors did go on Senior Trip to Washington, D.C., making them miss two class periods.

Changes were made to the rubric, groups of students, and project proposals. The rubric (Appendix C) now covered the following areas: content, quality of information, sources, preparedness, time-limit, tri-board, and demonstration. No students were allowed to work in groups for this nine week grading period, each student had to do their own work. Some students had completed tri-boards in the past, but now it was a requirement. Mainly, I wanted them to have some exposure to tri-boards before they went to college. Also, each student had to give a presentation. This was a not a requirement before, some students just completed a project and showed me their results. I wanted the whole class to see their project; there was also a time limit in giving their presentations. The rubric now had a maximum score of 28 for all of the areas the students were being graded. The category of Physics from the first three nine week grading periods was now covered by Content and Quality of Information, and the Creativity category was covered by Tri-Board and Demonstration.

The proposals were due earlier than in the past. I made proposal due two weeks after the beginning of the grading period. In addition, I also checked student work at the end of each week for the following four weeks after the proposals were due. The students had to show me some kind of proof that they were working on their project; this could include printed articles over their subject, receipts for tri-board, etc. If the students

did not show me any of kind of proof, then they lost 5% off of their project score.

Students had the potential to lose 20% off of their final project score for not showing me evidence for working on their project. This was meant to combat procrastination, but it came at the cost of class time while checking what each student had for that day.

The subject areas for the fourth nine weeks included: waves, sound, light, mirrors, lenses, and modern physics. There were several projects over lasers, and Archimedes Death Ray. Three projects tried to tackle the death ray and each one was very different. One student tried to build one as an array of mirrors that resembled a parabolic shape, and while they did not get anything to burn, it did increase in temperature (Figure 4). Another student built a death ray from a reclaimed mini satellite dish (Figure 5). This student covered the dish in reflective Mylar and was able to get objects to burn using the sun. The third student had great ideas, but unfortunately did not follow through with his project. He had been working on the project according to my checks for evidence, but did not go much further than collecting data.



Figure 4. Archimedes Death Ray as an array of mirrors.



Figure 5. Archimedes Death Ray as a satellite dish covered in Mylar.

The highlight from the fourth nine week grading period projects came from the same student that made the comic of me. He wrote and performed a song about electromagnetic waves, and made a music video to go along with the song. For the resources he had access to, it was a very well put together project. It was highly creative and engaging with all of the other students. I was allowed to keep a copy of the final production and I plan on showing it to future classes.

Of the 34 students required to complete the project, 31 turned in a project. The average grade for all students was 20.93 out of 28. For all students that turned in a project, the average grade was 22.97 out of 28. It should be noted that there was one student that did not turn in a project for any of the nine week grading periods. Also, for this grading period, there were fourteen students who has at least one instance of not

having evidence of working on their projects, this was a deduction of 5% from their final project grade for each instance.

Comparison with Test Scores

At the end of each assigned unit, students were given a test as an assessment. The tests were made up of multiple-choice and five to six word problems on each test. Through the year, the students completed ten tests. The tests were compiled to find an average percentage score correct for each test. Also, the projects were compiled to find an average score for all projects that were completed. Of the 38 students that were required to turn in a project, 30 scored on average higher on their projects than on their tests, with 8 scoring lower on their projects than on their tests. Of the eight scoring lower on their project scores, five had at least one instance where they did not complete a project.

The project grade should show that students can perform and learn material by means other than testing. I believe that the data for the students that participated in this project demonstrates this. The students who scored below 70% on tests and that completed all of their projects had an average score of 82% on their projects and an average score of 60% on their tests. The students were able to take in material, manipulate it, and then present what they learned. This reaches at very least into the synthesis level of Bloom's Taxonomy, and for some students the evaluation level. These are the students for which a standard test is not appropriate for assessment. Figure 6 on page 16 illustrates the differences between test scores and the project grades.

On the other end of the group of students is a group that scored on average 90% or higher on their tests. Three of these five students scored 100% on their project for

each of the nine weeks. I would describe these five students as high ability and high achieving learners. These students were very self-motivated to perform well at any task. This is not to say that project was not appropriate for them, but the intent of the projects was to help students who cannot perform well on tests or may not be motivated enough to do so.

For students in the 70% to 90% test score range, the project grades nearly matched their test grades. The average test grade for this group was an 80.3% and their average project grade was an 81.37%. This leads me to believe the work ethic of these students was the same for both their project as well as their class work.

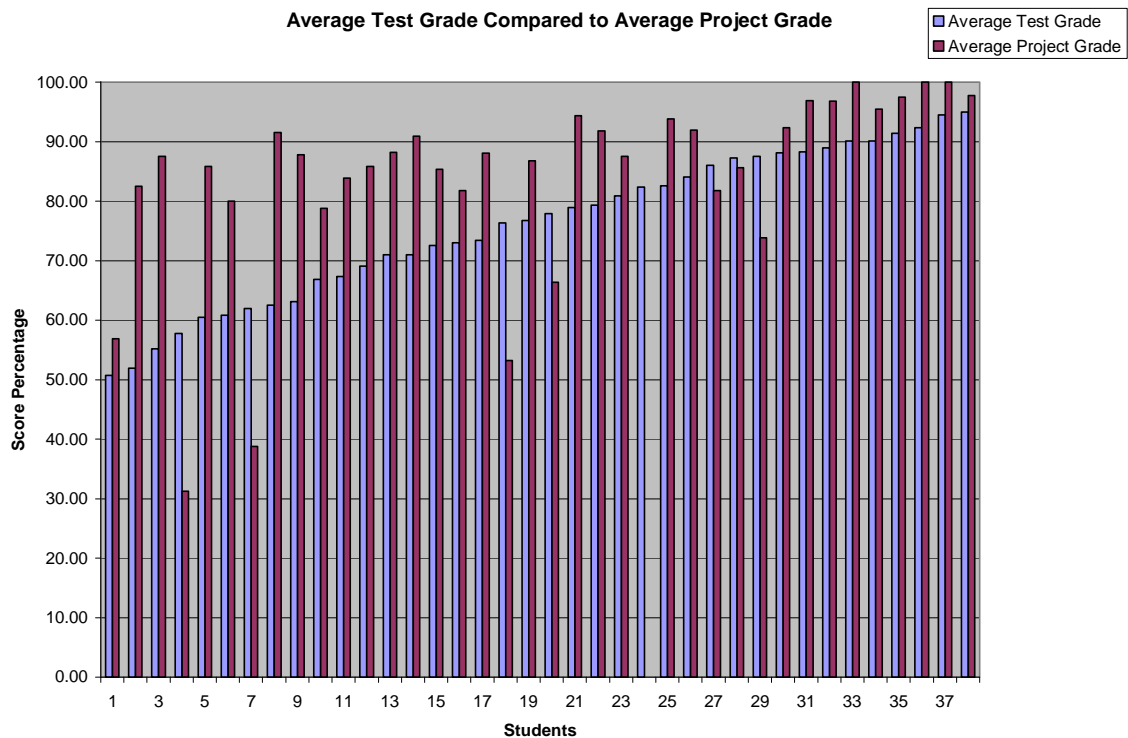


Figure 6. Note: Student 24 did not complete any of the projects, students 4, 6, 18, and 20, had at least 1 instance of not turning in a project.

Student Opinions

At the end of the year, the students were asked a few questions about their opinions of the projects. The questions were: “What did you find most challenging about the project?,” “If you were to change something about the requirements of the project, what would it be?,” and “What could you have done to make any of your projects better?” Of the questionnaires that were handed out, 28 were returned. Some students made multiple comments on each question.

Finding topics and time to work were popular answers for the first question, “What did you find most challenging about the project?” Several students remarked that they had trouble finding a topic to cover. This was because the topics were many times over information that we had not yet covered in class. From my standpoint, this was done on purpose because I wanted students to read ahead in the textbook for ideas so that they would be more familiar with the topics when we got to those units. I think spending more time talking about those topics at the beginning of the nine week grading period would have helped those students. The other problem was finding time to work on their projects and basic time management. Some students would have liked to have more time to work on their projects in class, but I felt that with the amount of time given to complete the projects, that they had enough time already.

The most popular answer to “If you were to change something about the requirement of the project, what would it be?” was to get rid of the tri-boards requirement. I only required the tri-boards for the last nine weeks and several students seemed not to enjoy this very much. Several remarked that they would have rather done a PowerPoint presentation. I did allow students to do a PowerPoint presentation for their

project, but they had to make a tri-board as well, the PowerPoint was not required. I think PowerPoint is a great tool, but it is too easy to use. I wanted the students to have exposure to tri-boards since I was certain they would use them in college and it required them to put more thought into their project. A skilled student could have created a PowerPoint presentation the class period before, but not a complete tri-board. Several students also remarked that the requirements were just right for their skill level. Also, several students remarked that the weekly checks that were instated with the final project helped them to stay on task. The second most popular answer was “No changes.” These students felt that the requirements were in line with their abilities.

For the final question, “What could you have done to make your projects better?”, nearly every single student remarked that they would have spent more time working on their project instead of waiting until the final few days. This was a constant problem throughout the year with all the projects. The students would wait until the last few days, or the night before to even start on their project. I tried to combat this problem with the weekly checks during the fourth nine weeks, but it was still apparent that students were waiting until the last possible moment to do their projects. Procrastination is a problem that many teachers face and it is apparent to me that for future projects, I will have to put something more in place than weekly checks.

Table 1

Results of Student Opinions of the Projects

Student Opinion Questionnaire Results	
What did you find most challenging about the project?	
Finding a topic and or information	14
Staying on task	10
Conveying information	2
More difficult to do each nine weeks	1
Demos not going as planned	1
Time limit (for the fourth nine week	1
Weekly Checks	1
If you were to change something about the requirement of the project, what would it be?	
No required Tri-board	8
No change in requirements	7
Allow partners	3
More class time to work on projects	2
No time limit for presentations	2
No weekly checks	1
Make an invention instead of a project	1
Require class participation	1
Designate a topic to those that want one	1
No presentation	1
What could you have done to make your projects better?	
Spent more time on them	24
Made better materials	6

Teacher Reflection

Overall, I was pleased with the projects, but I have several changes I would make for future projects. I had not assigned a project of this scope in my classroom before. Before, I had limited projects to two page reports that students would write and present over a famous scientist once during the school year. The nine week projects they completed for this research were of the same scope or greater, but the students had completed them four times and I had to grade the projects four times.

I believe a better approach to the projects would be to build up to one big final project. I feel I may have presented too much for the students to do for their first project and this did not prepare them for subsequent projects. Instead, for the first nine week grading period, I would have them possibly just do a tri-board and nothing more. Then for the next nine week grading period, have them do a tri-board and a demonstration, then build on those for the third and fourth nine week grading periods so that by the fourth grading period, they have all the tools necessary to put on a quality project. I also would not allow students to work together from the beginning. While some groups did excellent work, it was hard to determine accountability for some groups as to who was responsible for individual parts of the project.

Another change would be to review the material more before the projects start. I think if I spent a better part of a block discussing what those topics entail will help students to better choose a project they would like to pursue.

The last change would be an adjustment to the weekly checks that were done with the students to make sure they were on task. As I stated before, procrastination is a substantial problem in the classroom and can really hurt a student's grade when the

project is worth 25% of the nine week grading period's grade, such as it was in my class. For the checks, I would have students come see me and present what they had worked on or collected. I think a better approach would be to set strict deadlines for specific parts of a project, such as making the first week check articles or sources. Then the next week would be proof of acquiring a tri-board. Then the next week would be proof of working on a demonstration, and so on. The problem with this is that it eats into class time that should be used in covering Physics. A quick way of checking materials needs to be developed so that the teacher can quickly check materials and then move onto the lesson for that day.

For the problems that were encountered during this experiment of alternative assessment, it was still well worth it as a teacher to see another side to many of my students. Several students had artistic and musical skills that I would have never experienced had it not been for these projects. For other students, while they were not always engaged in the class work, they took ownership of their projects and took a genuine interest in what they were creating. This is something that all teachers love to see and wish their students were always this engaged. Without alternative assessment, these students would have stayed disengaged and possibly not receive anything out of the class. It was a chance for them to follow their interests and learn physics at the same time. I will continue to develop other forms of alternative assessment in my classroom so that these students are reached.

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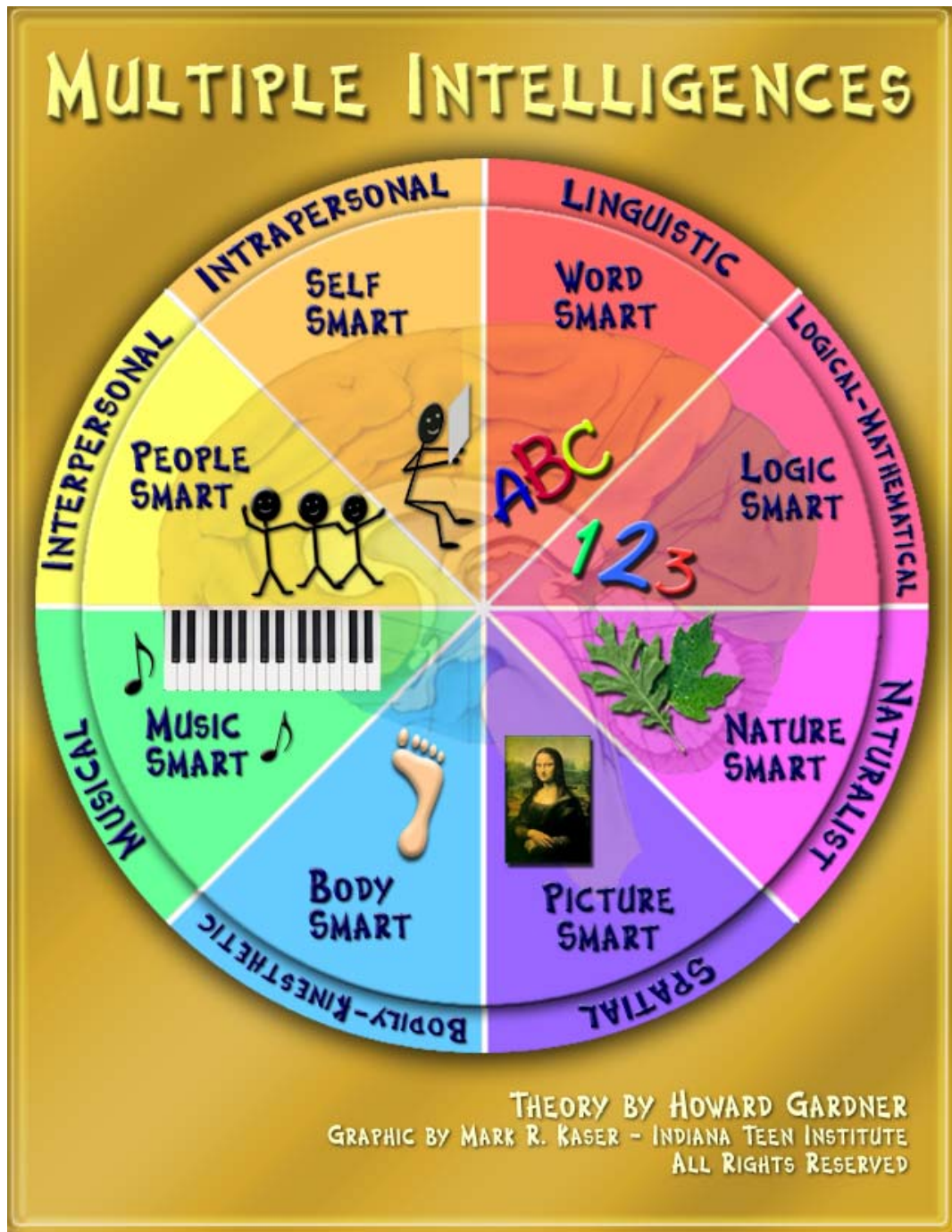
Appendix A

Grading Rubric for the First Three Grading Periods

Category	4	3	2	1
Amount of Information	All topics are addressed and all questions are answered.	All topics are addressed and most questions answered	Some topics are addressed and some questions answered	One ore more topics were not addressed
Sources	All sources are accurately documented in the desired format	Most sources are accurately documented in the correct format.	Some sources are documented but not in the correct format	No sources are accurately documented.
Quality of Information	Information clearly relates to the main topic, It includes several supporting details and/or examples	Information clearly relates to the main topic. It provides 1-2 supporting details and/or examples	Information clearly relates to the main topic. No details and/or examples are given	Information has little or nothing to do with the main topic
Physics	Physics is understandable and clearly understood by the person presenting the project	Physics is mostly right, but could use some clarification.	Physics is not understood or has severe inaccuracies	Physics is not understood.
Creativity	Project shows a high amount of creativity, clearly not done just the night before.	Project shows some creativity, more time should have been spent on the project	Project shows little creativity.	No creativity/

Appendix B

Gardner's Eight Intelligences Diagram



(Kaser, 2008)

Appendix C

Grading Rubric for the Fourth Grading Period

Category	4	3	2	1
Content	Shows a full understanding of the topic.	Shows a good understanding of the topic	Shows a good understanding of parts of the topic.	Does not seem to understand the topic very well.
Sources	All sources are accurately documented in the desired format	Most sources are accurately documented in the correct format.	Some sources are documented but not in the correct format	No sources are accurately documented.
Quality of Information	Information clearly relates to the main topic, It includes several supporting details and/or examples	Information clearly relates to the main topic. It provides 1-2 supporting details and/or examples	Information clearly relates to the main topic. No details and/or examples are given	Information has little or nothing to do with the main topic
Preparedness	Student is completely prepared and has obviously rehearsed.	Student seems pretty prepared but might have needed a couple more rehearsals.	The student is somewhat prepared, but it is clear that rehearsal was lacking.	Student does not seem at all prepared to present.
Time-Limit	Presentation is 5-7 minutes long.	Presentation is 4 minutes long.	Presentation is 3 minutes long.	Presentation is less than 3 minutes OR more than 7 minutes long.
Tri-Board	Tri-board is complete and professional. Information is presented neatly and concisely. No glue marks, crayons, or markers used in a way that is distracting	Mostly complete, glue marks present. Information not clearly presented. Crayons or markers were used instead of a printed page.	Unorganized, poorly put together, glue and/or tape visible. Unprofessional looking.	Did not do a tri-board or one that was very poorly made and unorganized.
Demonstration/Props	Student uses several props (could include costume) that show considerable work/creativity and which make the presentation better.	Student uses 1 prop that shows considerable work/creativity and which make the presentation better.	Student uses 1 prop which makes the presentation better.	The student uses no props OR the props chosen detract from the presentation.