

Physics 112: Project Re-Imaging

By Monday, November 30, collect everything from the Tracker program you need to write your report:

- Have all videos/objects tracked.
- Create a WORD file containing all the images you think will be necessary for your report. Doing this will allow access to images for your final report without having to access the Tracker program. Be sure to keep track of what each image represents (maybe use captions or a brief description). Right-clicking on an image will allow you to write a caption, or you could use textboxes.
- WORD file with any tables of data/results/error analysis.
- Research the internet to see if there have been similar experiments performed and comment on any similarities and/or differences and include these as references.
- Begin writing your report.

You will have a chance for a peer and/or self-assessment and I will be giving a participation evaluation (you will have a rubric for this).

As you begin writing use my report as a guide for structure. Remember that my experiment was more involved than I first thought and yours would not need to be that length. My report should give you an idea of how science is communicated and how thoughts are worded.

You will now only be submitting one report, worth 15%. This is a lot, but think about all of the class time dedicated to completing it.

Remember, I will look at one draft of your project once. I won't have time to read each section of each group as they work. The draft is worth 20% of the project mark. When you have a draft ready I will review it and get back to you ASAP – deadline for submitting a draft is **Monday, December 14th**. I will review and return them before the holiday break. The final report will be due **Friday, January 15th 2016**.

Continue reviewing the forces unit. The concepts from the recent test and Newton's Law we have been discussing in class. This is very important. We will review and continue practicing the problems in class but having the material be familiar will make the content easier for you.

Updated Project Evaluation

Project	Value
Plan	10
Peer/Self Evaluation	10
Participation	10
Draft	20
Final Report	50
Total	100

Name _____

Date _____

Category	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Attitude	Student is always respectful of his or her self, others, and teacher and has a positive attitude.	Often has a positive attitude about the task(s). Usually treats others and self with respect.	Occasionally has a positive attitude about the task(s) and behaves in a respectful manner.	Rarely behaves in a respectful manner.
Focus on Class Work	Consistently stays focused on in-class work and what needs to be done. Very self-directed.	Focuses on in-class work and what needs to be done most of the time.	Often must be reminded by the teacher or group about what needs to get done.	Rarely focuses on class work and what needs to be done.
Contributions	Routinely provides useful ideas when participating in discussions. A definite leader who contributes a lot of effort.	Usually provides useful ideas when participating in discussions. A strong student who tries hard.	Sometimes provide useful ideas in discussion. A satisfactory student who does what is required.	Rarely provides useful ideas when participating in discussions. May refuse to participate.
Working with Others	Almost always listens to, shares with, and supports the efforts of others. Students can feel safe volunteering in this student's presence.	Usually listens to, shares with, and supports the efforts of others.	Often listens to, shares with, and supports the efforts of others, but sometimes is not actively listening or responding.	Rarely listens to, shares with, and supports the efforts of others. Often disrupts or discourages others' attempts to participate.
Time-Management	Routinely uses time well to ensure things get done on time. Student never asks to adjust deadlines.	Usually uses time well, rarely misses deadlines.	Tends to procrastinate, does not use school time or schedule provided to get work completed.	Rarely gets work done by deadlines, always asks for extensions or does not submit work despite time in school.
Behavior	Student is engaged in class on a daily basis, and shows no disruptive behavior.	Student is engaged in class nearly every day, and shows no disruptive behavior.	Student has done nothing for a few classes. Shows some disruptive behavior.	Student frequently disrupts group or class.

Comments

Physics 112 Experiment Project: Peer Evaluation

My Name: _____

Peer: _____

Project: _____

Week of Nov. 16 – 19, 2015	/16	Poor	3	Excellent
1. Attendance		1	2	3
2. Focus and staying on task		1	2	3
3. Participation in group discussions		1	2	3
4. Contribution to project		1	2	3
5. Task(s) during this week was/were:				
6. Concerns/Comments:				

Week of Nov. 24 – Dec 1, 2015	/16	Poor	3	Excellent
1. Attendance		1	2	3
2. Focus and staying on task		1	2	3
3. Participation in group discussions		1	2	3
4. Contribution to project		1	2	3
5. Task(s) during this week was/were:				
6. Concerns/Comments:				

Month of Dec. 2 – 15, 2015	/16	Poor	3	Excellent
1. Attendance		1	2	3
2. Focus and staying on task		1	2	3
3. Participation in group discussions		1	2	3
4. Contribution to project		1	2	3
5. Task(s) during this week was/were:				
6. Concerns/Comments:				

Month of Jan. 5 – 15, 2016	/16	Poor	3	Excellent
1. Attendance		1	2	3
2. Focus and staying on task		1	2	3
3. Participation in group discussions		1	2	3
4. Contribution to project		1	2	3
5. Task(s) during this week was/were:				
6. Concerns/Comments:				

Physics 112 Experiment Project: Self-Evaluation

My Name: _____

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Project: _____

Week of Nov. 16 – 19, 2015

Poor

Excellent

/12

- | | | | | |
|---------------------------------------|---|---|---|---|
| 1. Focus and staying on task | 1 | 2 | 3 | 4 |
| 2. Participation in group discussions | 1 | 2 | 3 | 4 |
| 3. Contribution to project | 1 | 2 | 3 | 4 |
| 4. Task(s) during this week was/were: | | | | |

5. Some steps I took advantage of to better understand this concept were: _____

Week of Nov. 24 – Dec 1, 2015

Poor

Excellent

/12

- | | | | | |
|---------------------------------------|---|---|---|---|
| 1. Focus and staying on task | 1 | 2 | 3 | 4 |
| 2. Participation in group discussions | 1 | 2 | 3 | 4 |
| 3. Contribution to project | 1 | 2 | 3 | 4 |
| 4. Task(s) during this week was/were: | | | | |

5. Some steps I took advantage of to better understand this concept were: _____

Month of Dec. 2 – 15, 2015

Poor

Excellent

/12

- | | | | | |
|---------------------------------------|---|---|---|---|
| 1. Focus and staying on task | 1 | 2 | 3 | 4 |
| 2. Participation in group discussions | 1 | 2 | 3 | 4 |
| 3. Contribution to project | 1 | 2 | 3 | 4 |
| 4. Task(s) during this week was/were: | | | | |

5. Some steps I took advantage of to better understand this concept were: _____

Month of Jan. 5 – 15, 2016

Poor

Excellent

/12

- | | | | | |
|---------------------------------------|---|---|---|---|
| 1. Focus and staying on task | 1 | 2 | 3 | 4 |
| 2. Participation in group discussions | 1 | 2 | 3 | 4 |
| 3. Contribution to project | 1 | 2 | 3 | 4 |
| 4. Task(s) during this week was/were: | | | | |

5. Some steps I took advantage of to better understand this concept were: _____

Group _____ **Project** _____

Category	Excellent	Satisfactory	Needs Improvement	Unsatisfactory
Submission (3)	(3) Draft submitted by the due date.	N/A	(1) Not submitted by due date.	(0) Not submitted at all.
Content (10)	(10) All parts of the project are included and mostly complete. (see exemplar)	(7) Underdeveloped or missing one or two sections of the project.	(5) Underdeveloped or missing three sections of the project.	(2) Underdeveloped or missing more than three sections.
Video Analysis (7)	(7) All relevant images and data included.	(5) Missing one graph/data table.	(2) Missing two graphs/data tables or data from the analysis.	(1 or 0) Missing more than two graphs/data tables.

Comments



Physics Experiment Report Rubric

Criteria	1	2	3	4	5
Abstract (÷2)	<ul style="list-style-type: none"> Abstract not well thought out or written 	<ul style="list-style-type: none"> Abstract gives little insight as to the contents of the report 	<ul style="list-style-type: none"> Abstract summarizes the contents of the report and experiment 	<ul style="list-style-type: none"> Abstract is a well written summary of the report and experiment Weakly intrigues the reader 	<ul style="list-style-type: none"> Abstract is excellent in its summary of the report and experiment as it includes all key points Strongly intrigues the reader
Introduction & Hypothesis	<ul style="list-style-type: none"> Predicted results and hypothesized relationship between variables not stated 	<ul style="list-style-type: none"> Predicted results and hypothesized relationship between variables are unclear 	<ul style="list-style-type: none"> Predicted results and hypothesized relationship between variables stated and appear reasonable 	<ul style="list-style-type: none"> Predicted results and hypothesized relationship between variables stated 	<ul style="list-style-type: none"> Predicted results and hypothesized relationship between variables clearly stated and reasonable
Materials (÷2)	<ul style="list-style-type: none"> There is not a list of the necessary lab materials 	<ul style="list-style-type: none"> Most lab materials included 	<ul style="list-style-type: none"> All necessary lab materials included but not listed in any particular order 	<ul style="list-style-type: none"> All necessary lab materials included and listed 	<ul style="list-style-type: none"> All necessary lab materials included and listed in an organized manner
Procedure	<ul style="list-style-type: none"> Procedures are not listed 	<ul style="list-style-type: none"> Procedures are included but not it is not clear and information is missing 	<ul style="list-style-type: none"> Procedures are included but not clearly written Procedures are not coherent 	<ul style="list-style-type: none"> Procedures are included and written in the correct order Procedures are written with excellent grammar that the reader can understand 	<ul style="list-style-type: none"> Procedures are written in the correct order with excellent grammar that the reader can understand Diagrams/images are included to describe the set-up (if no diagrams/images possible then clearly describe the apparatus)
Data (×2)	<ul style="list-style-type: none"> Data is not represented or is not accurate 	<ul style="list-style-type: none"> Data lacks precision Data loosely related to hypothesis 	<ul style="list-style-type: none"> Good representation of the data using tables and/or graphs Precision is acceptable 	<ul style="list-style-type: none"> Accurate representation of the data using tables and/or graphs Data is fairly precise Graphs and tables are referred to in the text 	<ul style="list-style-type: none"> Accurate representation of the data using tables and/or graphs Graphs and tables are labeled and titled for easy referral from the text Data is precise Graphs and tables are referred to in the text
Analysis (×2)	<ul style="list-style-type: none"> Trends/patterns are not analyzed Analysis is not relevant 	<ul style="list-style-type: none"> Trends/patterns are not analyzed Analysis is inconsistent 	<ul style="list-style-type: none"> Trends/patterns are logically analyzed for the most part Analysis is general 	<ul style="list-style-type: none"> Trends/patterns are logically analyzed Analysis is thoughtful Evidence of research 	<ul style="list-style-type: none"> Trends/patterns are logically analyzed Analysis is insightful Similar experiments are researched
Error Analysis (×2)	<ul style="list-style-type: none"> There is no discussion of experimental errors 	<ul style="list-style-type: none"> Some experimental errors are identified Video tracked twice 	<ul style="list-style-type: none"> Experimental errors and their effects are discussed Video tracked three times 	<ul style="list-style-type: none"> Experimental errors are determined Their effects are discussed SEM is calculated Video tracked four times 	<ul style="list-style-type: none"> Experimental errors are determined Their effect and ways to reduce errors are discussed SEM is calculated Video tracked four times
Conclusion	<ul style="list-style-type: none"> No conclusion was included or shows little effort and reflection on the experiment 	<ul style="list-style-type: none"> A statement of the results is incomplete with little reflection on the experiment 	<ul style="list-style-type: none"> A statement of the results of the experiment indicates whether results support the hypothesis 	<ul style="list-style-type: none"> Accurate statement of the results of the experiment indicates whether results support the hypothesis Possible sources of error identified 	<ul style="list-style-type: none"> Accurate statement of the results of experiment indicates whether results support hypothesis Possible sources of error and what was learned from the experiment are discussed



Physics Experiment Report Rubric

Comments

/50