



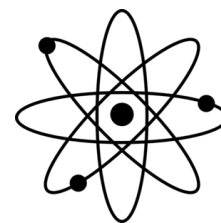
Physics in the Universe

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Jackson High School



Course Description: This course introduces basic physics concepts and problem-solving strategies. Students explore motion, electromagnetism, and a variety of other topics through a series of real-world scenarios. Activities are designed by HMH and supplemented by a team of experts.

Course Outline:

FALL SEMESTER

Unit 1: Motion and Forces

Unit 2: Momentum and Collisions

Unit 3: Forces at a Distance

Unit 4: Energy Conversion

SPRING SEMESTER

Unit 5: Electricity and Magnetism

Unit 6: Nuclear Processes

Unit 7: Waves

Unit 8: Stars and the Universe

Virtual Learning: This year requires innovation, and I'm happy with our district's response. School begins virtually and we'll reevaluate as the covid-19 crisis improves. For now, learning is virtual, but this is *real school*. Students are be graded A-F, there is attendance, etc.

Schedule:

"A" Day Monday, Wednesday		"B" Day Tuesday, Thursday		LIF Day Friday	
Teacher "office hours"	7:30 – 8:00	Teacher "office hours"	7:30 – 8:00	Teacher "office hours"	7:30 – 8:00
1st	8:00 – 9:45	4th	8:00 – 9:45	1st	8:00 – 8:30
Passing Time		Passing Time		Passing Time	
2nd	10:00 – 11:45	5th	10:00 – 11:45	2nd	8:40 – 9:10
Passing Time		Passing Time		Passing Time	
Lunch	12:00 – 12:30	Lunch	12:00 – 12:30	3rd	9:20 – 9:50
Passing Time		Passing Time		Passing Time	
3rd	12:45 – 2:35	6th	12:45 – 2:35	4th	10:00 – 10:30
Teacher "office hours"	2:35 – 3:00	Teacher "office hours"	2:35 – 3:00	Passing Time	
				5th	10:40 – 11:10
				Passing Time	
				6th	11:20 – 11:50
				Passing Time	
				Lunch	12:00 – 12:30
				Directed Independent Learning	12:30 – 1:20
				LIF Time	1:20 – 2:35
				Teacher "office hours"	2:35 – 3:00

Class Structure: Class meets three times weekly – 105 minutes on Monday/Wednesday or Tuesday/Thursday, depending on your class period, and 30 minutes each Friday. On days where we have class, students receive a morning announcement with the agenda. They access this via email or Canvas. Class begins and ends on Zoom, on time.

Class has two components: synchronous time and asynchronous time. Synchronous time (AKA Zoom time) includes warm-ups, class discussions, presentations, and online games. Asynchronous time

(when we aren't on Zoom) is when students complete projects, watch video lectures, etc. During asynchronous time, I'm available via email or Canvas's Chat feature.

Zoom: Students join Zoom by clicking the button in Canvas. They are not permitted to invite other students to our Zoom meeting or attend a Zoom meeting for any class other than their own.

All students must remain muted unless speaking. They must also use a real name (nick names are allowed, but silly names aren't). Additionally, I request that students turn on their video during class unless they're doing something distracting. We'll average 40 minutes on Zoom each class period.

Canvas: This class implements Canvas as much as possible. Zoom, assignments, the textbook, and peripheral software are all accessed via Canvas. The only additional software students need are email and gradebook.

Parents may view our Canvas, but they cannot interact with its assignments. I recommend that parents download "Canvas Parent" that students download "Canvas Student" on their phones. More information about accessing Canvas can be found [here](#).

Gradebook: Parents and students can access grades [here](#). Note, all assignments are unweighted, meaning that they don't affect the average. I implement standards-based grading, which assigns grades for *learning*, not for individual assignments. Students earn about 24 weighted grades per semester – 12 from assessments and 12 from a portfolio.

Communication: The best way to reach me is via email. Parents and students may email me to request a date and time to conference. Additionally, I send our daily agenda through Canvas's announcements feature and respond to Canvas's Chat feature during asynchronous time. Additionally, I periodically email newsletters to parents.

Office Hours: I'll have office hours 30 minutes before and after school each day. I'm also free by appointment if those times don't work. During that time, students and parents can email me to ask questions or initiate a Zoom meeting.

Meeting the Teacher: Our district has shortened the first three days of school for parent-teacher conferences. You can sign up for a time slot using [this sign-up sheet](#). We also have curriculum night on October 1st, where I'll present about the class and answer questions.

Attendance: To be marked "present," students must do *something* in a class's 24-hour period. That could mean attending a Zoom meeting, completing an assignment, sending an email, etc. Any interaction earns "present" for the day. Students that attend class each day, fully participate, and turn in assignments perform much better on assessments than students that merely complete assignments at their leisure. Click [here](#) to learn more about why attendance matters. Unless there's an emergency, I strongly suggest attending every zoom meeting. They provide feedback and allow opportunity for questioning that cannot be replicated outside the meeting. That said, a student may need to miss a Zoom meeting for various reasons. Those students can view and complete prior assignments through Canvas.

Portfolios: In lieu of a final exam, students create portfolios via Canvas's ePortfolio feature. Students learn about 12 standards per semester. For each standard, students must create a portfolio page defining that standard, tracking their learning of that standard, and proving their proficiency. I grade portfolios via 1-on-1 conferencing. Students meet with me five times each semester to discuss their portfolio. Portfolios make up 30% of students' final grades.

Portfolio Grades	30%
Assessment Grades	70%
Final Grade	100%

Assessment Grades: I use standards-based grading because it offers more clarity than traditional grading. See the example below. Each represents the same test, but only the standards-based assessment tells the student what they misunderstood. Now, the student knows what he must study.

Traditional	Standards-Based		
Electromagnetism Test	Electrostatics	Circuits	Magnetism
65%	C	A	F

Similarly, I grade standards. All non-assessment scores, like labs, worksheets, etc., are scored in Canvas, but not in gradebook. Students use those assignments for their portfolios. Assessments, like quizzes and tests, are the only things that determine a students' assessment grade. Here's a typical gradebook. Only the orange and purple columns comprise final grades.

	Standard 1						Standard 2						Semester Grade	
	F=ma: PRETEST	F=ma: QUIZ	F=ma: TEST	F=ma: RETEST	Standard 1: Assessment	Standard 1: Portfolio	Gravity: PRETEST	Gravity: QUIZ	Gravity: TEST	Gravity: RETEST	Standard 2: Assessment	Standard 2: Portfolio		
student 1	F	B	B	A	A	B	F	A	B	-	A	B	4	A
student 2	F	D	A	-	A	A	D	C	B	B+	B+	B	3.7	A-

For assessment grades, I take the highest grade between the quiz, the test, or the retest grade. For example, a student with an A on a quiz and an F on a test would receive an A for that standard.

To earn an A, students must demonstrate mastery. This means they must apply their learning to something new. Merely reciting memorized material earns a B. Every assessment will have at least one question requiring application – these questions are how students earn A's.

Grade	Score	
Mastery	A	4
Proficient	B	3
Developing	C	2.2
Beginning	D	1.5
No Evidence	F	0

The goal is for grades to reflect understanding, not busywork. I understand that some students have test anxiety or may be having a bad day on the day of the test. Those students can request to be assessed via conference instead of with a test. I'm willing to do anything to make grades fair.

To summarize:

- I grade standards instead of assignments.
- Each standard is evaluated through a quizzes, test, and retest. I take whichever is the highest.
- All non-assessment activities are assessed with portfolios, which comprise 30% of final grades

Late Work: Daily activities do not need to be completed if missing, but students may still wish to complete them to prepare for the test. Every assignment is an opportunity to prepare for the unit project and exam. Additionally, students will need to use daily assignments to complete their portfolios.