



Astronomy Syllabus - 2025 - 2026

Mr. Pawlak

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Course Description:

Astronomy is a single semester course for 0.5 credits. Students will engage in learner-focused lessons and hands-on activities that are designed to help students build cooperative relationships, and develop science literacy and practice skills. Student learning will be guided by astronomy related research questions that focus on the application of matter, energy, and forces, along with Newton's and Kepler's laws, to solve problems and engineer solutions related to space exploration. Later in the course, there will be lessons focused on the cycles of the sky, and opportunities for independent or group observations of the night sky using telescopes and astrophotography.

Course Outline:

Quarter 1: Why is stuff falling from the sky?

This unit is designed to introduce students to the motion of objects in our solar system through the perspectives of matter, force, and energy. The learning is anchored by the appearance of a large fireball in the sky over Siberia in 2013 (the Chelyabinsk meteor). This phenomenon provides the context in which to investigate how and why objects from space sometimes collide with Earth. To figure this out, students will need to apply the concepts of Newton's universal law of gravitation, orbital motion, energy transfer with gravitational fields, and the history of Earth.

Quarter 2: Why do stars shine and will they shine forever? and What is out there?

This unit is anchored by historical accounts of stars that suddenly appear and then disappear a short time later. Students wonder about how some stars appear unchanging, while these stars change so drastically within such a short period of time. That gets students wondering about why stars shine, and what could cause stars to change. They organize their questions in terms of matter, energy, and forces, and decide to look more closely at the places in the sky where these historical events took place using modern technology. Students also become more familiar with how various people throughout the ages have made sense of what is in the sky and the cosmos.

Primary Resources:

All resources including readings, slides, worksheets, maps, and other resources will be provided for you in class and will also be available on Google Classroom.

Grade Breakdown:

Semester Grade	Practice	Formative	Summative
80%	10%	30%	60%
20%	Semester Exam		

Grading Scale:

Grade	Percent	Grade	Percent	Grade	Percent
A+	97-100	B	83-86	C-	70-72
A	93-96	B-	80-82	D+	67-69
A-	90-92	C+	77-79	D	63-66
B+	87-89	C	73-76	D-	60-62
F Below 60					

Late Work/Missing Work Policy:

Mukwonago Area Schools believes that feedback is an integral component to student success in teaching and learning. Mukwonago High School expects that all students will turn in work by the intended due date to receive full credit and necessary feedback. Students will have the opportunity to turn in practice and formative assessments up to 2 school days late to receive partial credit.

- **Full Credit:** Students *might* receive full credit if the practice or formative assessment is turned in on the due date.
- **Partial Credit:** Students will receive partial credit if the practice or formative assessment is turned in up to two school days after the due date.
- **Zero Credit:** practice or formative assessment can be turned in past the two days to remain eligible for reassessment; however, no credit will be given.

Assessment Policy:

Assessments are used to measure student learning of essential learning standards within a unit of instruction.

Cumulative Assessments (Ex. Projects, Essays, Presentations, Semester Exams): These end of unit assessments are final products of learning in which students have had several opportunities to make adjustments based on feedback. Retakes are not provided for these types of end of unit assessments. ***Not eligible for retake**

Summative Assessments (Ex. Test): This end of unit assessment uses various types of questions that students have studied but not previously seen. Students are eligible to reassess if the following criteria are met: practice and formative assignments for the unit have been completed and turned in prior to the summative assessment, student meets with their teacher to schedule a reassessment, and demonstrates relearning within 2 weeks of receiving the original assessment. The reassessment grade will replace the original summative grade, regardless if the new grade is lower than the original assessment. ***Eligible for retake**

Materials/Supplies needed:

- ☐ Charged device
- ☐ Pencil
- ☐ Notebook or loose-leaf paper
- ☐ Three-ring binder and folder
- ☐ Basic set of colored pencils or markers
- ☐ Calculator capable of working scientific notation

Expectations & Classroom Conduct:

- Please follow the Schoolwide and the Classroom Specific Muk Way guidelines.
- We will start every class in the desk seats, and work in the lab area only when instructed.
- No food allowed in the lab areas. All drinks must be in resealable containers (no open cans).
- Students with excused absences will be allowed to make up the work. It is your responsibility to get the work and complete it within the given time frame. One day of excused absence means one day to make the work up.
- Missed tests or quizzes need to be taken within three class periods of the date they were given. It is your responsibility to schedule a make up test or quiz.
- If there are any special circumstances that would prevent you from adhering to the above goals, please speak with me ahead of time to discuss a solution.

Tardiness will be tracked in Infinite Campus (IC), and the following steps will be taken for each occurrence:

1st Tardy: Verbal warning

2nd Tardy: 10-minute detention with the teacher (must be served within 2 days) and parent contact; administration will be notified through Educlimber.

3rd Tardy: Teacher will submit an IC office referral. Administration will meet with the student, assign an after-school detention, and contact the parent.

4th +: The teacher will submit an office referral in Infinite Campus (IC), and administration will determine appropriate

consequences at their discretion.

Academic Honesty:

The Mukwonago Area School District emphasizes the importance of academic honesty and integrity as essential to education. Students are expected to complete and represent their work truthfully and are held accountable for academic misconduct, including cheating, plagiarism, and misuse of artificial intelligence. Teachers review the academic honesty policy at the start of each course. Consequences for dishonesty vary by offense: the **first offense** results in a zero on the assessment, parent contact, administrative review, and permanent ineligibility for National Honor Society; the **second offense** leads to another zero, a parent meeting with administration, and ineligibility for valedictorian or salutatorian honors; a **third offense** results in withdrawal from the course with a failing grade or audit status, and loss of honors pass privileges.

Tips for Success:

- All classwork will be accessible through Google Classroom, there you will find overviews of what to expect in the lessons, whiteboard notes, slides used in class, screencasts, or other important information or announcements. If you are absent or need to review past lessons, Google Classroom should be your first option.
- You can join Google Meet for every class period that you are absent. Please notify me in advance.
- Work is due at the beginning of the class on the due date posted in Google Classroom or a due date discussed in class. This will keep you prepared for what we are working on, and allows you to uncover questions you may want to discuss.
- Your notes and completed work must be kept organized in a notebook and binder. Your notes and binder will serve as your study guides and notes that you can use for any test or exam.
- Studies have shown that students who are active in their learning tend to perform better than students who are passive in the classroom. Participate in group work and take ownership of your own learning.
- Work hard to succeed. If you are struggling, be a great advocate for yourself and come see me for extra help. Be an active participant in your own rescue!

All Mukwonago policies & procedures will be followed and enforced in this class as outlined in more detail in the [Mukwonago High School Student and Parent Handbook](#).