Kendall Jacobs
Mathematics Instructor
Casper College School of Science
Casper, Wyoming

Kendall Jacobs has been teaching Mathematics at Casper College since 1999. He earned degrees in Geology and Secondary Education and later received a Master's Degree in Mathematics from Montana State. Kendall enjoys teaching all levels of mathematics from arithmetic through differential equations and is particularly interested in teacher education. Currently, Kendall is a partner for the Wyoming First Robotics League and is the Co-Chair of the Wyoming Science Olympiad. Kendall often leads evening sky observing sessions and gives monthly presentations at the Casper Planetarium.

Andrew Young
Physics Instructor
Casper College School of Science
Casper, Wyoming

Dr. Andrew Young was born in Boston, Massachusetts and grew up in the neighboring suburb of Brookline (home of JFK and Conan O'Brien). After graduating high school, he attended Boston University where he earned a Bachelor's degree in physics and astronomy, and a minor in mathematics and archaeology. He spent some time working at NASA's Goddard Space Flight Center and Los Alamos National Laboratory after college. Dr. Young transitioned to graduate school shortly after, where he earned a Master's and Ph.D. in astrophysics from the University of Minnesota. After working out east for a few years, Dr. Young arrived at Casper College in 2005. Dr. Young's past research interest includes blazars, space weather, aurora borealis, astrophysical search engines, and AGNs. His current primary academic duties consist of teaching live and on-line astronomy and physics courses at Casper College. He has served as a board member for the Tate Geological Museum, and currently serves as a board member for the Wyoming NASA Space Grant Consortium and the Pearson Publishing Physics Advisory Board. Dr. Young is also the Wyoming RadNet systems operator for the Environmental Protection Agency. Dr. Young's past recognition includes the Wyoming First Lego League Outstanding Volunteer Award (2014), the Wyoming Science Teacher's Association Friend of Science Award (2017), the Wyoming Department of Education Post Secondary STEAM Educator of the Year Award (2019), Casper College Rosenthal Outstanding Educator Award (2020), and the MacMillan Lab Innovator Award – Honorable Mention (2021).

Workshop: *Measurement of Time in Astronomy* – We will talk about time, how it is measured, go outside, 'see' the Sun's position by looking at the shadows made by various objects. We will then make a sundial, utilize one plan, make it, and test it by comparing it to the watch value of time. We will make another sundial by utilizing a different sundial plan, make it, test it by comparing it to the watch value of time. We will compare and contrast sundial 1 vs. sundial 2. Which one is "better"? *Time of Day on Other Planets* - Time as rotation on Earth and on other planets. What is their 'day' like? We will ask for 8

volunteers to be the planets (and 1 to be the Sun), and to spin according to their day length. *Time from an Orbital Perspective* - What is a year? Understand where planets are located and how long it takes for them to go around the sun. We will ask for 8 volunteers to be the planets (and 1 to be the Sun), and to orbit the Sun at their respective 'year'. We will then have a discussion our workshop: Using instruments to measure something. Comparing and contrasting experiments using different tools. Learning about the planets via NASA Space Probes, Orbiters, and Landers (Voyager, Mars Pathfinder, Parker Space Probe, etc..) Educational path towards those careers and other opportunities.