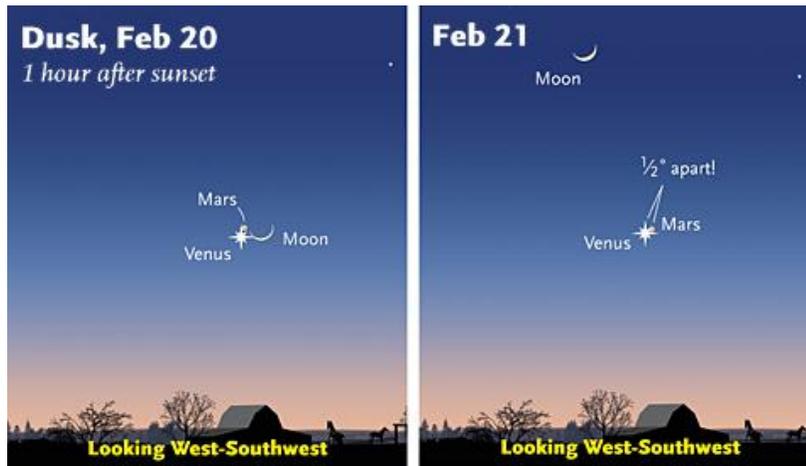


A Cosmic Dance this Weekend!

This weekend, there will be a beautiful arrangement of celestial bodies. On Friday night, Venus, Mars and the Moon will form a splendid triangle in the Western sky. In astronomy, this is called a conjunction, when two objects appear near each other in the sky. Venus will be the brighter of the two star-like objects and just above Venus will be the red planet Mars. Filling out the right side of the triangle will be a thin crescent Moon. All three objects will make a spectacular sight in binoculars and the two planets should be visible in a small telescope at the same time! This celestial triangle will not last long because the Moon will move significantly eastward (13 degrees) each night. However, Venus and Mars will remain close together on February 21 and 22.



On the opposite side of the sky will be the massive planet Jupiter. It will be seen just as it gets dark, dazzling and bright in the east. This gas giant is so big that all the other planets in our Solar System could fit inside it. It is also famous for its red spot and its many moons. Astronomer Galileo Galilei discovered Jupiter's four largest moons in 1610 with an early version of the telescope. These moons are known today as Galilean Satellites. Incidentally, Galileo used his discovery of Jupiter's moons as evidence that the Earth was not the center of our Solar System. Decades later his observations would lead to the acceptance of Mikołaj Kopernik's theory that the Sun was the center of our Solar System. To the right is a picture of Jupiter taken at Kopernik Observatory.



The last of Kopernik's special winter programs will be *Majestic Jupiter*, this Friday February 20 at 7 p.m. Learn more about Jupiter and the various spacecraft that have explored this planet.

In March, Kopernik resumes its weekly Friday night public programs. Have you ever thought about trying to brew your own beer? On March 6, Brewmaster Seth Weisel from Galaxy

Brewing Company in Binghamton will discuss the basics of beer brewing. Find out about barley germination, malting processes, fermentation, and various aspects of beer haze, foam, and color, and more.

On March 13, Alex Harvilchuck from the Susquehanna Astronomical Society will present an introduction to radio astronomy, explaining how astronomers view celestial objects using radio waves.

On Saturday 3/14, Kopernik will celebrate *Pi Day* honoring the mathematical constant pi (π) – the ratio of a circle’s circumference to its diameter – which is approximately 3.14. This year has special significance. At 9:26:53 a.m., the date and time will represent the first 10 digits of pi, 3.141592653. Kopernik will mark the occasion with family-friendly activities and contests. Doors will open at 8:30 a.m. There will be a pi digit memorization contest, pi shuffleboard, pi-ku poetry writing, and a pi scavenger hunt. March 14 also is the birthday of Albert Einstein. Come in costume for an Einstein impersonator contest.

Upcoming classes at Kopernik include *Extreme Magnification* on Saturday March 7 for students in grades 6-8. They will explore the smallest parts of our world using high magnification, capture images of tiny objects, and use software to creatively manipulate these images.

On Saturday March 21, children age 3-6 are invited to *Weather*, the next class in the KoperniKids series. They will explore the different types of weather and make some instruments to measure the weather.

Students in grades 8-12 can learn about observing the night sky at *Observational Astronomy* on Friday and Saturday, March 27 and 28. This two-evening class will include training on the use of binoculars, and Dobsonian and other basic telescopes, as well as more sophisticated systems, such as our Celestron 14-inch telescope!

Kopernik will offer several classes during the school spring break. Girls in grades 3-5 and 6-8 can attend separate sessions of *Girl Power: Girls who Code* and learn about computer programming. Boys and girls in grades 6-8 can have fun with stop motion animation at *Lights, Camera, Stop Motion!*

Even though the ground is covered in deep snow, it is not too early to think about summer camps at Kopernik. These weeklong camps offer students in grades 1-12 fun, hands-on, high-tech adventures in Science, Technology, Engineering, and Math, in a nurturing environment. Registration will open March 1.

See Kopernik’s website for more information about classes, camps, and public programs.