Astronomy Day from McDonald Observatory

Science TEKS Grades 6 – 8

Grade 6

6.2: The student uses scientific inquiry methods during field and laboratory investigations.

*B. collect information by observing and measuring.

*C. analyze and interpret information to construct reasonable explanations.

*D. communicate valid conclusions.

Students participate in a guided inquiry videoconferencing session about characteristics of the Sun and planets. They may communicate their results in reports following the videoconference.

6.3: The student uses critical thinking, and scientific problem solving to make informed decisions.

C. represent the natural world using models and identify their limitations.

D. evaluate the impact of research on scientific thought, society, and the environment.

Students make their own scale model of our solar system and identify size limitations, and consider the scientific process in the recent decision to re-classify Pluto.

6.4: The student knows how to use a variety of tools and methods to conduct science inquiry.

A. collect and analyze information using tools: cameras and computers.

Students are collecting and analyzing data (digital images) from McDonald Observatory solar telescopes via videoconference. In a sense, this is remote observing.

6.7: The student knows that substances have physical and chemical properties.

B. identify matter as solid, liquid, or gas.

Students identify characteristics of the sun.

6.13: The student knows components of our Solar System.

A. identify characteristics of objects in our Solar System including the Sun, planets, meteorites, comets, asteroids, and moons.

Grade 7

7.2: The student uses scientific inquiry methods during field and laboratory investigations.

*B. collect data by observing and measuring.

*C. organize, analyze, make inferences, and predict trends from direct and indirect evidence.

*D. communicate valid conclusions.

Students participate in a guided inquiry videoconferencing session about characteristics of the Sun and planets. They may communicate their results in reports following the videoconference.

7.3: The student uses critical thinking, and scientific problem solving to make informed decisions.

C. represent the natural world using models and identify their limitations.

D. evaluate the impact of research on scientific thought, society, and the environment.

Students make their own scale model of our solar system and identify size limitations, and consider the scientific process in the recent decision to re-classify Pluto.

7.4: The student knows how to use a variety of tools and methods to conduct science inquiry.

A. collect and analyze information using tools: cameras and computers.

Students are collecting and analyzing data (digital images) from McDonald Observatory solar telescopes via videoconference. In a sense, this is remote observing.

Grade 8

8.2: The student uses scientific inquiry methods during field and laboratory investigations.

*B. collect data by observing and measuring.

*C. organize, analyze, make inferences, and predict trends from direct and indirect evidence.

*D. communicate valid conclusions.

Students participate in a guided inquiry videoconferencing session about characteristics of the Sun and planets. They may communicate their results in reports following the videoconference.

8.3: The student uses critical thinking, and scientific problem solving to make informed decisions.

C. represent the natural world using models and identify their limitations.

D. evaluate the impact of research on scientific thought, society, and the environment.

Students make their own scale model of our solar system and identify size limitations, and consider the scientific process in the recent decision to re-classify Pluto.

8.4: The student knows how to use a variety of tools and methods to conduct science inquiry.

A. collect and analyze information using tools: cameras and computers.

Students are collecting and analyzing data (digital images) from McDonald Observatory solar telescopes via videoconference. In a sense, this is remote observing.

8.13: The student knows characteristics of the Universe.

A. describe characteristics of the universe such as stars and galaxies.

B. Explain the use of light years to describe distances in the universe.

C. research and describe historical scientific theories of the origin of the universe.

Students will visit with astronomer Dr. Steve Odewahn who will answer questions about our planetary system, our galaxy and scientific theories as to the origin of our universe. Students may also communicate their results in reports following the videoconference.