

Daily Lesson Plans

Standards

NGSSS – Next Generation Sunshine State Standards

Big Idea 5: Earth in Space and Time

SC.8.E.5.1 Recognize that there are enormous distances between objects in space and apply our knowledge of light and space travel to understand this distance.

Other standards of the unit

SC.8.E.5.3 Distinguish the hierarchical relationships between planets and other astronomical bodies relative to solar system, galaxy, and universe, including distance, size, and composition.

SC.8.E.5.2 Recognize that the universe contains many billions of galaxies and that each galaxy contains many billions of **stars**.

SC.8.E.5.5 Describe and classify specific physical properties of stars: apparent magnitude (brightness), temperature (color), size, and luminosity (absolute brightness).

Learning Targets

Students will be able to –

Compare and/or contrast the relative distance, relative size, and general composition of astronomical bodies in the universe.

Describe distances between objects in space in the context of light and space travel.

Differentiate among different units of measurements in outer space.

Establish the relationships between the measurements used in the space and outer space.

Graph distances between the celestial objects.

Essential Questions

This higher order question will be directly derived from the benchmark, introduced at the beginning of the lesson, discussed throughout the lesson, and answered by students at the end of the lesson to show understanding of the concepts taught.

How does the gravitational force of attraction impact distances

High Order Questions

Several questions will be answered to provoke higher order thinking and include Moderate to High Complexity Levels.

Why do scientists use different units to measure distances in space?

Vocabulary

Students will master the following vocabulary during the time of this unit plan

scientific model, nebula, light-year, empirical evidence, dwarf planet, astronomical unit, star, moon, asteroid, comet, planet, universe, galaxy, solar system, parallax, light year, telescopes, objective lens