

Extension: H-R Diagram Star Sort

The FRAME Routine

Key Topic
physical properties of stars

is about...

The reason why stars are so important is because they have helped humans navigate through Earth . When it was dark, these stars would light up the sky giving people light . In addition, stars are very important because they make life on Earth.

☐ Main idea
apparent magnitude (brightness)

Essential details

1. a measure of the brightness of a star or other astronomical object observed from Earth
2. depends on how big it is, how far away it is from Earth, and how much light it emanates per diameter of the star
3. measured on a scale called the magnitude scale from 1 to 6

☐ Main idea
temperature (color)

Essential details

1. color of a star depends on surface temperature from red to yellow to blue
2. might appear to have a single color, but emits a broad spectrum of colors
3. measure star temperatures in a unit known as the kelvin

☐ Main idea
size

Essential details

1. measure the size of stars in terms of the radius of our sun
2. size of a star affects its brightness
3. represent the mass of a star in terms of the solar mass, the mass of our sun

☐ Main idea
luminosity (absolute brightness)

Essential details

1. is the power of a star — the rate at which it emits energy
2. the luminosity of a star is usually measured in terms of the luminosity of the sun
3. brightness of a star depends on its surface temperature and size

So What? (What's important to understand about this?)

Once we look beyond the solar system, most of what we can learn about the Universe is based on observing stars. Stars represent the most fundamental building blocks of galaxies. Stars are responsible for the manufacture and distribution of heavy elements such as carbon, nitrogen, and oxygen, and they are central to the field of astronomy.

The FRAME Routine

Key Topic

is about...

☐ Main idea

Essential details

- 1.
- 2.
- 3.

☐ Main idea

Essential details

- 1.
- 2.
- 3.

☐ Main idea

Essential details

- 1.
- 2.
- 3.

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Essential details

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