

LIVE WORKSHEET

Space

Hierarchy of the Universe

Rank from largest to smallest. 8 (largest) 1 (smallest)

 Milky Way 	 Solar System 	 Earth 	 METEOR
 UNIVERSE 	 Moon 	 STAR 	 Virgo Super Cluster

Law of Gravity

Compare the gravitational force between the objects.

Gravitational Force Depends on Mass

The gravitational force between objects **INCREASES** as the masses of the objects **INCREASES**.

A		A
B		B

Gravitational Force Depends on Distance

The gravitational force between objects **DECREASES** as the distance between objects **INCREASES**.

A		A
B		B

Mass vs Weight in Space

Click the [space calculator](#) to determine the correct answer.

Mass = 120 pounds Weight = 120 pounds  Earth	Mass = Weight =  Mars
Gravity affects weight NOT mass!	

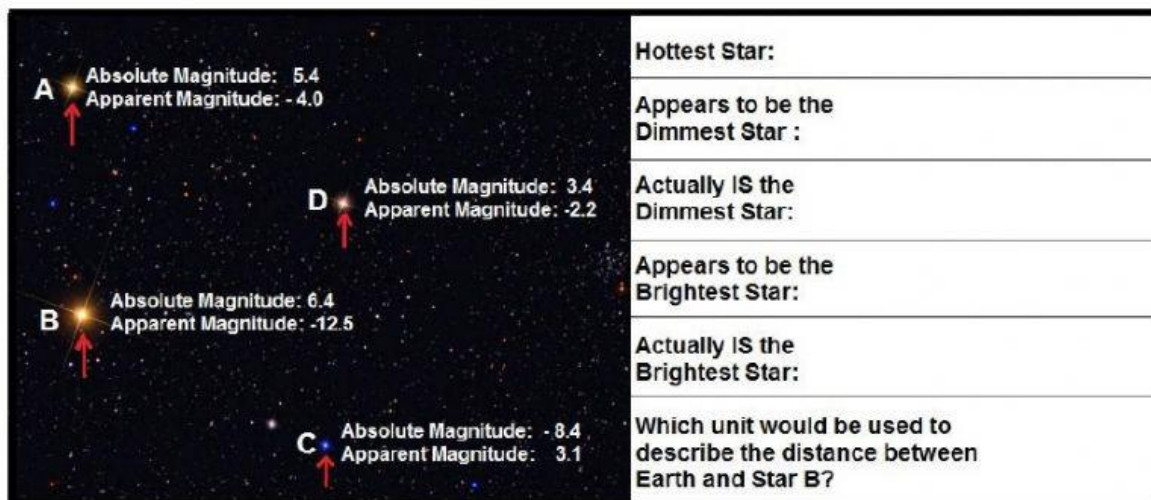
Distance in Space

Compare astronomical units and lightyears.

5.9 Trillion Miles	Sun-Earth Distance	Used for vast distances between stars and galaxies
93 Million Miles	Used for distances between objects in a solar system	Distance light travels in ONE year

Apparent Magnitude vs Absolute Magnitude

- Apparent Magnitude: how bright a star appears from Earth
- Absolute Magnitude: the actual brightness of a star at a standard distance of 10 parsecs
- Negative values represent brightest stars; positive values represent dimmest stars



Star Classification

The Hertzsprung–Russell Diagram

