

A Star that is the center of our system of planets

(The Sun)

The distance that light travels in one year

(light year)

Small, solid objects that revolve around the sun

(planets)

To turn around on an axis

(Rotate)

The movement of one object around another, such as a planet around the sun

(Revolve)

What is the moon called when it is just a little curved piece?

(crescent)

The third planet from the sun

(Earth)

What is it called when the one planetary body is blocked from the sun by another planetary body?

(an eclipse)

What is the name for the shortest day of the year?

(Winter Solstice)

What is the name for the longest day of the year?

(Summer Solstice)

What is the invisible line around which the Earth rotates?

(axis)

What are the two days called when the night and day are equal lengths?

(Spring and Fall Equinox)

What are the dates of the longest and shortest days of the year?

(December 21st and June 21st)

What are the dates of the two days during the year when night and day are equal lengths?

(March 21st and September 21st)

What is the name for someone who studies space?

(an Astronomer)

What is the phase of the Moon called when it is not visible in the sky?

(New Moon)

What is the word for when the moon is in the process of growing larger and larger?

(waxing)

What is the word for when the moon is in the process of growing smaller and smaller?

(waning)

What is the force that keeps planets in orbit around stars, and the moon in orbit around the Earth?

(gravity)

What word describes making models that are in the same shape and size as the original?

(scale)

How do we measure distance in space?

(in lightyears)

What is the phase of the moon when it is almost or just past a full moon?

(Gibbous)

What time of day or night would you see a full moon?

(middle of the night)

What is the phase of the moon called when it looks like half a moon?

(quarter)

WARP SPEED!!

A group of stars that form a shape or pattern that has been given a name

(Constellation)

What time of day would you see a new moon?

(middle of the day)

What is the measure of how much "stuff" is in something?

(mass)

What is the measure of a planet's attraction for something's mass?

(weight)

WARP SPEED!!

What is lightest part of the Earth's shadow called?

(penumbra)

WARP SPEED!!

Why should you never look at a solar eclipse?

(because the corona is very, very intense light and can burn out your retinas, leaving you blind)

Why are quarter moons called 'quarters' when they look like half moons?

(They are a quarter way through the moon's cycle of phases)

Is it safe to look at a lunar eclipse? Explain.

(yes; the light is reflected sunlight and is not bright enough to hurt eyes)

Why does the Moon shine?

(it reflects light from the sun)

What is the name for the light shining from the moon during a total eclipse?

(Earthshine)

What causes the tides?

(the gravitational pull from the Moon on Earth's oceans)

If it is winter in Connecticut, what season is it in Australia?

(summer)

What caused the craters on the Moon?

(collisions with meteoroids)

What is the name of the shape of Earth's orbit around the Sun?

(an ellipse)

Why is it cool at the poles even during summer, when there are 24 hours of light?

(the sun's angle causes weak sunshine)

Is there water on the Moon?

(Maybe! The dark patches near the poles might be ice)

Rules for Play

Object of the Game

To be the first player to reach the Black Hole and become the scientist who discovers what they really are.

Starting the Game

Each player selects a personality for the game: Moon Goddess; Intergalactic Traveler; Ruler of the Orbits; or Earth's Commander. Each personality is given their secret Knowledge Card, which they must keep secret throughout the game. When a card is selected in their personality deck, they are responsible for verifying the answer to the card given by the player who drew it.

The group rolls the die to determine who moves first. The player with the highest roll is the first one to play. If there is a tie, the first player to have rolled the high number moves first.

Play

The player to the right of the first player selects a Universe Card and asks the question of the player whose turn it is to move.

If the player answers the question correctly, that player may roll the die and move that many spaces toward the Black Hole.

If the card selected has "Warp Speed" written on it and the question is answered correctly, then the player moves twice the number of spaces indicated on the die.

If the player fails to answer the question correctly, they move backwards one space. Players can move no further backwards than the starting Launch Pad.

Special Cards

If a player lands on a special square, the player should select the first card in the indicated deck. The player will read the question and answer it. The personality for that topic (Moon Goddess, etc.) will verify the answer using her or his secret Knowledge Card. If the answer is correct, the player may roll the die and move forward the number of spaces thrown.

Winning the Game

The first player to reach the Black Hole wins the game.



Moon Goddess

1. 27.3 days
2. craters
3. tides
4. lunar eclipse
5. 27.3 days
6. Because the moon's plane of travel is angled from Earth's so it travels above and below Earth most of the time
7. Because its gravitation pull toward Earth has it rotating and revolving at the same rate, so only one side ever faces Earth
8. 1/6th
9. Marias
10. Yes (see #7)



Intergalactic Traveler

1. Milky Way Galaxy
2. The Big Bang
3. The Universe
4. comets
5. Jupiter, Saturn, Uranus, and Neptune
6. Meteors, meteorites, or asteroids falling through Earth's atmosphere
7. Yes, it became our Moon
8. Yes! And very recently, too.
9. a galaxy
10. Stars shine because they are making their energy through nuclear fusion, which gives off light, heat, and other forms of energy



Ruler of the Orbits

1. Mercury, Venus, Earth, Mars
2. 2 of: a) different plane of travel; b) not round; 3) not made of same material as other planets; 4) very small; 5) its orbit intersects Neptune's orbit
3. By something planet-sized colliding with Earth and knocking off a chunk that became the Moon
4. mass and distance
5. something big hit Earth and knocked our axis onto an angle
6. When the day and night on a planet are equal in length
7. It wobbles and rolls in its orbit
8. It has no atmosphere, water, and food
9. No living men - just robotic rovers
10. It has no atmosphere, water, and food



Earth's Commander

1. solar eclipse
2. axis
3. Earth's rotation on its axis
4. Earth's revolution
5. Summer
6. umbra
7. the Equator
8. 365 days
9. Because the tilted axis makes different parts of the Earth closer or further from the Sun as the Earth revolves around the sun, changing the amount of sunlight reaching the Earth
10. Tropic of Cancer



1

How long is a year on the Moon?



2

What are the depressions on the Moon called?



3

What does the Moon cause on Earth?



4

What is it called when the Earth blocks the sun from shining on the Moon?



5

How long is a day on the moon?



6

Why don't we have an eclipse of the moon every month?



7

Why do we only see one side of the Moon?



8

What is percentage of the Earth's gravity on the Moon?



9

What are the dark areas on the Moon called?



10

Does the Moon rotate? (Explain)



1

What are the first four planets from the Sun?



2

Give two reasons why Pluto is no longer considered a planet.



3

How do we think the Moon was formed?



4

What are the two things that cause the strength of gravitational pull?



5

How do we think Earth's axis became angled?



6

What is an equinox?



7

How is Mars' orbit affected by its lack of a Moon?



2

Why can't we live on the Moon right now?



9

Has man ever been to Mars?



10

Why can't we live on Mars right now?



1

What is it called when the moon blocks sunlight from the Earth?



2

What is the name for the invisible pole through the center of the Earth?



3

What causes day and night?



4

What is the motion of the Earth around the Sun?



5

If the north pole is pointed toward the sun, what season is it in the northern hemisphere?



6

What is the name of the darkest shadow cast by the Earth ?



7

What is the part of the Earth closest to the sun at the equinoxes?



8

How long is a year on the Earth?



9

Why does the daylength change through the year?



10

What part of the Earth is closest to the Sun at the Winter Solstice?



1

What is the name of Earth's home galaxy?



2

What was the name of the action that created the Universe?



3

What is the name of all the things in space, put together?



4

What are the flying balls of ice called that travel through the universe?



5

Name the outer planets (beyond Mars)



6

What are falling stars?



7

Did Earth ever have a ring?



8

Have any other planets been discovered outside our solar system?



9

What is a huge group of stars, star systems, and gas bound by gravity?



10

Why do stars shine?



*Intergalactic Traveler
Knowledge Card*

*Moon Goddess
Knowledge Card*

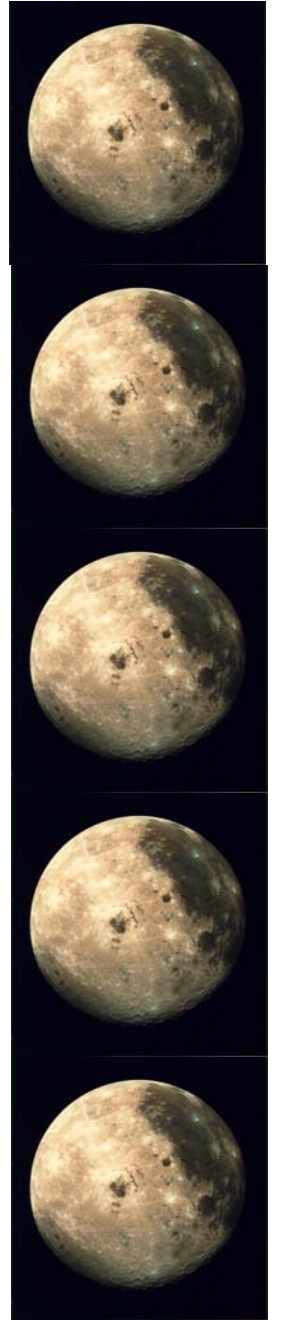
*Planetary Traveler
Knowledge Card*

*Ruler of the Orbits
Knowledge Card*



End of Game

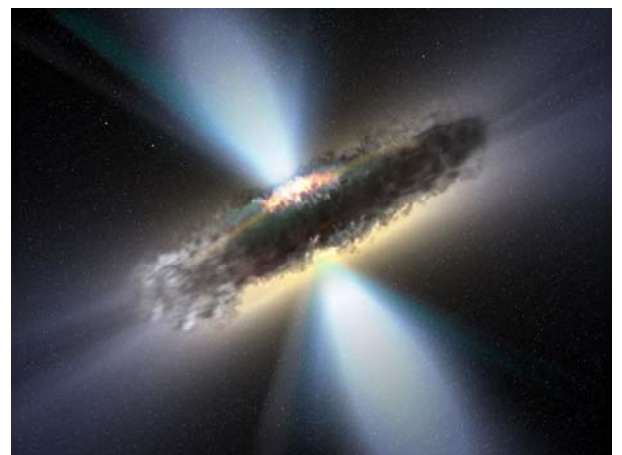








Start of Game



Teacher Notes:

I created an astronomy game for my students. I'm attaching the file with the card information, colored parts, etc. Takes some time to make the boards and cards, but I've used them repeatedly now. I used posterpaper for the board and laminated the playing cards. The directions are mid-way through the file. Comments welcome!

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Rules for Play

Object of the Game

To be the first player to reach the Star in the center of the board and return to the start.

Starting the Game

Each player starts at the start of the path. The player who starts the game is the one who starts the game. The player who starts the game is the one who starts the game.

Play

The player starts at the start of the path. The player who starts the game is the one who starts the game. The player who starts the game is the one who starts the game.

Special Cards

If a player lands on a special square, the player must do something. The player who starts the game is the one who starts the game.



Start of Game



