



Riddle of the Planets - Lesson Plan

This song is very workshop-able! There's a whole galaxy of possibility here! So here we go...

First a little overview:

The study of the solar system has been going on as long as humans have been observing the heavens. All kinds of information regarding 'the ancient seven', that is, the Sun to Saturn, exists in the records of many cultures, from the Ancient Greek astronomers to the Dogon tribe of Mali.

The names of the days of the week relate to the planets in a combination of language origins. There are references to Roman, Greek, Anglo-Saxon/Teutonic and Norse mythology. It's especially interesting to cross reference the English names for the days with the Latin (the Romantic languages). It does make you wonder about the origins of many things!!! While we're at it, why *seven* days?

Monday, Lunes, Luna: Moon

Tuesday (Tiu's Day), Martes, Mardi: Mars

Wednesday (Woden's Day, Hermes), Miercoles: Mercury

Thursday (Thor's Day!), Jueves (Jove): Jupiter

Friday (Freya's Day...), Viernes: Venus

Saturn's Day

Sun Day

OK! Back to our song... RIDDLE of The Planets! Yes, the idea of this song is to spur research. Each verse provides a few cool facts about each planet (plus the Asteroid Belt, dwarf planet Pluto and the Sun), and then asks the question: What planet am I? Or What am I?

It also progresses in order from the inner planets to the outer planets and back to the sun, which is quite helpful. So here are some useful prompters relating to each verse. Have fun!

Both hot and cold, slow and fast

Mercury's day = 58.6 Earth Days

That is one slow rotation! Therefore it's hot on its sunny side and extremely cold on its night side.

At the same time it whizzes around the Sun at 29.8 miles/second orbital speed.

Quicksilver planet traveling past

The 'god' Mercury was the winged messenger and was responsible for things like travel and communication. Someone with a silver tongue could be considered Mercurial.

What planet am I?

Sister Planet, gassy hot

Sister to our earth and 915 degrees F. on its surface.

Its beautiful glow is caused by its dense (and deadly) atmosphere trapped by an overwhelming greenhouse effect - so the Sun's light reflects brightly off Venus' mirror-like nature.

Morning and evening star

It rises and sets with the Sun!

Backward spin, east to west

Venus rotates so slowly on its axis that its day is longer than its year!
And yes, the sun sets in the east on Venus, the planet of love and beauty.

Beautiful sight you are!

What planet am I?

Watery planet Mother blue

Cradle of life for me and you

To what degree you emphasize the Earth's maternal nature is up to you. When we say 'Mother Earth' or as many indigenous tribes say 'Great Mother', children instinctively know it to be true, clearly so.

Lunar tides, aurora glow

Now there are two marvelous subjects to get into!

The lunar phases of the 13 months (moon-ths) of the lunar calendar is a fertile subject.

Also, the Auroras of the North and South poles are a key to understanding the Earth's relationship with the Sun: the magnetosphere, Solar winds, the Sun's corona, solar flares, space weather....

Here's a link to a lovely light show!

http://youtu.be/IT3I6a9p_o8

How does your garden grow?

Yes Mary, Mary, how does your garden grow?

We have much to continue to learn from the way Mother Nature does things, from principles of symbiotic reciprocity to diversity to ecotones to ecosystems to conservation....to understanding the nature of the color *BLUE*....

What planet am I?

Warrior planet marching by

Martial Arts, Artes, Ares, Aries, Arterial Blood (Red),
The month of March! Iron. The color red...

Polar ice, rusty, dusty sky

Volcanic Craters, arid seas

Giant mountains, deep valleys

Mars features the highest mountain/volcano in the solar system - Olympus Mons, which dwarfs the Earth's most impressive peaks. And....yes Water! More and more evidence of water and the possibility of 'life' at one time in Mars-o-logical time!

What planet am I?

Chunks of a planet from long ago

Held by the Sun's gravitational pull

What orbits in between

The inner and outer solar scene?

We have been astounded over and over again by children's fascination with the asteroid belt and meteors and especially the subject of gravity!

The video at the end of this lesson plan provides a new and quite elegant explanation for gravitational force. It is to do with the toroidal or spiraling motion of things...very cool!

What am I?

Royal giant spinning fast

Yes, incredibly fast, considering its size.

Great red storm, swirling gas

The Great Red Spot is a storm that has been raging for 300 years! It's actually hard to keep track of how many moons have been discovered orbiting Jupiter. Most sources say around 28. But some say up to 39, believe it or not.

The amazing thing about Jupiter and its moons are the characteristics of some of its satellites. Io, Europa and Ganymede are of particular interest!

By Jove! Great God of lightning and thunder

Here's where your study ancient mythologies can really come alive!
Norse, Egyptian, Greek and Roman stories surround this great gas
giant on the verge of becoming a star.

Inspiration, joy and wonder

The ancients believed that planets affected human life and endowed
us with certain qualities!

What planet am I?

Father Time, magnificent rings

Cronos, Chronology, Time

And yes, those magnificent rings!

Let's see what Saturday brings

Many moons up in the sky

Ten hour day goes whizzing by

Yes Saturn rotates extremely fast for its size. It's actually quite
astounding how fast the gas giants spin. Saturn itself is the least
dense of all the planets.

What planet am I?

Spinning on its side it circles the Sun

Yes Uranus with its faint rings and many moons spins on a
horizontal axis!

Topsy turvy giant, big blue green one

What planet am I?

The history of the naming of Uranus is fun.

Beautiful blue, mermaid sings

Associated with the God of the Seas, Poseidon rules with his mighty
trident. Pisces goes with Neptune, of course - the sign of two
revolving fish! Also let's not forget the song of the Sirens in Homer's
Odyssey!

Like all gas giants, icy rings

What planet am I?

Because you're a dwarf

Alas! your fate

There once were nine

But now there are eight

248 Earth years for Pluto to orbit the Sun; named for the Greek god of the underworld; one moon named Charon; this distant cold, dark and lonely planet has been relegated to the title "dwarf".

What dwarf planet am I?

Then finally,

We all catch your winds in our sails

Beautiful yellow star - I wonder what you are

On the high seas of the Milky Way

Beautiful yellow star - I wonder what you are

Our sun, the Sun, which curiously doesn't really have a name (nor does our Moon), is at the center of it all. So much have we yet to learn about our sun! But we do have some amazing insight thanks to the diligent observations of astronomers and their ever-improving technologies.

Here is a 'paradigm altering' view of the Solar System that really does begin to make a bridge to more accurate understanding and perception:

<https://youtu.be/0jHsq36> NTU

Enjoy!

PAZ