

Missed Session Notes 10/17/18  
NASA Astronomy and Space Science

Start turning in assignments as soon as possible. Due by 11/3 are the 2 power point slides showing what we did during the implementation lesson. We are expected to talk for 1-2 minutes about each slide and discuss what worked and what didn't work during our implementation. This can be a NASA lesson or not. Must be turned into Dropbox no later than 11/3.

Aliens look back at Earth. Opposite of how we look at the sky. There are patterns in the lights on Earth that Aliens could use and study. Very interesting idea here. But also very true when looking at night shots from space to Earth.

Juno is a satellite that takes pics of Jupiter. Juno is the first satellite to capture Jupiter's poles. The poles have really cool blue swirling clouds. To me, the pictures resembled art by Vincent VanGogh with swirls and colors. Jupiter is known for its "red spot" but to me, the poles were even cooler! When shown in infrared light, the swirls became a very dark red. Brandon referred to it as a "pepperoni pizza."

Hubble and mirrors. The mirrors needed for Hubble are very large. Hubble is not known for taking amazing shots and does not take high quality images. It takes very specific images of small things. The Eagle Nebula was very neat. I thought it was interesting that scientists do not like the photo because of the "duct" in the photos. It looked like one of the planets in Star Wars.

#### Kepler and exoplanet telescope

Students don't understand that there are billions of stars. Urban vs. Rural. I teach in a very rural area so my students are used to stars, but we talk about what the night sky looks like when you stand under a street light and when you're in the pasture.

#### Chandra space telescope

James Webb Space Telescope is the size of 2 tennis courts, need to separate heat so there's many levels.

Telescopes show us how things were before. Rather than waiting for light to reach us, we go towards it. We can measure how old something is by measuring how the wavelengths are changed. Not looking backwards in time, looking at things as they are right now. Looking at things and how they are before they are "changed" by elements. I found this to be very interesting. I've never really thought about what a satellite can see and from what time period. It makes sense that it can see things in real time vs. seeing things once their light has hit Earth.

TESS 4 cameras. Transiting Exoplanet Survey Satellite. Will scan the sky quickly.

Being able to see dark matter with new satellites. Right now we don't really know what dark matter looks like.

Cereal box spectrometer - looks like a fun activity that could be pertinent for elementary students to see light spectrum.

Helpful sites to look into

[Zooniverse.org](http://Zooniverse.org)

[Planethunters.org](http://Planethunters.org)

Week 10 discussion now

For the implementation lesson, I'm planning on using the "Design a Lunar Buggy" lesson from Nasa's Best. Is that what you're asking us to do? Find a lesson on space science and implement it?