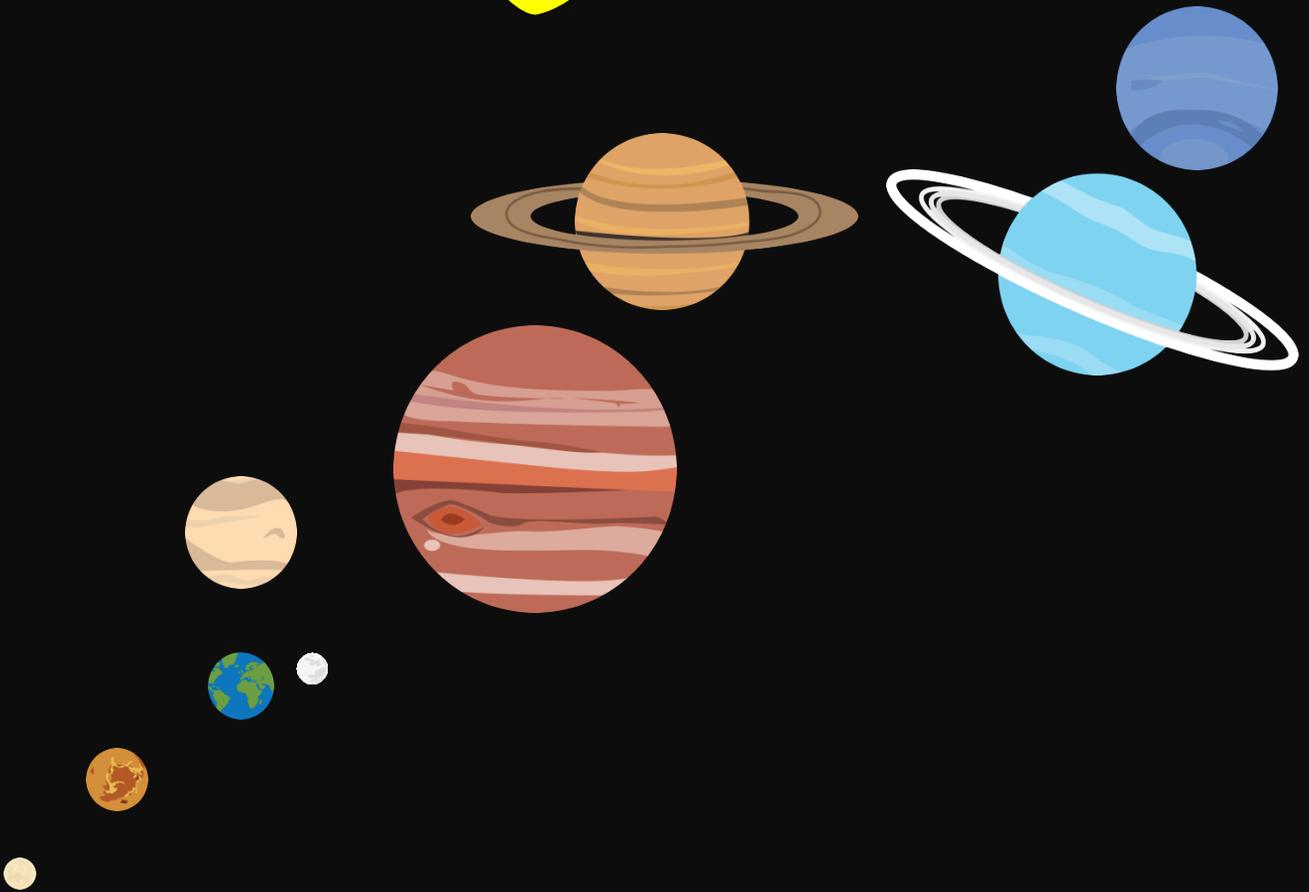


CREATE AN ALIEN PROJECT

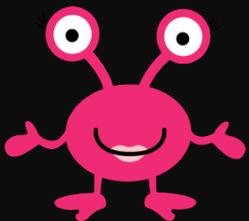


A CROSS-CURRICULAR PROJECT

BY JEN MASCHARI

WWW.JENMASCHARI.COM

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FOR THE TEACHER



As I was teaching my space unit and thinking about our final cumulative project, I wanted to create a project that allowed the students to truly demonstrate an application of what they had learned. Our standards call for students to be able to know and understand general knowledge about the planets in our solar system.

In this project, students choose one of the eight planets to research. Then, they create a passport of information about that particular planet, including information like atmosphere, temperature, environment, distance from the sun, etc. **Pages 4 – 9** in this packet will serve as a great guide for your students as they choose a planet, research and create a passport for their alien's journey to earth.

With this information, the students must design a 3D model of an alien that could live on the planet they have chosen to research. Here is where the application of knowledge comes in! They must consider all of the information they have learned about the planet to create an alien who would be able to survive there. I have included pictures of the aliens the students created in the packet but actually did not show the students any examples ahead of time.

Once all of the research has been done, the passports have been created and the aliens have been designed, you can have a Welcome to Earth celebration for your in-coming visitors. This can be set up like a fair and students can travel around to different stations to “meet” the aliens. They can fill out a **Nice to Meet You! Guide** to catalog the information they have learned about the different aliens and their home planets. **Pages 10-13** can be used for this celebration. I put a planet name on each round table, and the students laid out their passports and aliens.

The rubric is included on **page 14** and addresses both language arts and science standards.

As always, if you have any questions about the implementation of this project, please feel free to e-mail me at jen.maschari@gmail.com



STANDARDS COVERED:

The solar system includes the sun and all celestial bodies that orbit the sun. Each planet in the solar system has unique characteristics. (From the current State of Ohio standards)

SUPPLIES NEEDED:

- Collection of space books from your school or local library
- Copy of research packet for each student
- Black or navy construction paper or cardstock cut in half hamburger style
- White computer paper or cardstock cut into fourths (to fit inside book)
- Coloring supplies
- Assorted recyclables and other art materials provided by the students

SUGGESTED BOOK TITLES AND WEBSITES:

<http://science.nationalgeographic.com/science/space/solar-system>

This is an awesome website that has beautiful, accurate pictures and a wealth of information about all of the planets. Students can click on a planet or term like asteroids to find out more about them.

<http://pds.jpl.nasa.gov/planets/>

This website provides a lot of pictures as well as brief planet profiles that students can use as a starting point in their research.

<http://www.windows2universe.org/>

This website also has some awesome pictures and some very interesting facts about the planets and other parts of the solar system. There are advertisements on this webpage but none seemed inappropriate.

<http://school.discoveryeducation.com/schooladventures/universe/>

An exploration of the universe with the American Museum of Natural History

<http://amazing-space.stsci.edu/resources/explorations/trading/>

Background information for teachers that students may find useful but it is text dense. Students get to learn about the planets and other objects through space trading cards.

http://www.kidsastronomy.com/solar_system.htm

Information about the planets as well as some cool animation

<http://solarsystem.nasa.gov/planets/index.cfm>

Another really great site that allows students to click on links to find information about the different planets. Students can also pick two planets to compare and scientists are profiled.

13 Planets: The Latest View of the Solar System by David Aguilar

Planets by Penelope Arlon and Tory Gordon-Harris (this is a Scholastic Discover More book – comes with a code for an on-line companion feature)

Almost Astronauts: 13 Women Who Dared to Dream by Tanya Lee Stone (I suggest this book – not for this project, but for your classroom – it is a great addition to any unit on space!)

Books on Planets from the A True Book Scholastic series – these are written by **Elaine Laudau** (one book written for each of the planets)

I also love all of the **Seymour Simon** books on the planets.

PROJECT INSTRUCTIONS

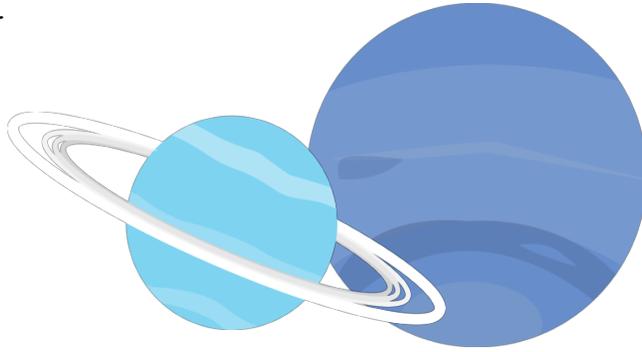


Greetings Earthlings!

I am so excited to hear that you have been learning about outer space. The planets are so fascinating to learn about. They all have such different characteristics. Some are made of gas while others have a rocky surface. Some have very thick atmospheres while others have none.

Your challenge will be to find out more about a specific planet of your choosing. You may choose between:

- MERCURY
- VENUS
- MARS
- JUPITER
- SATURN
- URANUS
- NEPTUNE

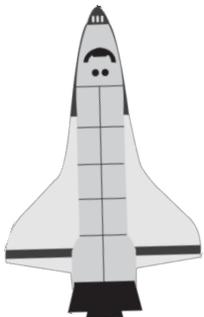


Once you have chosen your planet, you will research it. I have included a **graphic organizer** and some **website suggestions** to get you started. I also have put some **books** out in the classroom for you to use as well.

You will create two things with your new knowledge.

1. YOU WILL CREATE AN ALIEN WHO COULD INHABIT THE PLANET THAT YOU HAVE CHOSEN. YOU WILL CREATE A 3D MODEL OF THIS ALIEN OUT OF MATERIALS YOU CAN FIND AT HOME. YOU WILL NEED TO CONSIDER WHAT ADAPTATIONS THE ALIEN WOULD HAVE HAD TO MAKE TO SURVIVE.

2. YOUR ALIEN WILL BE TRAVELING TO EARTH IN THE VERY NEAR FUTURE. THE INTERNATIONAL SPACE COMMISSION REQUIRES THAT ALL ALIENS VISITING FROM OUTER SPACE HAVE THE PROPER DOCUMENTS. THEREFORE, YOU WILL CREATE A PASSPORT FOR YOUR ALIEN THAT HAS THE NECESSARY INFORMATION ABOUT ITS HOME PLANET.





AS YOU BEGIN YOUR RESEARCH...

As you begin your research on your planet, it is important that you use sources that are reliable. Remember, anyone can go onto the internet and create a website. This website may have the correct information or it may not. We can check the validity of this information by researching from a variety of different sites and books.

It is also important that the resources you use are up-to-date. Some books or websites still list Pluto as a planet. We know that Pluto was demoted to dwarf-planet status way back in 2006.

Here is a list of websites that I have already previewed for you. They are student friendly and full of great information and graphics. There are also a great number of student friendly search engines as well. Examples of these include SIRS Discover and INFOHIO. Be sure to check these out to help you as you find out more information about your planet.

LIST OF WEBSITES:

<http://science.nationalgeographic.com/science/space/solar-system>

This is an awesome website that has beautiful, accurate pictures and a wealth of information about all of the planets. You can click on a planet or term like asteroids to find out more about them.

<http://pds.jpl.nasa.gov/planets/>

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<http://www.windows2universe.org/>

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<http://school.discoveryeducation.com/schooladventures/universe/>

An exploration of the universe with the American Museum of Natural History

<http://amazing-space.stsci.edu/resources/explorations/trading/>

You get to learn about the planets and other objects through space trading cards. There is some additional information for teachers as well – this might be helpful to you if you can wade through the text.

http://www.kidsastronomy.com/solar_system.htm

Information about the planets as well as some cool animation

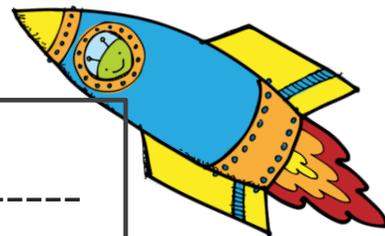
<http://solarsystem.nasa.gov/planets/index.cfm>

Another really great site that allows you to click on links to find information about the different planets. You can also pick two planets to compare and scientists are profiled.

FEEL FREE TO GO TO THE PUBLIC LIBRARY, AS WELL, TO CHECK OUT SOME ADDITIONAL BOOKS!



ORGANIZE YOUR INFORMATION



PLANET BASICS:

PLANET name - -----

TYPE OF PLANET (TERRESTRIAL OR GAS GIANT):

NUMBER OF PLANETS FROM THE SUN: -----

any moons? -----

MORE INFO ABOUT MOONS:

ATMOSPHERE? -----

IF IT HAS ONE, WHAT IS IT MADE OF?

WEATHER? -----

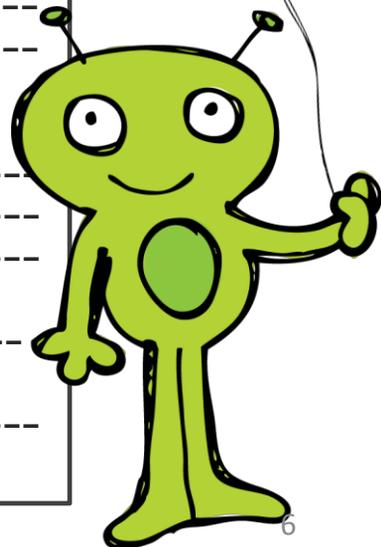
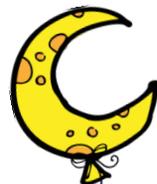
Size - -----

TEMPERATURE - -----

HOW FAST DOES IT ROTATE OR REVOLVE?

HOW LONG IS A DAY ON YOUR PLANET? -----

HOW LONG IS A YEAR ON YOUR PLANET? -----



CREATING YOUR PASSPORT



You will receive **two pieces of black cardstock paper**. This will serve as the front and back covers of your alien passport. You will also receive **several pieces of white construction paper**. These will be the inside pages of your booklet.

Here is what you will need on each page:

-**Cover** – Passport cover page (you will draw and color an accurate picture of your planet in the space provided – write Interplanetary Space Commission, Passport on the front)

-Page 1 – Introduction Page

- Mini-photo of your alien (you will need to take this at the end of the project once your alien is completed)

-alien name

-alien age (on earth and on its planet)

-alien weight (on earth and on its planet)

-planet of origin / terrestrial or gas giant?

-Page 2 – Basic Facts

How many planets yours is from the sun (ex. Venus is 2nd planet from sun)

-Any moons? If so, provide the number and some basic information about them.

-atmosphere and composition

-weather (if there is any)

-temperature of planet

Page 3 - A Day in the Life Page

-How fast does the planet revolve around the sun?

-How fast does your planet rotate?

-Length of day and year

-Size of planet

Page 4 – Interesting Facts

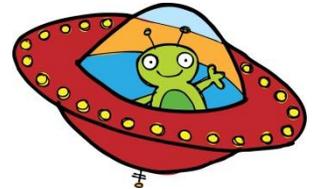
- Write a paragraph about your planet that includes some interesting facts.

Page 5 – Description of Alien

-Write a paragraph with a description of your alien. For each characteristic, write an explanation of why the alien would have it. For example, my alien has special skin that protects it from the heat. Venus is a very hot planet so it would have needed to adapt to its extreme temperatures.

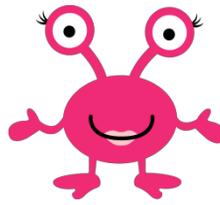
Page 6 – Credits Page

List your sources



****You may add more to your passport but the pages above are required.****

Create your Alien



When you create your alien, you will want to consider the atmosphere, composition, atmospheric pressure, gravitational pull and the other characteristics of your planet. You will try to imagine what kind of life could exist on the planet you have researched.

You can create your alien out of a variety of materials. Consider what these materials could represent on your planet. Maybe the latex of a balloon could represent a special skin. Tin foil cut into pieces could represent solar reflection. Use your imagination!

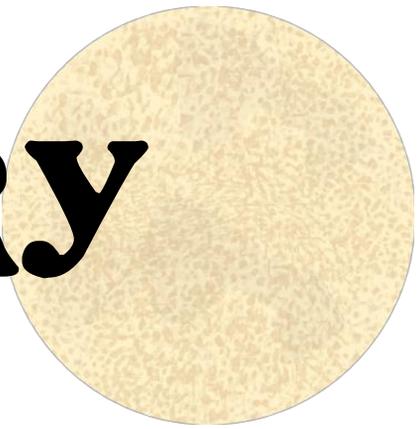
Here are some suggested materials you could use for your alien:

- 2L soda bottles
- paper plates
- streamers
- balloons
- googley eyes
- clay
- paint
- fabric
- egg cartons
- old, cleaned-out jars
- construction paper
- cotton batting or stuffing
- socks
- buttons
- cardboard boxes or shoe boxes
- toilet paper tubes or paper towel tubes
- tin cans
- wax paper
- tin foil
- plastic wrap



You will create a 3D model of your alien to go along with your passport. Your alien and passport will be due on _____ . We will be having a Welcome to Earth celebration on that day.

MERCURY



VENUS



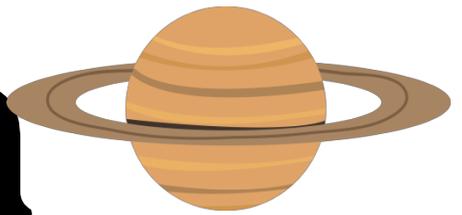
MARS



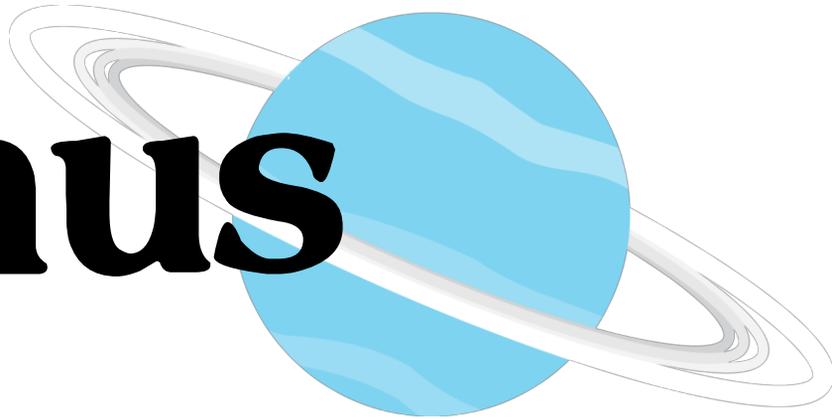
JUPITER



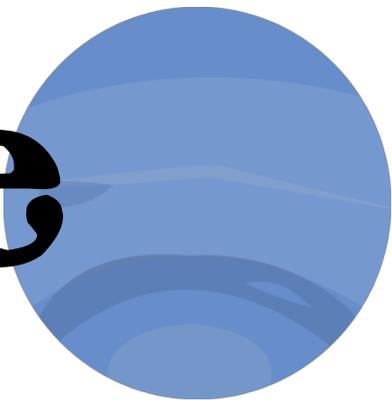
SATURN



URANUS

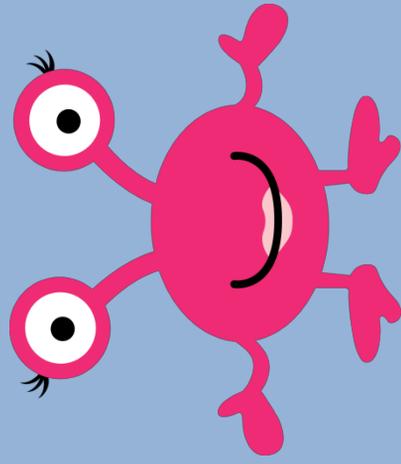


NEPTUNE

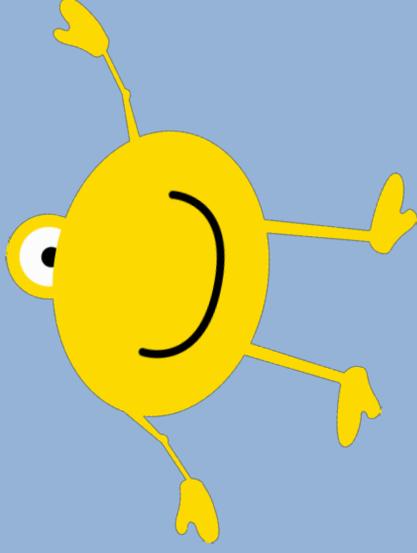


Cut these out, mount on construction paper and laminate. These will go on tables for **Welcome to Earth** celebration. The next page can be put on your door to welcome the aliens!

WELCOME TO



EARTH!



WE GREET YOU



in PEACE!

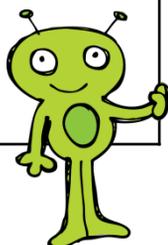
WELCOME TO EARTH CELEBRATION



WE WELCOME OUR ALIEN FRIENDS TO EARTH. THEY JOIN US FROM A VARIETY OF PLANETS IN OUR SOLAR SYSTEM.

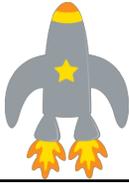
THEY HAVE JUST ARRIVED TODAY! GO VISIT EACH GROUP OF ALIENS TO LEARN MORE ABOUT THEIR PLANETS. THE ALIEN PASSPORTS HOLD VALUABLE INFORMATION.

PLANET	ALIEN name	WHAT I LEARNED...
Mercury 		
Venus 		
Mars 		
Jupiter 		
Saturn 		
Uranus 		
Neptune 		

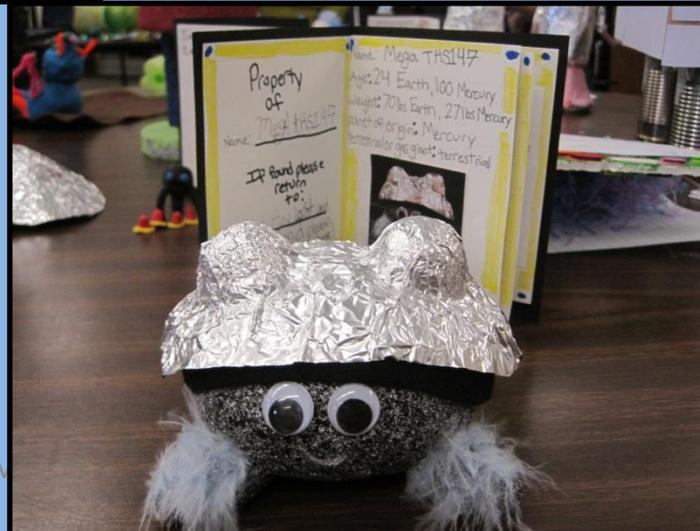
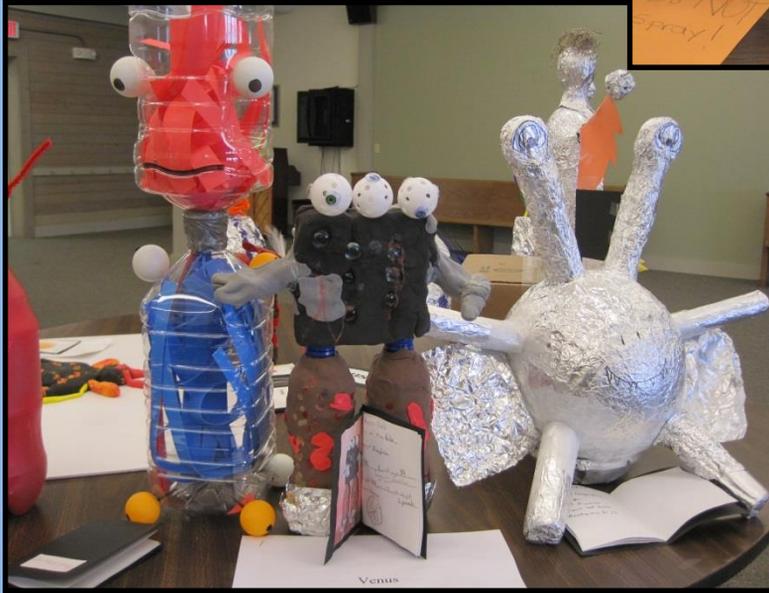
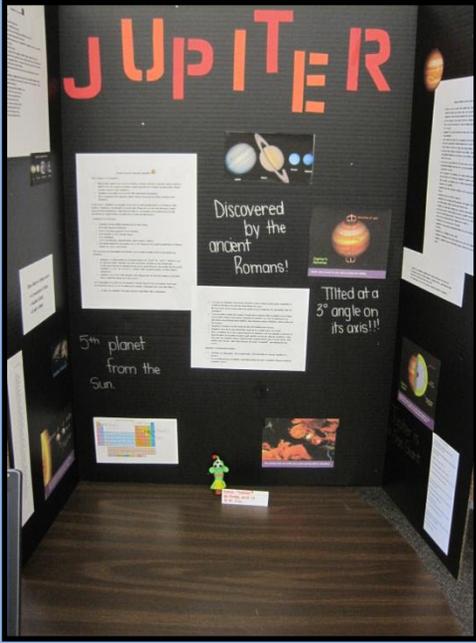
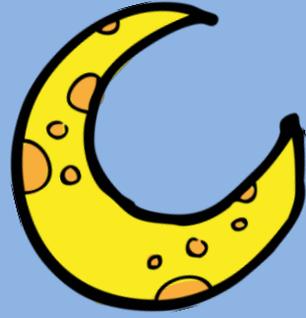


PROJECT RUBRIC

This rubric assesses both language arts and science standards. It takes into consideration the research, the writing in the passport, the information learned about the planet and the application of the knowledge.

	4	3	2	1
RESEARCH	Student has thoroughly researched planet using a variety of resources including books and websites. The information is valid and correct. Student cites multiple sources in passport.	Student has researched planet using several resources including books and websites. The information is correct. Student cites sources in passport. Research is not as extensive as a 4.	Student has researched planet using resources but more sources could have been used for cross-checking. The information is correct for the most part. Research may not be as extensive as a 3. Sources are cited.	Student has not researched planet thoroughly and may have not cited sources in passport. The information may have several inaccuracies. More research was needed.
PASSPORT - Writing	Student has met all requirements of the passport. Student has demonstrated excellent writing skills with complete sentences, correct punctuation and spelling, correct grammar and is well organized. Information is adeptly expressed.	Student has met all requirements of the passport. Student has demonstrated solid writing skills with complete sentences, correct punctuation and spelling, correct grammar and is organized. There may be a few errors in any of these areas.	Student has met requirements of the passport. Student has demonstrated emerging or developing writing skills with growing attention to sentence structure, spelling, grammar, punctuation and organization.	Student may have not met the requirements of passport. Student does not demonstrate mastery in the area of writing skills in regards to spelling, sentence structure, punctuation, grammar and organization.
planet information	The information demonstrates a great understanding of the planet and its composition, structure, size, atmosphere, gravitation and other elements. Very thorough.	The information demonstrates a good understanding of the planet and its composition, structure, size, atmosphere, gravitation and other elements.	The information demonstrates a growing understanding of the planet. One or two elements may be missing.	The information does not demonstrate an understanding of the planet. Several elements are missing.
alien application	The alien and corresponding description show an excellent application of the planet research.	The alien and corresponding description show a solid application of the planet research.	The alien and corresponding description show growing application of the planet research.	The alien and corresponding description does not show an application of the planet research.

Photos and Samples



Credits



TPT STORE: <http://www.teacherspayteachers.com/Store/Jennifer-Maschari>

WEBSITE: www.jenmaschari.com

FONTS FROM: www.kevinandamanda.com

GRAPHICS FROM:

Clementine Digitals <http://www.etsy.com/shop/ClementineDigitals>

KPM DOODLES: <http://www.etsy.com/shop/kpmdoodles>

GOODNESS AND FUN: <http://www.etsy.com/shop/goodnessandfun>

i REALLY APPRECIATE YOUR BUSINESS! i HOPE THAT YOUR STUDENTS BENEFIT FROM THIS LEARNING EXPERIENCE. MY STUDENTS LOVED SHARING THEIR ALIENS + LEARNING ABOUT THE PLANETS IN THIS AUTHENTIC WAY. i EVEN HAD STUDENTS THAT WENT ABOVE AND BEYOND THE PROJECT REQUIREMENTS. THEY CREATED TOOLS FOR THEIR ALIENS, POWER POINTS, QUIZZES AND POSTERS ABOUT THEIR PLANETS.

i HOPE THAT YOUR STUDENTS MEET THIS PROJECT WITH THE SAME ENTHUSIASM!

THANK YOU!

