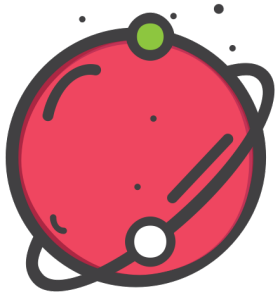


Names _____



Project Planet

Design your own Planet!



It is the year 3010, and the Earth has become overpopulated. It is your job as astrophysicists and astronomical engineers to find a new planet for the human race to inhabit.

You will need to research Earth to find out what qualities and features our planet has that allow humans to live here. Your new planet must contain those qualities that can sustain human life.

You will also need to decide how far from the sun your new planet can be in order for it to maintain a temperature that humans can withstand. If your planet is too close to the sun, it will be too hot for them to survive. If it is too far from the sun, it will be too cold for human life to survive.

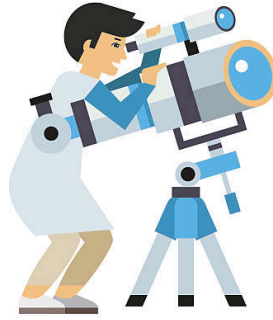
Along with your partner, you will research, question, explore, and problem-solve your way to a new planet that will become home to the human race, as well as animals and plants.

Begin by answering the questions on the following page based on your assigned team position. Once you have completed your questions, you will come together with your information to design your planet, name your planet, and create laws for your planet.

Be prepared to present your new planet to the NASA Population Board as to why people from Earth might want to migrate to your planet. You may use a pamphlet, Google Slides, Prezi, or a poster to present information on your planet. A picture of your planet must be included.

Extra Credit: You may create a 3D model of your planet in place of a picture to include in your presentation.

Astrophysicist



Research how far Earth is from the sun. Research how far from the sun is too far and how close to the sun would be too close. Determine a range of safe existence in order for your planet to sustain human life comfortably.

Will your planet rotate around the sun? If so, you will have seasons depending upon your location on the planet. If not, based on your location in the solar system, what would the average yearly temperature likely be and how would this affect the climate/agriculture? What are the pros and cons of a stationary planet?

Also, if your planet doesn't rotate around the sun, one side of the planet will have day all the time, while the other side of the planet will have night all the time? What accommodations will need to be made in order to function with either constant day or night? Does your planet orbit any other celestial bodies? How might that affect/help your planet?

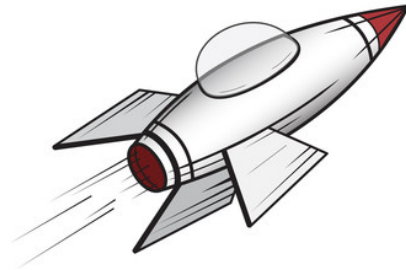
Will your planet have a moon(s) and/or stars? What will keep it from being totally dark at night? Research how a moon affects the ocean.

What kind of weather does your planet experience? If it has oceans, it will have rain. Is rain necessary to sustain human life/plant life?

If you have stars, you could create new constellations. You can be creative with this. Perhaps the constellations could have a specific purpose, i.e directions, maps, etc.

What about gravity? Will you have gravity on your planet? If it doesn't, what kind of technological advances will need to be made in order for people to live there?

Astronautical Engineer



How will humans and animals travel to this new planet? Design a spacecraft that will hold large quantities of people and sustain life throughout the trip. What features will your spacecraft need to have in order to house humans/animals on this journey?

Research based on the distance and typical speed of space travel, how long will it take to get to the new planet? What provisions will be necessary for a trip of this length?

How will humans live on the new planet until housing can be built? Create temporary shelter for them. How will humans/animals eat at first before they have a chance to plant/grow crops, etc?

How will humans explore the planet/travel on the surface? This will be necessary in order for communities to be established in different locations. Design a mode of surface transportation. Take into account whether or not your planet has gravity.

What will humans' homes look like on this planet? This is an opportunity to create smart homes that are technologically advanced.

What jobs will be needed in order to sustain the planet and keep life going?

Questions



Name of your planet?

Size of planet?

Distance from Earth?

Distance from the sun?

What is your planet made of?

Will your planet orbit around another celestial body? Why or why not? How many days will it take to complete one orbit?

Will a celestial body orbit around your planet? Why or why not? How could this affect your planet?

What are the pros and cons of a stationary planet?

PROS

CONS

Will your planet have a moon or moons? Why or why not? If yes, how will the moon(s) affect the ocean tides? If no, where will the inhabitants get light from at night?

Explain the climate on your planet?

Will your planet have seasons? Why or why not? If yes, what will cause these seasons?

What will the weather be like? Why?

What are some of the qualities that your planet has that are similar to Earth in order to sustain life?

Does your planet have gravity? If not, what technological advances will help humans in a zero gravity world?

How will humans and animals travel to your new planet?

What will your spacecraft look like? You may sketch it out on a separate sheet of paper with a floor plan design.

How many people/animals will your spacecraft carry?

How long will it take to travel from Earth to the new planet?

What features will the spacecraft have in order to accommodate humans for the journey?

What supplies will be necessary for the trip and to begin a new existence on the new planet?

How will humans live on the new planet until housing can be built? Sketch what their temporary shelters will look like.

How will people/animals eat at first until they have a chance to plant/grow crops, or does your planet already have plant life?

How will humans explore the planet/travel the surface? Sketch their mode of transportation.

What will humans homes look like once they are built? Sketch out.

What jobs will be needed on the planet in order to sustain the planet and keep life going?