



Ticket to Space Travel Agency Roleplay

Planetary Tourism Activity for Middle School or High School Students

Learning Objectives

1. Students will be able to simulate Space Tourism
2. Students will be able to know the environments in different planets
3. Students will be able to understand the calculations needed to travel from Earth to other planets

Required Materials

Print for each team:

- 7x Itinerary Brochures to each planet
- 7x Tickets to each planet
- Space Travel Agent name tags

Additional materials:

- 1 Calculator
- 1 Scratch Paper
- 1 Pencil

Preparation

Divide students into groups. Print required materials and place them on a table for each group. Allow students time to read the materials and give themselves the roles of "Space Travel agent" or "Space Traveler".

Background

In the distant future, space tourism will likely be routine for Earth dwellers. Imagine you are in a Planetary Tourism Office. The Space Travel Agent's job is to find the perfect travel destination for the Space Traveler based on their interests and persuade them to book a ticket. Once the Space Traveler has chosen a destination, the Space Travel Agent will give an itinerary and ticket details.

The group will work together to calculate the time of arrival to reach the planet using the distance information in the brochures. Assume that the spacecraft travels in a straight line at a speed of 365,000 km/hr, the top speed of NASA's Parker Solar Probe, the fastest spacecraft in existence.

Procedure

Introduce the situation and background. Encourage student discussion and teamwork. Play NASA Space Place video for the class.

(<https://youtu.be/o2FFtPPM3iY?si=Nt7PFpDJjYZwlePX&t=94>). Let students determine time of arrival and write their answers on the tickets. (Time = distance from Earth to Planet / speed of rocket). Ask students what they think about space tourism in the future. Discuss how distances to the planets vary every day and spacecraft don't travel in a straight line.