

**Teacher:** Monica Sijder

**Title:** Exploring my Options: Is Earth really the best planet to live on?

**Grade level:** 6<sup>th</sup> – 8<sup>th</sup> grade

**Length of Lesson:** 2-weeks 50-minute intervals for students to work on assignment

**Materials:** added as attachments

**Next Generation Science Standards:**

**MS-ESS2-2** – Construct an explanation based on evidence for how geoscience processes have changed Earth’s surface at varying time and spatial scales.

**MS-ESS2-3** – Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.

**Math or ELA Connections:**

Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.

**Lesson objective(s):**

Students will be able to:

- Compare and contrast between three planets: Earth, Mars, Venus
- Explain and discuss information researched
- Describe the atmosphere, surface, subsurface, solar system
- Practice their knowledge on collecting data, research, charts, and write-ups

**ENGAGEMENT**

- Students will look at several images of the three planets and describe what they see.
- Ask them what they think they are looking at.
- Describe the similarities, differences.
- Ask them which planet is it they are living on from the images.

**EXPLORATION**

- Students will work in groups to research the 3 planets
- They discuss why we live on Earth and not Mars or Venus
- Students also explore if there could be life on another planet

**EXPLANATION – Student Experience**

- Students are to discuss with their group why Earth is ideal to live in and if it is possible to live on Mars or Venus - give their reasons
- Students learn new words that allow them to describe the planets being compared.

**ELABORATION**

- Students will present their findings to their classmates.
- Giving an overview of what it is like to live on Earth, Venus, and Mars.

- This will allow students to appreciate the finite resources we have on Earth and be more conscious of how we care for the planet we do live on

**EVALUATION – Assessments**

- Students will be given a rubric to be able to follow what they need to complete and accomplish.
- Teacher meets with groups throughout the 2 weeks to make sure all students understand the assignment

**TEAM EARTH, VENUS, OR MARS?**

Is Earth really the only planet we can survive on? Let's explore and find out if earth really is our best option. Form a group of 3 students to study what other planets are like. Each group member will focus on their assigned planet – Earth, Mars, and Venus.

Group Name:

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Student Names and assigned planet:

1. \_\_\_\_\_

2. \_\_\_\_\_

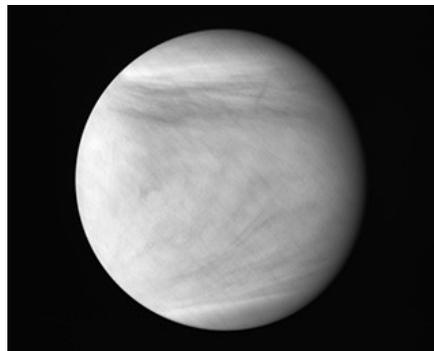
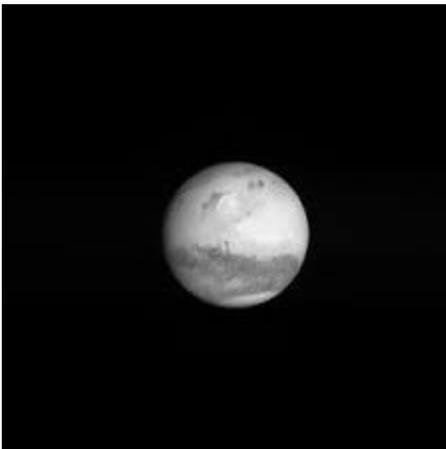
3. \_\_\_\_\_

Before you move on take a look at these images and tell me what you see?

Which image is which planet? Label each planet.

By looking at each image are you able to tell which planet is livable?

How were you able to tell which planet is which? Describe what they look like.



Watch the following video to learn more about these three planets:

[https://m.youtube.com/watch?v=WIIOT\\_mvLKA](https://m.youtube.com/watch?v=WIIOT_mvLKA)

Use the references provided to do more research on the three planets.

List three ways in which the three planets are alike.

- 1.
- 2.
- 3.

List three way in which the three planets are different.

- 1.
- 2.
- 3.

What makes Earth habitable?

What makes Venus habitable or inhabitable?

What makes Mars habitable or inhabitable?

Describe what life is like on earth? Include what the city looks like, food, people.

Describe what you think life would be like on Venus? Include what the city looks like, food, people.

Describe what you think life would be like on Mars? Include what the city looks like, food, people.

References

[https://www.nasa.gov/audience/forstudents/5-8/features/F\\_The\\_Planet\\_Venus\\_5-8.html](https://www.nasa.gov/audience/forstudents/5-8/features/F_The_Planet_Venus_5-8.html)

<https://www.nasa.gov/topics/earth/index.html>

[https://www.nasa.gov/mission\\_pages/insight/main/index.html](https://www.nasa.gov/mission_pages/insight/main/index.html)

<https://www.nasa.gov/venus>

[https://m.youtube.com/watch?v=WII0T\\_mvLKA](https://m.youtube.com/watch?v=WII0T_mvLKA)

<https://m.youtube.com/watch?v=KY70s0W5zH0>