**Rocky Planet Picture Show**

**Introduction:**

In this activity, students will use prior knowledge and applied logic to sort facts about the four terrestrial planets (Mercury, Venus, Earth, and Mars) to create a more complete description of each planet. This activity can be used as either a pre-assessment or a post-assessment of students’ knowledge of the four inner planets.

**Objectives:**

The student will:

* Demonstrate an understanding of planetary characteristics
* Demonstrate an understanding of some of the conditions that support life on Earth
* Discuss, compare, and contrast the differences between four planets in our solar system
* Work with a group of peers to build consensus and express their point of view

**Materials:** (per group)

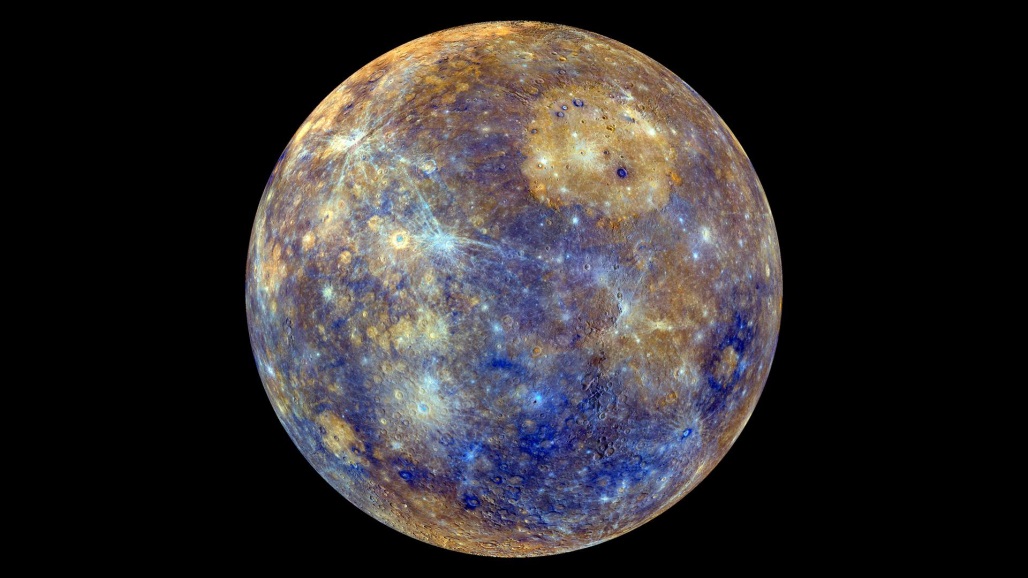
* 1 Mercury card, 1 Venus card, 1 Earth card, and 1 Mars card
* 1 Set of planetary facts

**Procedure:**

1. Distribute the materials and instruct the students to place each of the planetary picture cards face up on the table.
2. Have the students work in their groups to discuss each fact and come to a group consensus about whether each fact should be placed under Mercury, Venus, Earth, or Mars. (*If a group cannot reach a consensus on a fact, that fact must be set aside.)*
3. Check the facts as a class. Take time to discuss the questions this might raise amongst any of the groups. Also, emphasize the effectiveness of working together as a team to make decisions and reach consensus.

**Extensions:**

* Instruct the students to use the internet to research the differences between the two planets.
* Have the students create display boards or reports about one or both of the planets.
* Have students use research results to create their own custom planetary fact sets.



Mercury



Venus



Mars



Earth

|  |  |  |  |
| --- | --- | --- | --- |
| [**Mass**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#mass)**(1024kg)**  **0.330** | [**Mass**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#mass)**(1024kg)**  **4.87** | [**Mass**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#mass)**(1024kg)**  **5.97** | [**Mass**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#mass)**(1024kg)**  **0.642** |
| [**Diameter**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#diam)**(km)**  **4879** | [**Diameter**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#diam)**(km)**  **12,104** | [**Diameter**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#diam)**(km)**  **12,756** | [**Diameter**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#diam)**(km)**  **6792** |
| [**Gravity**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#grav)**(m/s2)**  **3.7** | [**Gravity**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#grav)**(m/s2)**  **8.9** | [**Gravity**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#grav)**(m/s2)**  **9.8** | [**Gravity**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#grav)**(m/s2)**  **3.7** |
| [**Length of Day**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#leng)**(hours)**  4222.6 | [**Length of Day**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#leng)**(hours)**  2802.0 | [**Length of Day**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#leng)**(hours)**  24.0 | [**Length of Day**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#leng)**(hours)**  **24.7** |
| [**Distance from Sun**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#dist)**(106 km)**  **57.9** | [**Distance from Sun**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#dist)**(106 km)**  **108.2** | [**Distance from Sun**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#dist)**(106 km)**  **149.6** | [**Distance from Sun**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#dist)**(106 km)**  **227.9** |
| [**Orbital Period**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#orbp)**(days)**  **88.0** | [**Orbital Period**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#orbp)**(days)**  **224.7** | [**Orbital Period**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#orbp)**(days)**  **365.2** | [**Orbital Period**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#orbp)**(days)**  **687.0** |
| [**Average Temperature**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#temp)**(C)**  **167** | [**Average Temperature**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#temp)**(C)**  **464** | [**Average Temperature**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#temp)**(C)**  **15** | [**Average Temperature**](https://nssdc.gsfc.nasa.gov/planetary/factsheet/planetfact_notes.html#temp)**(C)**  **-65** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Mercury** | **Venus** | **Earth** | **Mars** |
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