

ASSURE Lesson Plan

Planet Measurements

Analyze the Learners:

The class will consist of 7th Grade Earth Science students. There are 30 students in the class.

State the Objectives:

- Using the “Planet Measurement Activity” wiki and the nineplanets.org website, the seventh-grade Earth Science students will be able to identify and record the relevant planetary measurements: distance the planet is from the sun, diameter, mass, number of moons, and on-surface temperature variations (if known).
- Using the “Planet Measurement Activity” wiki and the nineplanets.org website, the seventh-grade Earth Science students will be able to assemble and organize the measurements (distance the planet is from the sun, diameter, mass, number of moons, and on-surface temperature variations (if known)) into the chart on the wiki (<http://planetmeasurementactivity.wikispaces.com/>)
- Using the collected data placed in the wiki, the seventh-grade Earth Science students will be able to present their information orally to the class as they compare and contrast the various measurements for each planet (distance the planet is from the sun, diameter, mass, number of moons, and on-surface temperature variations (if known)).

Select the Media:

The internet, computer, whiteboard, and projector will be utilized for this collaborative group activity. The URLs that will be utilized are: nineplanets.org and <http://planetmeasurementactivity.wikispaces.com/>

Utilize the Media:

Students will tour the nineplanets.org website. Looking at their assigned planets, students will gather measurement information (distance the planet is from the sun, diameter, mass, number of moons, and on-surface temperature variations (if known)) and will place the information into the chart on the wiki (<http://planetmeasurementactivity.wikispaces.com/>).

Require Learner Participation:

Turn on your computers (two computers per group) if they aren't already on

Log in

Choose the Internet Explorer icon

Type in the address on the board (<http://planetmeasurementactivity.wikispaces.com>)

Follow the instructions given on the wiki site page.

■ Wiki site instructions:

1. Designate members of your group to perform the following jobs: Recorder of Information, Computer User(s), Final Presentation/Table Creator
2. Go to the following website: <http://nineplanets.org/> (Press Ctrl key then click on site. This will open the site in a new window.)
3. Choose the link that corresponds with your planet
4. On your own paper, record the information needed to complete the table below (information needed for your planets only)
5. Once information for both planets has been gathered, return to this page.
6. Click on the "Edit button in the upper right hand corner of the page.
7. Collaborate with your group to fill in the information you gathered in the chart below**

When all groups are finished, students will present their information to the class.

**Chart:

| | Mercury | Venus | Earth | Mars | Jupiter | Saturn | Uranus | Neptune |
|--|---------|-------|-------|------|---------|--------|--------|---------|
| Distance from the Sun | | | | | | | | |
| Diameter (km) | | | | | | | | |
| Mass (kg) | | | | | | | | |
| Number of Moons | | | | | | | | |
| On Surface Temperature variations (degrees Kelvin) if known. | | | | | | | | |

Evaluate and Revise

The teacher will observe the students gathering information from the computer. She will evaluate the accuracy of the information on a 100% accuracy scale. She will grade the students presentation skills based on an established rubric. (Rubric attached below)

Assessment

Name/Date _____

The following scale will be used to see how well a student did:

| Planet Measurement Activity Rubric | |
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| 100%- 90% | <ul style="list-style-type: none">• Student followed directions correctly and completed the assignment neatly.• Student assisted group members in completing the task and cooperated effectively.• Student identified the correct planetary measurements (distance the planet is from the sun, diameter, mass, number of moons, and on-surface temperature variations (if known)).• Student placed the measurements found at the nineplanets.com website into the chart on the Planet Measurement wiki correctly with 100% accuracy.• Student demonstrated good communication skills during their presentation to the class: no "umms," "uhhs," or shuffling nervously. |
| 89-80% | <ul style="list-style-type: none">• Student followed directions with one to two errors.• Student assisted group members in completing the task.• Student identified the correct planetary measurements (distance the planet is from the sun, diameter, mass, number of moons, and on-surface temperature variations (if known)) with 90% accuracy. |

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| | <ul style="list-style-type: none"> • Student placed the measurements found at the nineplanets.com website into the chart on the Planet Measurement wiki correctly with 80% accuracy. <p>Student demonstrated good communication skills during their presentation to the class: one to two "umms," "uhhs," or shuffling nervously.</p> |
| 79-70% | <ul style="list-style-type: none"> • Student followed directions with three to four errors. • Student attempted to assist group members in completing the task. • Student identified the correct planetary measurements (distance the planet is from the sun, diameter, mass, number of moons, and on-surface temperature variations (if known)) with 80% accuracy. • Student placed the measurements found at the nineplanets.com website into the chart on the Planet Measurement wiki correctly with 70% accuracy. • Student demonstrated good communication skills during their presentation to the class: three to four "umms," "uhhs," or shuffling nervously. |
| 69% and below | <ul style="list-style-type: none"> • Student followed directions with five or more errors. • Student did not attempt to assist group members in completing the task. • Student identified the correct planetary measurements (distance the planet is from the sun, diameter, mass, number of moons, and on-surface temperature |

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| | <p>variations (if known)) with 70% accuracy or less.</p> <ul style="list-style-type: none">• Student placed the measurements found at the nineplanets.com website into the chart on the Planet Measurement wiki correctly with 70% accuracy or less.• Student demonstrated poor communication skills during their presentation to the class: more than five "umms," "uhhs," or shuffling nervously. |
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