Earth & Space Unit Investigation

SNC1P

Planet Profile

Name: _____

DUE DATE:

Materials: *ScienceLink* 9 textbook planet database table calculator

Procedure:
Read the planetary "data cards" on pages 199 and 201 in your textbook. Enter the information you need to complete the columns in your database table. Once you have compiled all the information for your database, answer these questions (in complete sentences) to help you understand more about scale and the solar system.

Knowledge/Understanding

1. Which planet derived its name from the Roman god of agriculture?

_____

_____

2. Which planet has the tallest volcano in the solar system?

_____

_____

3. Which planet has the greatest number of moons?

_____

_____

4. What is considered as the Deep Blue planet? Describe its most notable feature.

_____

_____

_____

_____

5. Why is Uranus considered the "tilted planet?"

_____

_____

_____

6. Which planet is named after the speedy Roman messenger of god?

_____

_____

7. Why is Mars considered as the "red planet?"

_____

_____

Thinking

Using your planet database and other information you may have, answer the following questions.

8. In months, what is Mercury's orbital period?

_____

_____

9. In kilometres, how far away is each gaseous planet from the Sun?

Planet	Distance from the Sun
_____	is _____ km away from the Sun.
_____	is _____ km away from the Sun.
_____	is _____ km away from the Sun.
_____	is _____ km away from the Sun.

10. What is Jupiter's diameter in kilometres?

_____

_____

11. In hours, how long does it take Saturn to complete a rotation?

12. What pattern do you notice about the surface temperatures on the planets?

Communication

13. According to the International Astronomical Union, what conditions must be met for a celestial body to be considered a planet?

14. Explain why landing a spacecraft on Jupiter or Saturn would be an unlikely event.

15. Venus is farther from the Sun than Mercury, yet it is hotter than Mercury. Explain why Venus is hotter than Mercury.

STUDENT'S CHECKLIST

Before the task

- ☐ Do I know and understand what the **task** is?
- ☐ Have I asked or clarified any unclear **instructions**?
- ☐ Do I have the **sequence or procedure** in completing the task laid out well?
- ☐ Do I need to do some **research**?
- ☐ Is the task to be completed in stages or phases before submitting the final work?
- ☐ Have I noted the submission date for the 1st stage/phase? _____
- ☐ Have I noted the submission date for the 2nd stage/phase? n/a
- ☐ Have I noted the submission date for the final work? _____

During the task (Before submission of the final work)

- ☐ Am I following the procedure accurately?
- ☐ Have I followed the format in presenting my work?
- ☐ Have I presented all my work in an organized and neat manner?
- ☐ Has my work (1st stage/phase) been proofread or edited?
- ☐ Has my work (2nd stage/phase) been proofread or edited?
- ☐ Do I have everything needed for the 1st stage/phase?
- ☐ Do I have everything needed for the 2nd stage/phase?
- ☐ Have I included all drafts and research done for this task?
- ☐ Have I written my name on my work?

After the task

- ☐ Did I take note of the recommendations to improve my work?
- ☐ Did I take note of the corrections to improve my work?
- ☐ Did I understand clearly what I have to do to improve my work?
- ☐ To improve my mark in this task, I could have _____

_____

		K	T	C	A
20)	Use processing skills and strategies (e.g., completing the checklist sheet and success criteria)		x		

Student's Name	Course	Date	Task/Activity
	SNC1P		EARTH & SPACE Unit – PLANET PROFILE ASSIGNMENT

Learning Goals

- To show scientific investigation skills in the four areas (initiating and planning, performing and recording, making conclusions, and communicating).
- Find the properties of different types of celestial objects in the solar system and the universe.
- Understand the major astronomical phenomena and of the main components of the solar system and the universe.

Success Criteria

Here's what your teacher is looking for. Go through the success criteria to make sure that you considered all of them before submitting your assignment; circle "yes" if you believe you have, and "no" if you don't think that you met the criteria.

		Description	Level 1 Struggling	Level 2 Pretty Close	Level 3 Grade 9 Standard	Level 4 Above & Beyond!
KNOWLEDGE/UNDERSTANDING (Student Product)						
Yes	No	I can tell the features and characteristics of each planet.				
THINKING (Observation, Student Product)						
Yes	No	I can locate information using various sources (if necessary) to complete the planet data sheet.				
Yes	No	I can calculate and/or find out the orbital periods and distances of the planets.				
Yes	No	I can look for a pattern of the surface temperature of the planets.				
COMMUNICATION (Student Product)						
Yes	No	I can explain what a planet is from a dwarf planet.				
Yes	No	I can explain why Venus is hotter than Mercury.				
Yes	No	I can have my thoughts and ideas organized and expressed in complete sentences.				
Yes	No	I can use appropriate terms, symbols, diagrams and/or units as needed.				
APPLICATION (Conversation)						
Yes	No	I can describe and mention some features and characteristics of a planet other than Earth.				
Yes	No	I can explain why science (Astronomy) is tentative.				

Teacher's Remarks: