WYNBERG GIRLS' JUNIOR SCHOOL

GRADE 6 – NATURAL SCIENCE PAPER

SEPTEMBER 2012   **60 MARKS**

1.   Refer to the electrical appliances in the table below. Calculate the missing information and record it on your answer paper. You may use your calculator to do the calculations.   (6)

Electrical appliance	How much electricity it uses in Watts	How much electricity it uses in kW	How long it was used for this month	How much electrical energy was used in kW.h	How much we must pay @ R0,91 per unit price
E.g. Stove	8 000W	8kW	23 hours	8kW x 23 h = 184kW.h	184 x ,R0,91 = R167,44
Kettle	2000W	**1.1**	27 hours	**1.2**	**1.3**
TV	300W	**1.4**	60 hours	**1.5**	**1.6**

2.   Arrange these appliances in a list from those that use the least electricity to those that use the most:

        Microwave oven, radio, electric stove, cellphone   (4)

3.   Give two specific examples of how electricity can be saved in your home.   (2)

4.   Use your knowledge about the planets in our solar system to answer the following questions:

4.1   Which is the hottest planet?

4.2   Which is the coldest planet?

4.3   Which is the biggest planet?

4.4   Which is the smallest planet?

4.5   Which planet is closest to the sun?

4.6   Which planet is closest to Earth?

4.7   Which planet has the shortest year?

4.8   Which planet has the longest year?

4.9   What is the name of Earth's satellite?   (9)

4.10   Which planets have rings?   (4)

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5.   Match the following planets with the correct description. **Write down the letter** next to the correct description.

5.1   Mars   a)   has the satellites Titania and Ariel

5.2   Jupiter   b)   has had a number of ice ages

5.3   Saturn   c)   has an atmosphere made of CO_2

5.4   Mercury   d)   has a desert appearance and polar ice caps

5.5   Venus   e)   has a blue methane atmosphere and fierce winds

5.6   Earth   f)   has a great red spot and spins faster than other planets

5.7   Uranus   g)   has no atmosphere to reflect sun's light

5.8   Neptune   h)   has a wide range of rings called the Cassini Division   (8)

6.   The orbital velocity of a planet is the **average speed of the planet** as it orbits the

        Sun, measured in kilometres per second. Use the information below to construct a

        bar graph in which you illustrate the orbital velocities of the planets in our solar system.

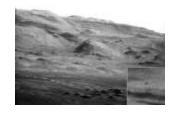|	
Mercury:	47.9 km/s
Venus:	35 km/s
Earth:	29.8 km/s
Mars:	24.1 km/s
Jupiter:	13.1 km/s
Saturn:	9.7 km/s
Uranus:	6.8 km/s
Neptune:	5.4 km/s

(13)

7.   Write a paragraph about the most recent space mission to Mars. Include information

        about the scientists' thinking concerning Mars, the purpose of the mission, which part

        of Mars is being explored, the equipment being used and the experiments being done.

                                                                                        (8)

Pluto

8.1   List the 3 criteria that must be met in order for a celestial body to be defined as a planet. (3)

8.2   Why is Pluto no longer considered a planet?   (2)

8.3   If Pluto is not a planet, what type of celestial body is it?   (1)