

WorksheetCloud.com - Memorandum

Subject: Grade 8 NATURAL SCIENCES

Topic: Natural Sciences: Exam Term 4

Total Marks: 100

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1. FALSE 2
- Explanation:** The plastic gains electrons from the cloth. This results in the plastic having a negative charge.
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2. TRUE 2
- Explanation:** The head of a comet consists of rocks held together by ice. Most comets are thought to come from the Oort cloud.
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3. Coma 3
- Explanation:** In the sketch, the 'coma' label is missing. The tail of a comet always points away from the Sun.
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4. TRUE 2
- Explanation:** The centre of our galaxy contains a massive black hole. This phenomenon keeps thousands of solar systems orbiting around it.
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5. FALSE 2
- Explanation:** The LHC (Large Hadron Collider) is situated just outside of Geneve, Switzerland.
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6. FALSE 2
- Explanation:** The actual speed of light is 299 792 458 m/s but it is commonly rounded up to 300 000 000 m/s.
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7. TRUE 2
- Explanation:** The Earth is indeed 27 000 light years from the Sun. That's 270 quadrillion kilometres!
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8. FALSE 2
- Explanation:** White paper does not have a smooth surface. White paper has a rough surface so the light is reflected in all directions. A mirror is a smooth surface that reflects light in the same direction and this is why you can see your reflection.
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9. B 4
- Explanation:** Some of the electrons on the negatively charged ruler will be transferred to the neutral ruler. Both rulers will then carry a negative charge.
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10. A 4
- Explanation:** The fact that substance A is attracted to the positively charged substance B means that A must be negatively charged. This means that electrons were transferred from the ruler to substance A.
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11. C 4
- Explanation:** A charged ruler is a weak example of static electricity. A bolt of lightning is an example of a very strong form of static electricity.
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12. C 4
- Explanation:** During the nuclear process, hydrogen atoms are fused together and form helium gas.
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13. D 4
- Explanation:** The sun is a middle-aged star. We know this by looking at its colour and structure. We have seen stars in all phases of their existence, from youth to death.
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14. D 4
- Explanation:** We use kilometers and miles to measure the distance on a single planet. The most suitable unit to measure the distance between planets is the light minute.

15. C	4
Explanation: The only unit larger than the light hour is the light year. One light hour is the time light travels in one hour. One light year is the distance light travels within a year.	
16. protons	3
Explanation: The nucleus is made of positively charged protons and neutral neutrons.	
17. Venus	3
Explanation: Venus is the second planet from the Sun. It is also the hottest planet due to its acid atmosphere.	
18. Proxima	3
Explanation: The three stars in the Alpha Centauri system are called, Centauri A, Centauri B and Proxima.	
19. Proxima	3
Explanation: The missing star is called Proxima. It's the smallest of the three stars.	
20. 6 six	3
Explanation: One million has six zeros. Numerically it's written as 1 000 000.	
21. switch	3
Explanation: A switch can cause a break in the circuit (when you turn the device off) and can connect the circuit again (when you turn the device on). This gives you the option to use a charged device when necessary, otherwise it'll remain on forever or until the battery is flat.	
22. 90	3
Explanation: The normal is perpendicular to the reflective surface. This means that the angle is 90°.	
23. radiation	3
Explanation: We say that light radiates from the candle / sun / light bulb.	
24. violet; indigo; blue; green; yellow; orange; red	3
Explanation: violet; indigo; blue; green; yellow; orange; red The rainbow backwards (VIB-G-YOR). At this point of your studies, you do not need to understand why the wavelengths are longer or shorter, just learn that the violet end of the rainbow has the shortest wavelength and it increases to the red end of the rainbow having the longest wavelength.	
25. (1) spark (2) a rapid heating of the air	4 (2 per answer)
Explanation: A fire can be caused by static electricity. This is because a spark can be produced which causes a rapid heating of air.	
26. (1) neutrons (2) protons	4 (2 per answer)
Explanation: The particles of an atom that do not move are the neutrons and protons.	
27. (1) nuclear (2) helium	4 (2 per answer)
Explanation: Large amounts of nuclear reactions take place on the surface of the Sun. Helium gas is produced as a byproduct.	

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28. (1) Saturn 8 (2 per answer)
(2) Jupiter
(3) Mercury
(4) Venus

Explanation: As you move further away from the Sun, it gets colder. The exception to the rule is Venus due to its acidic atmosphere.

29. (1) spiral 4 (2 per answer)
(2) merging

Explanation: In the sketch, we see two spiral galaxies merging. This means that they will one day form a single, larger galaxy.

30. (1) negative terminal to the positive terminal 4 (2 per answer)
(2) switch is closed

Explanation: Electric current flows from the positive terminal to the neagtive terminal. Electrons in a circuit flow from the negative terminal to the positive terminal when the switch is closed.

30 Questions, 3 Pages