

HILLCREST HIGH SCHOOL
NATURAL SCIENCE GRADE 8 - NOVEMBER 2025
MARKING GUIDELINES

SECTION A: ENERGY AND CHANGE

QUESTION 1 : MULTIPLE CHOICE

(5 x 1 = 5)

- 1.1 C ✓
- 1.2 B ✓
- 1.3 B ✓
- 1.4 D ✓
- 1.5 D ✓

QUESTION 2: TERMINOLOGY

(5 x 1 = 5)

- 2.1 fuse ✓
- 2.2 retina ✓
- 2.3 insulator ✓
- 2.4 dispersion ✓
- 2.5 electroscope ✓

QUESTION 3: MATCHING COLUMNS

(4x 1 = 4)

- 3.1 E ✓
- 3.2 B ✓
- 3.3 A ✓
- 3.4 I ✓

QUESTION 4

(14)

4.1 series circuit ✓

(1)

4.2

Potential / Chemical energy ✓ => electrical energy ✓ => light energy ✓

(3)

4.3 a) 5A ✓

(1)

b) Current is the same throughout a series circuit ✓

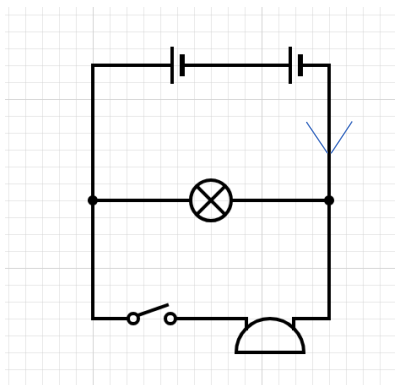
(1)

4.4 a) INCREASE ✓

(1)

b) As more lightbulbs / resistors are added in parallel ✓ resistance decreases ✓

(2)



4.5

(5)

2 cells in series ✓

Buzzer and lightbulb ✓

Buzzer and lightbulb in parallel ✓

Open switch controlling only buzzer ✓

Electron flow _ to + ✓

QUESTION 5:

(4)

5.1 a) balloon stuck to wall / attracted to wall ✓

(1)

b) electrons ✓ were transferred through friction ✓ from the wool to the balloon ✓

(3)

QUESTION 6:

(12)

6.1 a) refraction ✓

(1)

b) A ✓ C ✓

(2)

6.2 Labels:

Incident ray, reflected ray, angle of incidence, angle of reflection, normal (any 3 ✓✓✓)

Angle of reflection = 60° ✓ (within x degrees)

Angle of incidence = angle of reflection ✓ (within x degrees) (5)

6.3 a) convex lens ✓ (1)

b) far sightedness ✓ (1)

c) parallel before entering lens ✓ converging to single point ✓ (2)

QUESTION 7: (6)

7.1 To determine which substances can conduct electricity ✓ (1)

7.2 voltage of cell, copper connecting wires, lightbulb, crocodile clips, etc ✓✓ (any 2) (2)

7.3 Steel wool, nichrome wire can conduct electricity, ✓ cotton thread, rubber band, string cannot conduct electricity ✓ (2)

7.4 Use an ammeter ✓ to measure current (1)

TOTAL 50 MARKS

SECTION B : PLANET EARTH AND BEYOND

QUESTION 8 : MULTIPLE CHOICE (5 x 1 = 5)

8.1 A ✓

8.2 D ✓

8.3 B ✓

8.4 B ✓

8.5 B ✓

QUESTION 9 : MATCHING COLUMNS (4 x 1 = 4)

9.1 D ✓

9.2 A ✓

9.3 C ✓

9.4 E ✓

QUESTION 10 : TERMINOLOGY

(5 X 1 = 5)

- 10.1 solar flares ✓
- 10.2 solar system ✓
- 10.3 moon ✓
- 10.4 meteorites ✓
- 10.5 astronomy ✓

QUESTION 11 :

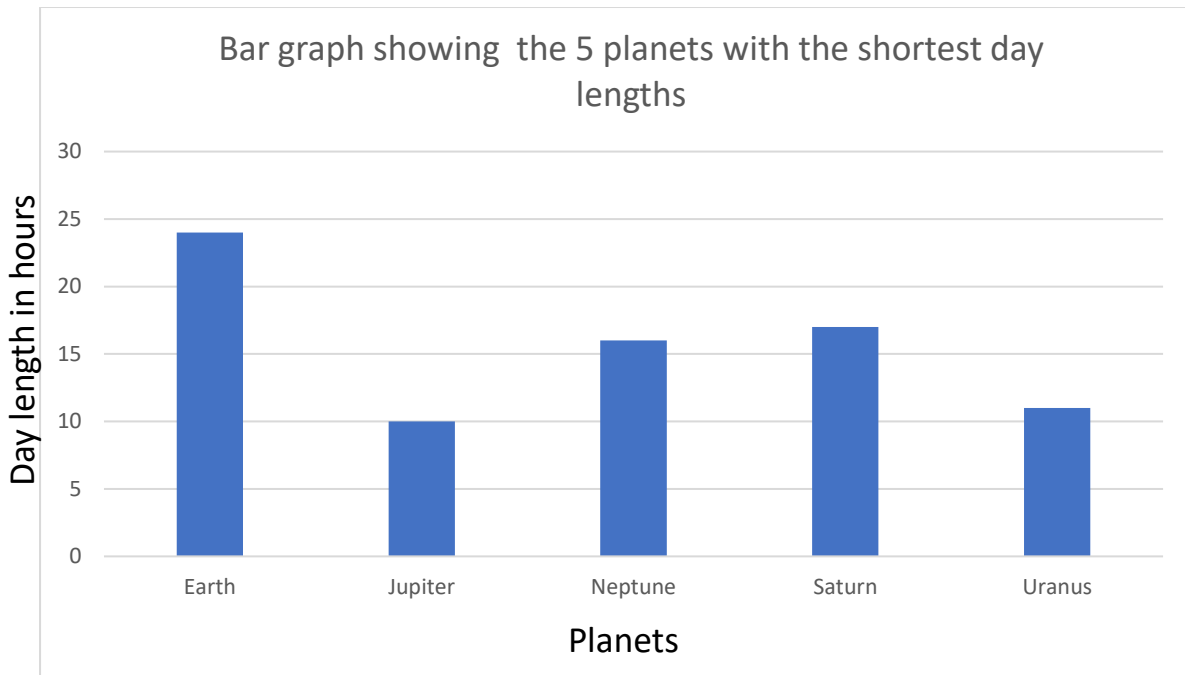
(14)

- 11.1 helium ✓ (1)
- 11.2 sun ✓ (1)
- 11.3 asteroid belt ✓ (1)
- 11.4.a) Mars ✓ (1)
 - b) Terrestrial ✓ (1)
 - c) - Low/cold temperatures
 - thin atmosphere of mostly carbon dioxide/no oxygen present
 - do not allow liquid water to remain on Mars which means life couldn't be supported
 - Any TWO explained ✓✓ (2)
- 11.5 dwarf planet ✓ not able to keep its path clear of other objects ✓ (2)
- 11.6 it has a moderate temperature range / not too hot and not too cold ✓
 - it has oxygen in the air atmosphere ✓
 - it has water in all 3 phases ✓ (3)
- 11.7 a) B ✓ (1)
 - b) F ✓ (1)

QUESTION 12:

(8)

- 12.1 Jupiter ✓ (1)
- 12.2 Mercury ✓ (1)
- 12.3 (5)



CRITERIA	DESCRIPTION	MARK
C	Caption – both variables	1
T	Type – Bar graph with even bars and spaces	1
L	Labels – Both x and y axis with units	1
P	ALL 5 plotted correctly – only Jupiter, Uranus, Neptune, Saturn, Earth No mark if more or less planets included	1
S	Y-axis is correct	1

- 12.4 Planets ✓ (1)

QUESTION 13:

(4)

- 13.1 Southern Cross ✓ (1)
- 13.2 Group of stars in a pattern / fixed arrangement ✓ (1)
- 13.3 Alpha Centauri ✓ (1)
- 13.4 A light year is the distance that light travels in one year ✓ (1)

QUESTION 14:

(10)

14.1 Square Kilometre Array ✓ (1)

14.2 50 times more powerful or 10 000 times faster ✓ (1)

14.3 The dark sky helps to see the objects in space better / light pollution obscures powerful telescopes ✓
Still night makes the objects clear / not blurry as turbulence / movement prevents accurate images being seen ✓ (2)

14.4

- A radio ✓
- B optical ✓
- C metal dish ✓
- D lenses / mirrors ✓
- E Kat-7 ✓
- F SALT ✓

(6)