

Haileybury Turnford

AMBITION • PRIDE • SUCCESS

Year 11 Student Bulletin

Hello Year 11,

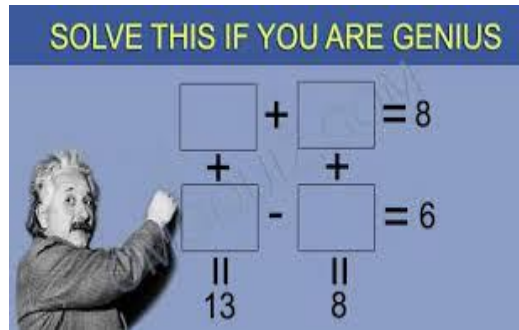
I hope you and your families are well and keeping safe in this challenging time.

Well done for this term, I am particularly impressed with the dedication some Year 11s have shown to Year 11 interventions and mock examinations. We have seen a real commitment and focus in the lead up to these exams -. Your conduct in mock exams has been exemplary. Keep up the good work!

Take care and have a lovely Christmas break.

Ms Johnson

Student Quiz



Good news from around the globe!

Y11 top Achievement

Point receivers this half term – well done!

Kailey Hampton
Emilio Stamatiou
Senel Salih
Leah Routledge
Lewis Butteriss
Grace Heywood
Gregory Protopapa
Toby Sharples
Francesco Landi
Denzel Obodochina
Harvey Townsend
Eva-Maria Baican-Vist

MAN WHO WAS GIVEN LOTTERY TICKET IN GET-WELL CARD AFTER OPEN-HEART SURGERY WINS 1 MILLION PRIZE

"It was a little bit of disbelief at first but then it settled in and it was like, wow, I can't believe this happened, you know?" he said



SKECHERS PLEDGES TO SUPPORT THE NATURE CONSERVANCY AND LAUNCHES 'OUR PLANET MATTERS' RECYCLED COLLECTION.

Interventions – please attend!

Maths

Higher: 8am Tuesday to Friday

Foundation: 8.35am (rota system)

All: 3-4pm Tuesday

English

All: 3-4pm Monday

Targeted students: 8.35am Monday to Wednesday

Science

All: 3-4pm Thursday

Targeted students: 8.35am Monday to Wednesday

Spanish

All: 8am Wednesday

Geography

Targeted students: 8am Monday

Targeted students: 3-4pm Wednesday

Targeted students: 3-4pm Thursday

Drama

Targeted students: P5 Friday

Art

Targeted: lunch time Thursday

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Mr Datta visited us this half term to discuss future careers and university opportunities.



“The only guaranteed reason you will not get into Cambridge is if you do not apply”

Mr Datta



Danny Smith Year 11

I found the amount of opportunities he put forward to us invaluable. I learnt that you don't necessarily have to decide now what we want to do with our careers. But we should focus on what we are learning right now and this help us make decisions at the start of next year. He talked a lot about Russel Group Universities, what universities this included and how to get in. He also highlighted how beneficial they are in comparison to other universities. This has helped me make the decision to do A 'Levels at HT next year.

Kasie Howard Year 11

This opportunity of speaking with an expert in the field of university application discussed with us no matter what our plan is in the future even its that is unknown, that our main focus should be excelling what our aims are right now. He also went into detail about Trinity Collage at Cambridge and about different subjects that go well together and what is recommend if you choose to study at a top university. He went into detail about Russel Group Universities – and how the advantages of going to one of his schools could help you financially in the future.

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Prom has been booked!

Ensure you have paid your deposit! Use the following link to pay your deposit:

www.parentpay.com

Three Lakes, Ware - The Arched Barn

Date – Wednesday 6th July

Includes:

- Room hire from 7.30-11.30pm
- Dedicated events co-ordinator
- Your own host for the evening
- Mocktail on arrival
- Unlimited soft drinks all night
- Bbq buffet
- Use of private garden for photos
- Free Parking
- Fairy lights and room drapes tied in your choice of colour
- All staff to serve you
- Table linen and decorations – in colour of your choice
- DJ (with music/song suggestions of your choice)
- Ice – cream cart



House Points for this term.

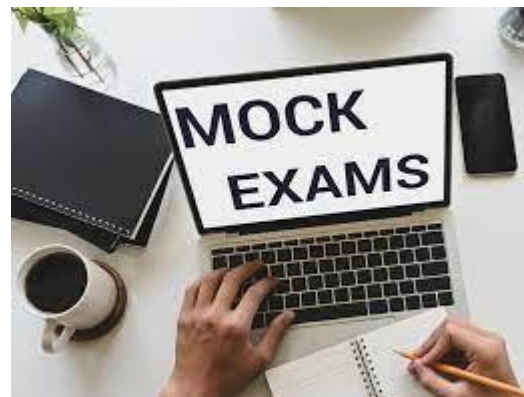
Well done Shackleton!

Austen	69
Bader	79
Bevan	86
Pankhurst	67
Shackleton	90
Turing	52

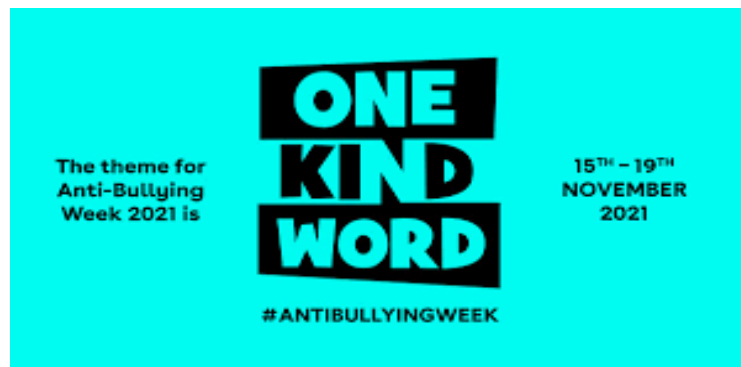
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We have had a positive half term with lots of events taking place, well done for the Year 11s contribution to this.



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Year 11 work hall of fame



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Copper oxide + Sulphuric acid → Copper sulfate + water
 $\text{CuO} + \text{H}_2\text{SO}_4 \rightarrow \text{CuSO}_4 + \text{H}_2\text{O}$
12V1121
 Acid + Alkali →
 $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$
 $\text{H}^+_{(\text{aq})} + \text{OH}^-_{(\text{aq})} \rightarrow \text{H}_2\text{O}_{(\text{l})}$
 Lead + Potassium nitrate → Lead + Potassium nitrate
 $\text{Pb}(\text{NO}_3)_2 + 2\text{H}_2\text{O} \rightarrow \text{Pb}(\text{OH})_2 + 2\text{HNO}_3$
 A solid that forms from a green solution → called a precipitate
 Acid - a substance that produces H^+ ions in water
 Alkali - a soluble base that produces OH^- in water
 P.A. scale: $\text{H}^+ + \text{OH}^- = \text{H}_2\text{O}$
 pH 1 - 6 = acid Strong acids completely ionise
 pH 7 = neutral Weak acids partially ionise
 pH 8 - 14 = alkali / base
 acid + metal →

acid + metal → a salt + hydrogen
 acid + metal oxide → a salt + water
 acid + alkali → a salt + water
 acid + metal carbonate → a salt + water
16V11181
 1) acid + alkali → salt + water
 2) Bleach
 3) H^+
 4) OH^-
 5) $\text{H}^+ + \text{OH}^- \rightarrow \text{H}_2\text{O}$
~~Hydroxide~~ A Neutralisation involves an acid and an alkali that together form a neutral solution

G3) 1) $A = \frac{10-0}{100}$
 2) ions
 3) $= 2 \text{ m/s/s}$
 G4) 1) $A = \frac{10-0}{10}$
 2) $A = \frac{40-10}{10}$
 3) $= 0.4$
 G5) 1) $A = \frac{10-0}{10}$
 2) $A = \frac{40-10}{10}$
 3) $= 0.4$
 Square = $L \times W$
 rectangle = $L \times W$
 triangle = $\frac{1}{2} \times b \times h$
 1) 18 cm^2
 2) 40 cm^2
 3) 875 cm^2 $0.5 \times 5 \times 10 = 25 \text{ cm}^2$
 4) $0.5 \times 4 \times 6 = 12 \text{ cm}^2$

Velocity Time Graphs 1: Find the distance travelled for each velocity time graph

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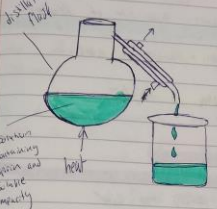
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Monday 20th November 2021

Chapter 6 Notes of Reaction Reactions



Collision Theory

For a reaction to happen, the particles must collide with enough energy to react.

The minimum amount of energy required for a reaction between particles is called the activation energy.

Concentration and Reaction Rate

- All high concentrations have more particles in the same volume.
- This means greater chance of collision.
- More frequent collisions = faster rate of reaction.

Wednesday 29th September 2021

Acceleration

more force means less distance

\downarrow distance = \downarrow force \uparrow distance = \uparrow force = \downarrow injury

\uparrow time = \downarrow force = \downarrow injury

$F = ma \rightarrow \text{Acceleration (m/s}^2 \text{) (ms}^{-2}\text{)}$

Force (N) mass (kg)

$\frac{F}{m} = a$

Ex:

- $1. F = ma$
- $2. F = 3.5 \text{ kg} \times 80 \text{ m/s}^2$
- $3. F = 280 \text{ N}$

- $1. F = ma$
- $2. F = 800 \text{ kg} \times 60 \text{ m/s}^2$
- $3. F = 48000 \text{ N}$

- $1. F = ma$
- $2. F = 5 \text{ kg} \times 10 \text{ m/s}^2$
- $3. F = 50 \text{ N}$

- $1. F = ma$
- $2. F = 112 \text{ kg} \times 42 \text{ m/s}^2$
- $3. F = 4704 \text{ N}$

Sheet Starter - Are these statements true or false?

- Thinking distance is the time taken for a driver to react. ☒
- Braking distance is the distance travelled while the brakes are applied until the car stops. ☒
- Stopping distance = Braking Distance + Thinking Distance. ☒
- Braking distance can be affected by poor quality tyres and brakes. ☒
- Thinking distance can be affected by icy conditions. ☒
- A newly qualified driver can have a maximum of 6 points. ☒
- You would receive 3 points on your licence for a hold time. ☒

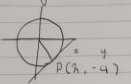
Checking Progress 1 - Circle the correct option:

- If the time taken for a collision is increased, the force exerted on the passengers increases / decreases. ☒
- If the distance a car crumples is decreased, the force exerted on the passengers increases / decreases. ☒
- During an accident the time for a person to decelerate will increase / decrease if wearing a seatbelt. ☒
- An airbag deflates slowly, increasing the time taken for the passenger's head to be lowered, hence this will increase / decrease the force exerted. ☒
- The force on a person's body increases / decreases, which will reduce the risk of an injury. ☒

Checking Progress 2 - Complete the calculations below:

Medium	Hot
What is the force if the mass is 3.5 kg and the acceleration is 80 m/s ² ? <input type="text"/>	What is the force of a ball with a mass of 5 kg if it accelerates at 10 m/s ² ? <input type="text"/>
What is the force if the mass is 800 kg and the acceleration is 60 m/s ² ? <input type="text"/>	What is the force of a man if he accelerates at 42 m/s ² and has a mass of 112 kg? <input type="text"/>
What is the acceleration if the mass is 80 kg and the force 75 N? <input type="text"/>	What is the acceleration of a car if it has a mass of 8 kg and hits the car flap with a force of 4 N? <input type="text"/>
What is the mass if the force is 90 N and the acceleration is 80 m/s ² ? <input type="text"/>	What is the mass of a dog if it accelerates at 10 m/s ² and has a force of 8 N? <input type="text"/>
What is the mass if the force is 20 N and the acceleration is 80 m/s ² ? <input type="text"/>	Draw a car moving forward at constant speed. What are the forces acting upon the car? Draw arrows to show them. <input type="text"/>
What is the force if the mass is 40 kg and the acceleration is 23 m/s ² ? <input type="text"/>	What are the forces acting upon a ball pushed by a man? Draw arrows to show the forces. <input type="text"/>
What is the acceleration if the force is 74 N and the mass is 655 kg? <input type="text"/>	if $E = m \times X$ rearrange the equation. <input type="text"/>

1) the tangent of the circle at one point C(2, -4)

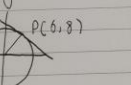


gradient = $\frac{-4 - 0}{2 - 0} = -2$

tangent = $y - 2 = -2(x - 2)$

$y = -2x + 4$

2) the tangent to the circle at point C(6, 8)



gradient = $\frac{8 - 0}{6 - 0} = \frac{4}{3}$

tangent = $y - 8 = \frac{4}{3}(x - 6)$

$y = \frac{4}{3}x - 4$

Biological Revision

December Mocks

Topics:

- Cell biology
- Organisation
- Infection and response
- Bioenergetics

Diffusion: The Movement of molecules from a high concentration to a low concentration *always* *randomly*

Osmosis: The Movement of water molecules from a high concentration to a low concentration *always* *water*

Active transport: The Movement of molecules / ions from a low concentration to a high concentration *uses energy*

Transpiration: When water is lost in the leaves

1) roots (osmosis) concentrated

2) xylem / guard cells

3) leaves

4) evaporation (stomata)

The structure of the atom

atoms are made of very small particles that cannot be divided

Protons: positive charge, mass of 1

neutrons: neutral, (mass 1)

Electron: negative mass is negligible

atoms have no overall charge - they are neutral

Particle	Relative mass	Relative charge
Proton	1	+1
Neutron	1	0
Electron	1/1836	-1

① mass. The number of protons in an atom tells you what the element is. This doesn't change so if you have 4 protons then the element must be beryllium.

② Protons. mass = protons + neutrons

Hydrogen = 1 very common

Helium = 2

Lithium = 3

Beryllium = 4

Boron = 5

Carbon = 6

Nitrogen = 7

Oxygen = 8

Fluorine = 9

Carbon dioxide: CO2

Methane: CH4