Holding screen: Parent Forum

Hello everyone, Thank you for joining our parent forum. This forum is on **Self-Directed Assignments** and will begin at **5 PM**.

If you have any questions that are relevant to this forum, that we could answer during this session, then please email your question to parentforum@rodingvalley.net.

Note: If you have a personal question relating to a specific subject etc, then please do contact the subject lead, subject teacher, or Year Progress Leader.
The parent forum email address will expire after the sessions.

Email- parentforum@rodingvalley.net

SELF-DIRECTED ASSIGNMENTS

Benefits and support

"Meaningful practice"

Independent learning

Student outcomes

Consolidates new learning

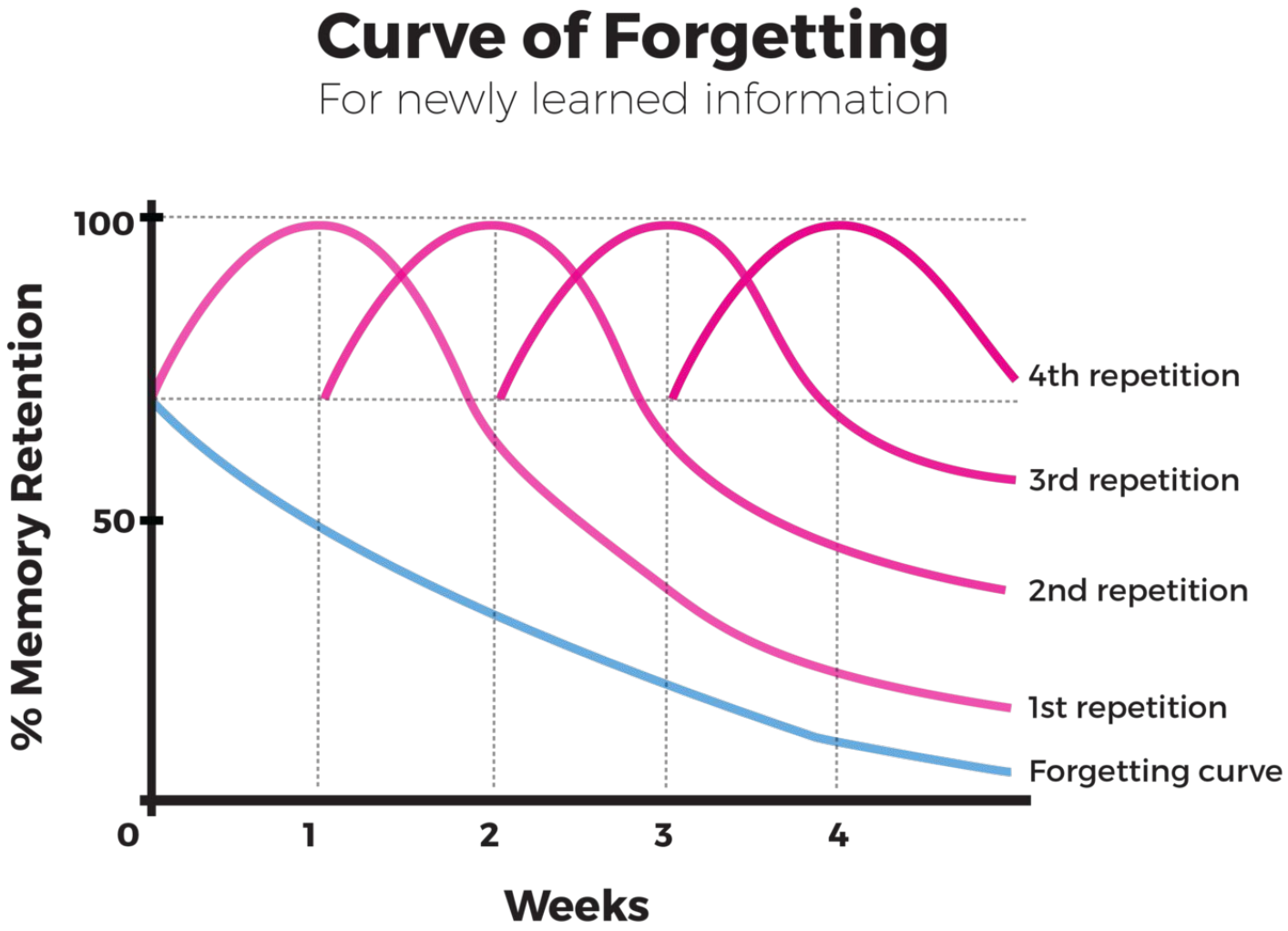
Develops recall ability

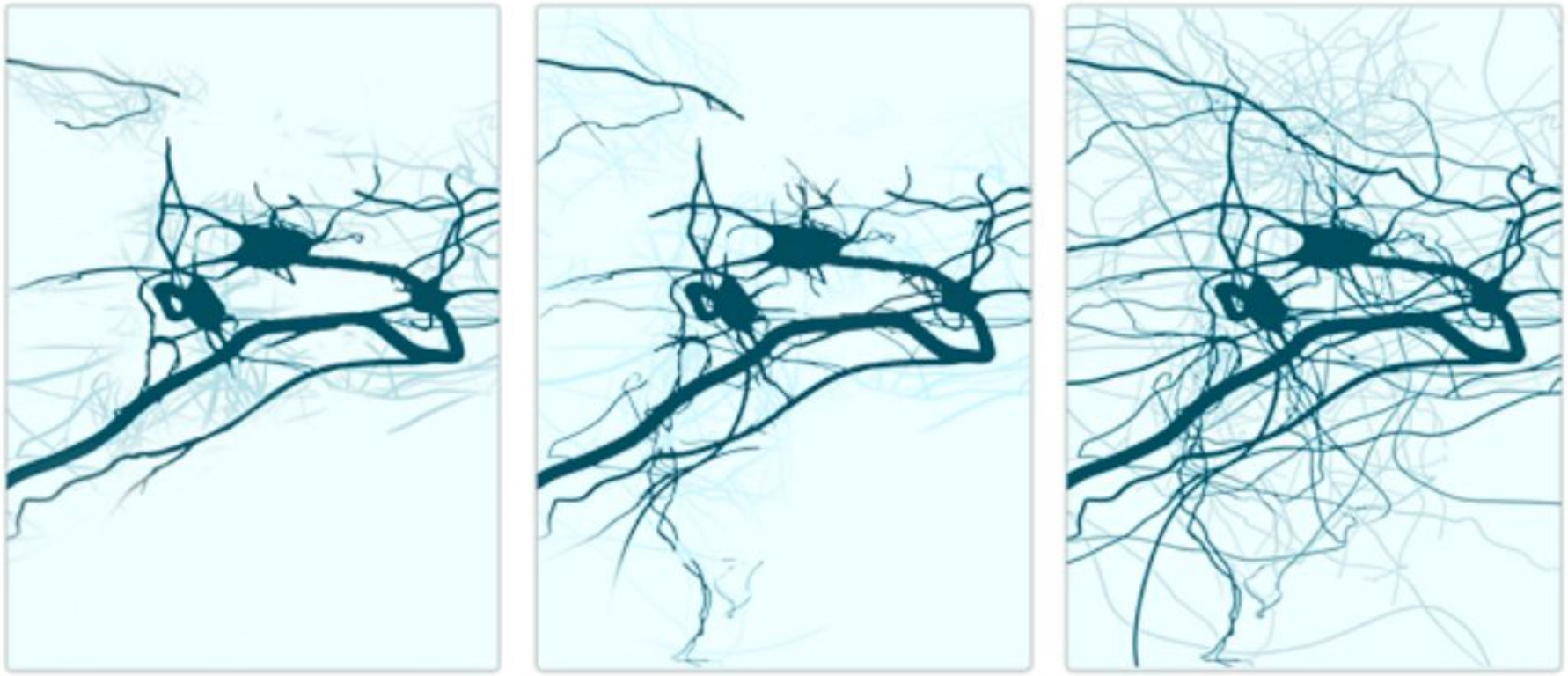
Develops subject skills

Develops independence

Achievement & Resilience

Ebbinghaus


Curve of Forgetting
For newly learned information
% Memory Retention
100
50
0
1
2
3
4
Weeks
4th repetition
3rd repetition
2nd repetition
1st repetition
Forgetting curve

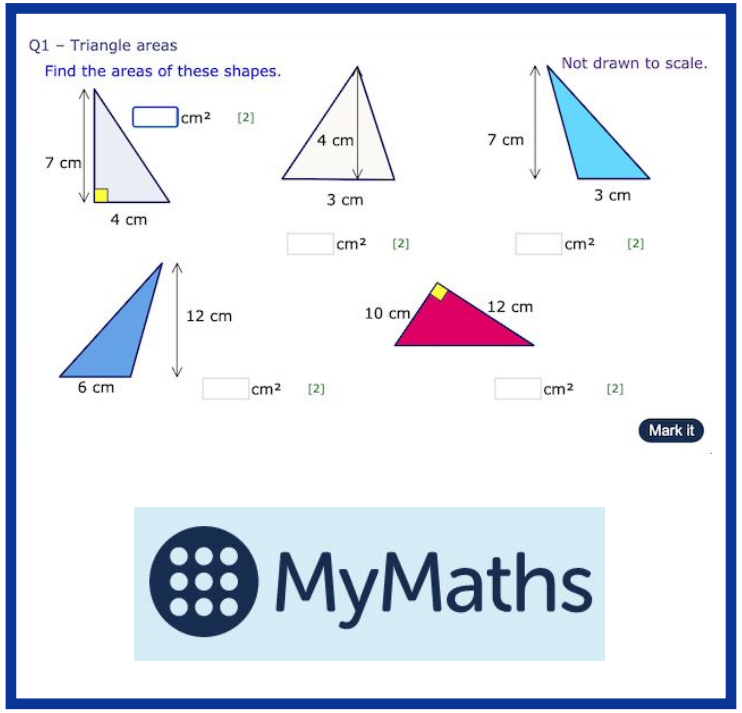


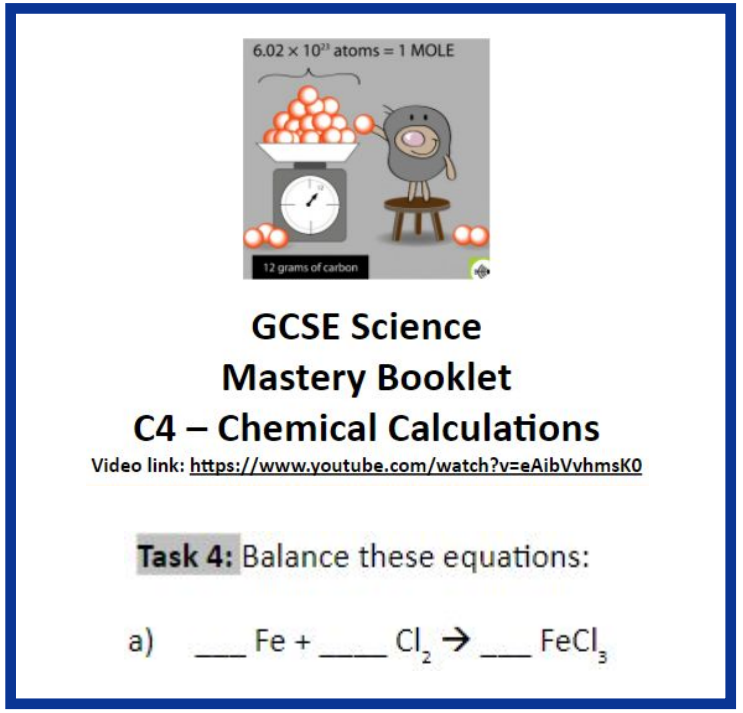
Neural networks **before** training

Neural networks **2 weeks** after stimulation

Neural networks **2 months** after stimulation

Neuroplasticity





"Meaningful practice"

Learning during lockdown at RVHS

- Live lesson
  - new learning directed by a teacher
  - practise lesson using MyMaths, begins with direction from a teacher

- At the end of the lessons, teacher will be available to answer any questions

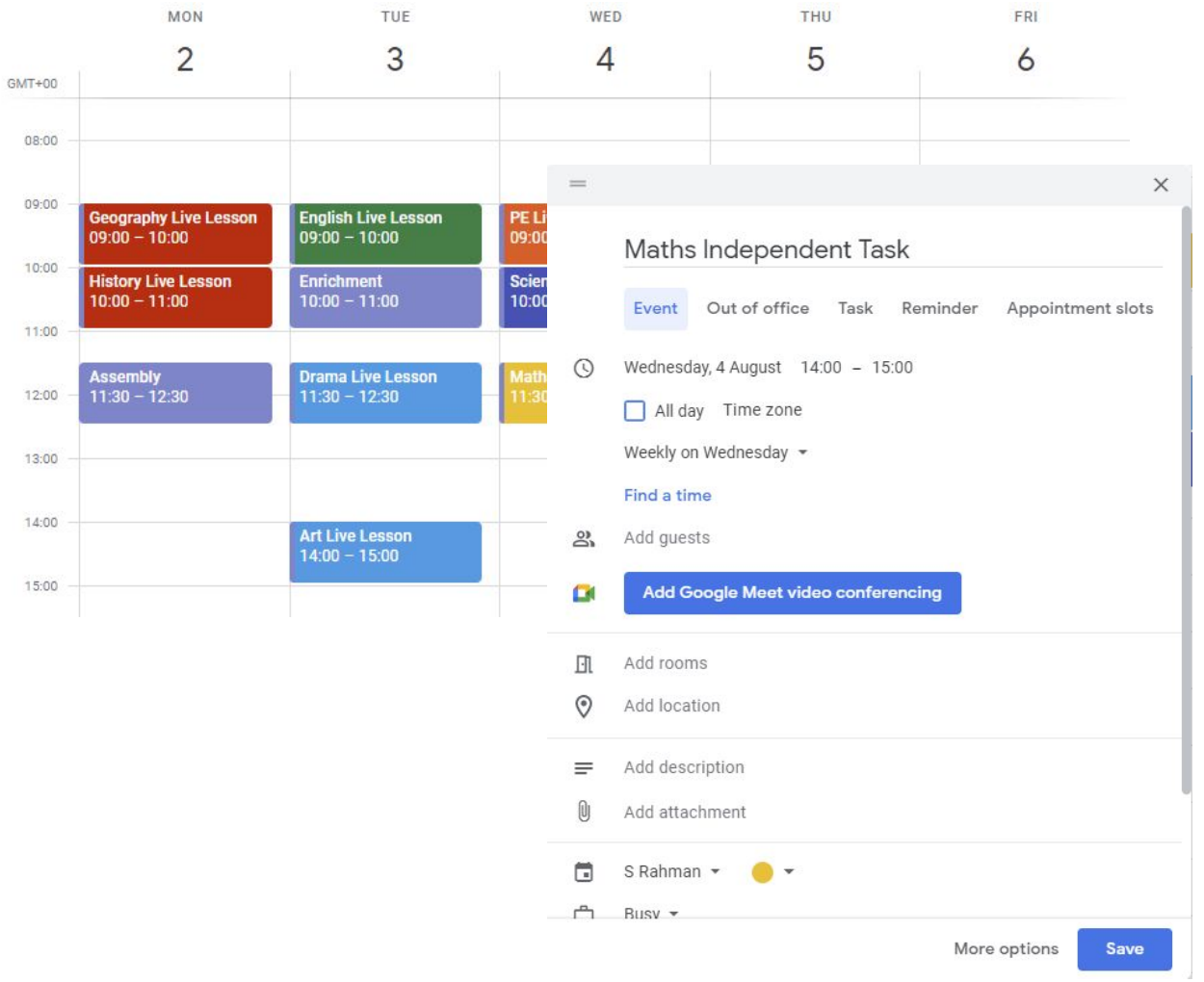
Independent learning at RVHS

- Self study lesson using Oak National Academy
  - lessons designed by Mathematics Mastery, our partners on the delivery of the Maths curriculum
  - resources used are similar to what would've been used in the classroom

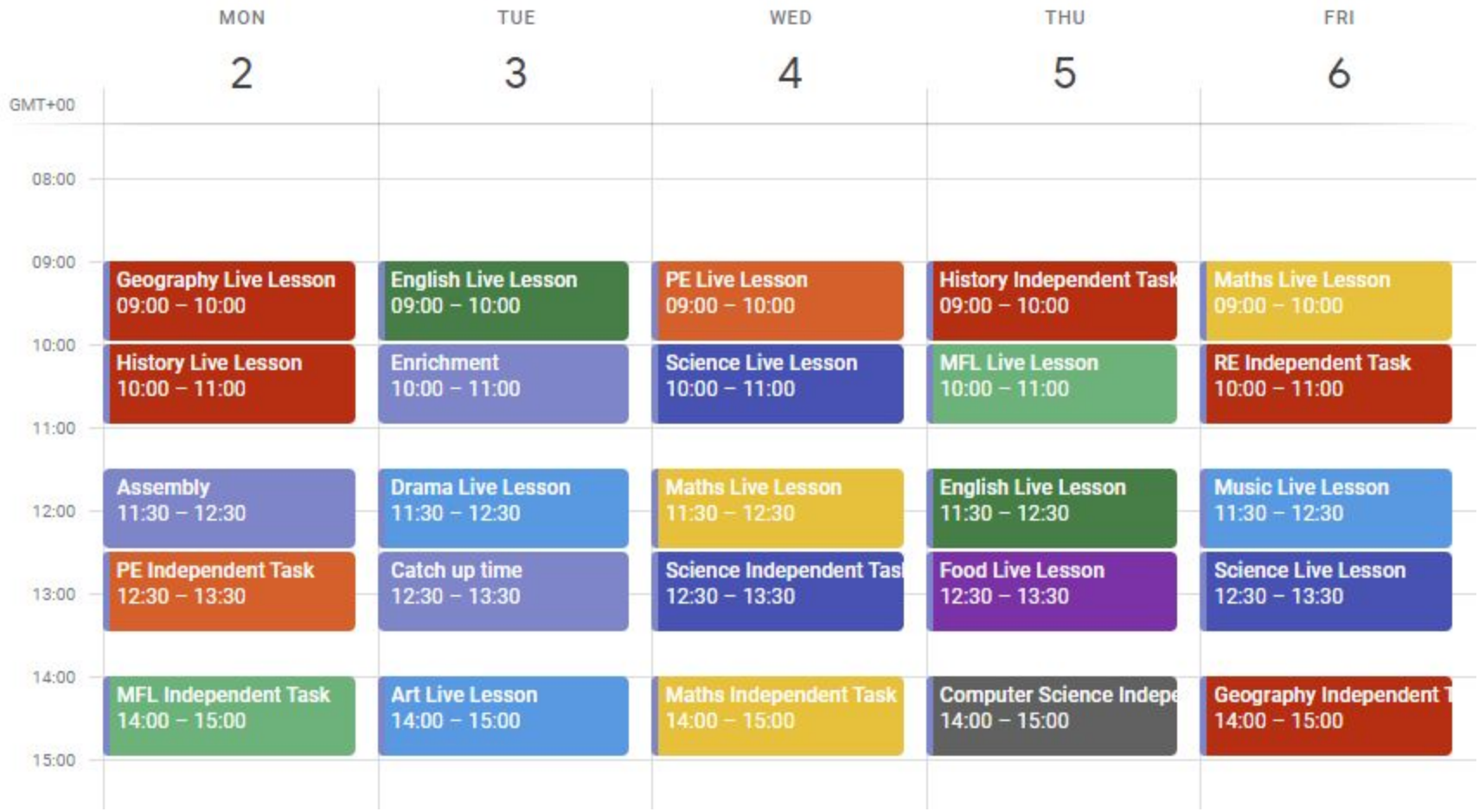
- Maths Clinic for those who need extra support

Time Management

- Google Calendar with live lessons
- Self study tasks can be booked in to student calendars help manage time



Time Management



			Year 7				
			Mon	Tue	Wed	Thu	Fri
2	09:00	10:00	Geography	English	PE	History	Maths
3	10:00	11:00	History		Science	MFL	RE
4	11:30	12:30	Assembly	Drama	Maths	English	Music
5	12:30	13:30	PE		Science	Food	Science
6	14:00	15:00	MFL	Art	Geography	Computer Science	

KS3 SCIENCE CONTINGENCY 2021

WHOLE SCHOOL CONTINGENCY TIMETABLE

1) HOME LEARNING: assignment with video instruction + Phy (45m) directed work + GQuiz: (10 Qs)

2) Online Lesson 1*: Bio content, equivalent to 2hrs (Y9/Y8) or 1hr (Y7)

3) Online Lesson 2*: Che content (1hr)

OAK NATIONAL ACADEMY

GOV.UK

This brand-new enterprise has been created by 40 teachers from some of the leading schools across England, backed by government grant funding. It will provide 180 video lessons each week, across a broad range of subjects from maths to art to languages, for every year group from Reception through to Year 10.

Independent learning

"Meaningful practice"

Independent learning

Student outcomes

Consolidates new learning

Develops recall ability

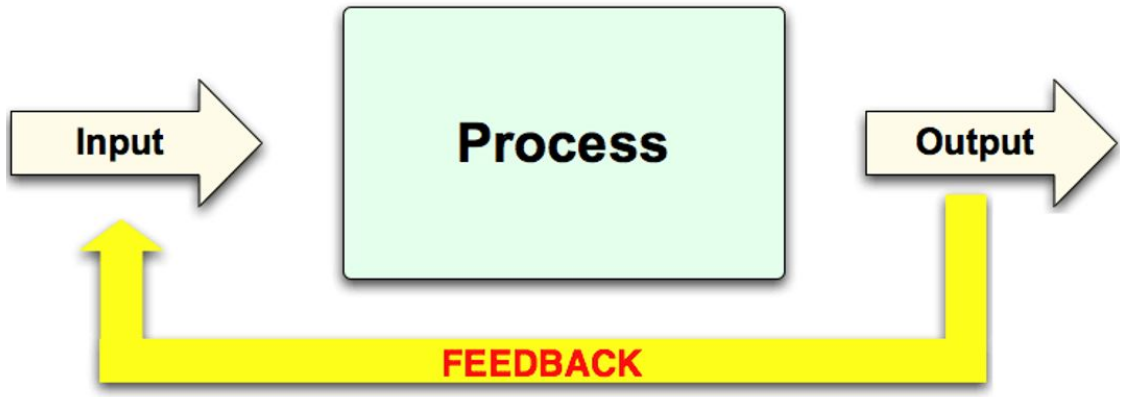
Develops subject skills

Develops independence

Achievement & Resilience

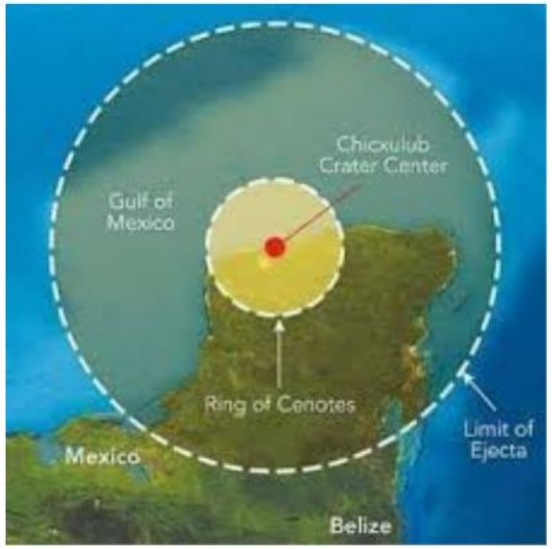
- Achievements
- Independence and resilience
- Setting up for the future

Student outcomes



FEEDBACK

Which promotes progress



Describe in detail the 'asteroid' theory for dinosaur extinction (use pg. 247)

Theory details: The hypothesis that an Astroid collided with Earth and threw up loads of material was thrown up into the atmosphere which therefore blocked out the Sun. This then caused temperatures to drop and killing 70% of all life.

Evidence: A large crater with iridium in (a metal only produced under massive force)

Adam Miah
11 Feb, 18:34

mote (0:45)

Adam Miah left you a voice note.

Edit

[redacted]
11 Feb, 18:35

it would get thinner as you move away? i'll add it now sir

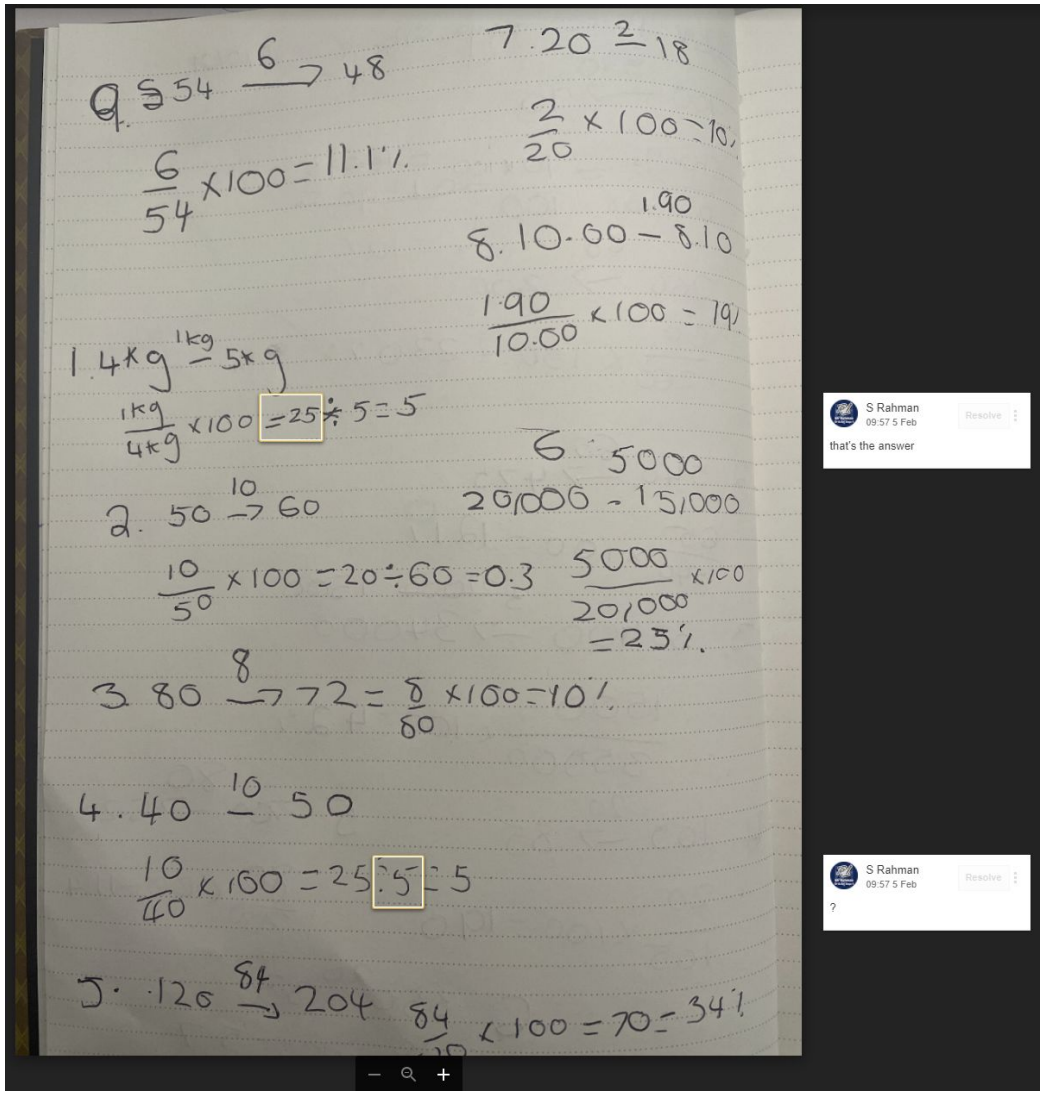
Adam Miah
11 Feb, 18:39

Brilliant! Levels of iridium definitely do decrease outwards from the crater, much much further than the crater itself, suggesting it was a true catastrophic event.

Mote

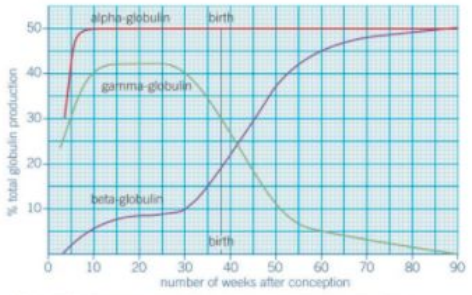
Google Classroom

- Feedback given directly on top of submitted work
- "Chatbox" to have a conversation about the work if needed
- Students will receive an email when feedback is left



Gene expression in haemoglobin

A haemoglobin molecule is made up of four polypeptide chains each known as a globulin. In adult humans two of the polypeptides in a haemoglobin molecule are alpha-globulin and two are beta-globulin. In other words, 50% of the total globulin in all haemoglobin is alpha and 50% is beta. In a human fetus, however, the haemoglobin is different, with much of the beta-globulin being replaced by a third type, gamma-globulin. Fetal haemoglobin has a greater affinity for oxygen than adult haemoglobin. The changes in the production of the three types of globulin during early human development are shown in Figure 2.



▲ **Figure 2** *Percentage total globulin production during early human development*

Humans have genes that code for the production of all three types of globulin. The production of the different haemoglobins depends upon which gene is expressed. The expression of these genes changes at different times during development.

1 Suggest an advantage of fetal haemoglobin having a greater affinity for oxygen than adult haemoglobin.
2 At birth, what percentage of the total globulin production is of each globulin type?
3 Describe the changes in gene expression that occur at 30 weeks.
4 Outline *two* possible explanations for the change in the expression of the gene for gamma-globulin after 30 weeks.
5 Sickle cell disease is the result of a mutant form of haemoglobin. In Saudia Arabia and India, some individuals have high levels of fetal haemoglobin in their blood, even as adults. Where these individuals have sickle cell disease, their symptoms are much reduced. Suggest how controlling the expression of the genes for globulin might provide a therapy for sickle cell disease.

1. The fetal hemoglobin~~harmoglobin~~ will readily load oxygen more as it has 2 blood supplies, one of its own and one from the placenta of the mother
2. Alpha - 50%, gamma - 30%, beta - 20%
3. At week 30 alpha is expressed the most. Beta is starting to be expressed more shown in the increase and gamma is decreasing so is being expressed less
4. Maybe there's a decrease in gamma because something is preventing it from transcribing and so it cannot express its genes any more.
5. You would try to express the gene of one globulin so it overrides the other and can help reduce the disease

Summary questions

1. What is the role of a transcriptional factor?
They stimulate transcription of a gene and expresses it

2. Describe how oestrogen stimulates the expression of a gene.
Oestrogen is lipid soluble and so diffuses across the cell-surface membrane. Once inside the cytoplasm, the shape of the site and the shape of the oestrogen complement one another. Oestrogen causes the transcriptional factor to

Rubric 2/3

20.3 Regula... 2/3

GREEN (3/3) *3 pts*

Above expectations: exceptional work showing perseverance and endeavour. Optional challenge: https://quizlet.com/56529276

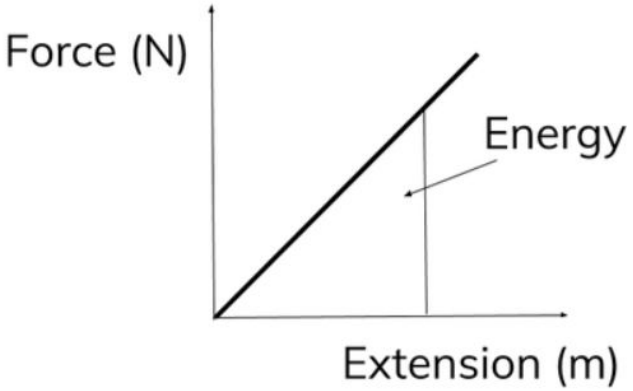
AMBER (2/3) *2 pts*

Meets expectations: acceptable works that meets minimum requirements and expectations of student. Try this task: https://quizlet.com/565339

RED (1/3) *1 pt*

Below expectations: work that is insufficient for student's ability, suggesting a lack of effort in the weekly preparation and task. Required follow-on task:

Rubric



- The elastic potential energy stored in a stretched spring equals the area under the force-extension graph.

When work is done on a spring, what is stored in the spring?

- Elastic potential energy ✔
- Friction ✖
- Electricity
- Mass energy

Elastic Potential Energy Stored in a Spring

$$\text{\_\_\_\_\_} = \frac{1}{2} \times \text{spring constant} \times \text{extension}^2$$

- force
- elastic potential energy
- length

Seneca

Celebration!

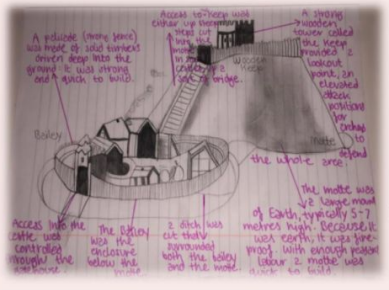
- Examples of Excellent work is shared with the RVHS community using the Bulletin and Broadcasts

During this period of lockdown, we thought it would be fantastic to celebrate the outstanding work that our students have been doing from home.

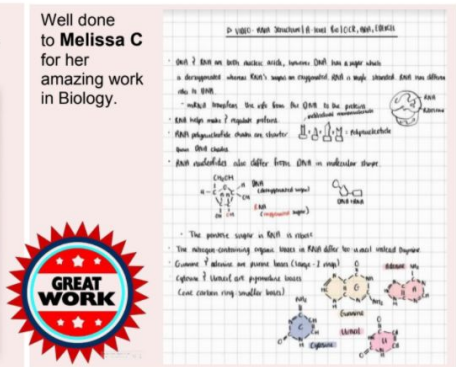
Congratulations to all of our students, who have displayed such resilience and have adapted to the change amazingly.

Remember to keep up the fantastic work and if you would like your work presented in the bulletin please send it to your class teacher or to Miss Larkin at plarkin@rodingvalley.net

Congratulations to **Gabriella Vlietinck** for her amazing work in history, this was done during a live lesson with Ms Preston.

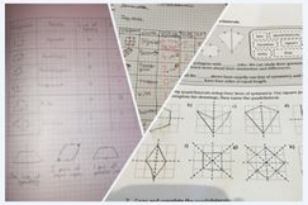


Well done to **Melissa C** for her amazing work in Biology.



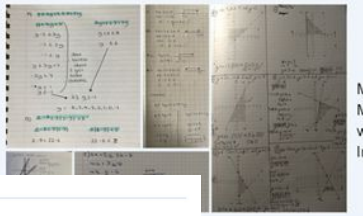
Student Work

We are very pleased with the quality of the work that is being completed at home. Whilst we do not have the space to show all work that is being completed, here is a small selection.



Excellent work on properties of quadrilaterals by Arthur, Chloe and Hannah in Year 7. Mr Edeko was very impressed!

Mr Edeko was also pleased with Connie in Year 8. Grea
work on Gradients!

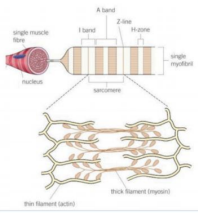


Mr Rah
Megan,
working
Inequalit

ery pleased with
r 12 working on

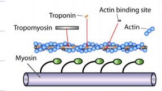
rk on Google Classroom and y

Myofibril Bandings



Myofibrils appear striped due to their alternating light-coloured and dark-coloured bands. The light bands are called I bands (isotropic bands). They appear lighter because the thick and thin filaments don't overlap in this region. The dark bands are called A bands (anisotropic bands). They appear darker because the thick and thin filaments overlap in this region.

At the centre of each A band is a lighter-coloured region called the H-zone. At the centre of each I band is a line called the Z-line. The distance between adjacent Z-lines is called a sarcomere. When a muscle contracts, these sarcomeres shorten and the pattern of light and dark bands changes.



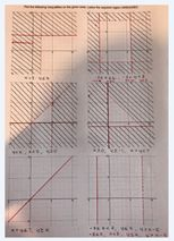
Another important protein found in muscle is tropomyosin, which forms a fibrous strand around the actin filament.

Student Work

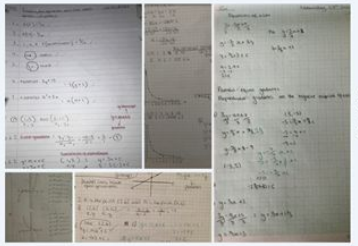
We are very pleased with the quality of the work that is being completed at home. Whilst we do not have the space to show all work that is being completed, here is a small selection.

Excellent work this week from Enru in Year 8, working on Gradients. Miss Harbutt was particularly impressed and commended you on the neatness and high standard of your work. Well done!

Mr Qureshi was very pleased with work produced by Alice and Morgan in Year 10 on Simultaneous Equations.



Mr Rahman was impressed with the quality of work produced by Emma in Year 11 whilst working on Graphical Inequalities.



And Mr Naidoo was very pleased with his Year 11 class as they worked through Non-Linear graphs.

Make sure to submit you work on Google Classroom and your work may be included in future issues.