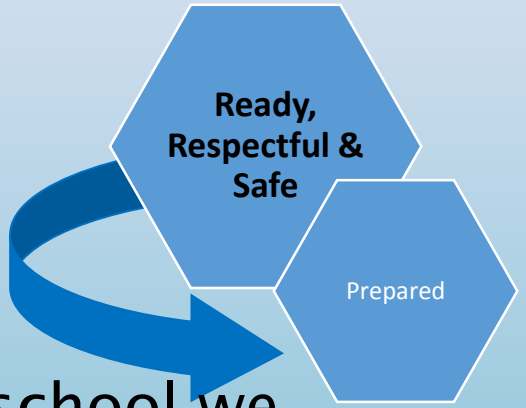
Raising Achievement Evening

THE BEWDLEY SCHOOL

Learning for Life - Achievement for All

Why am I here this evening?



- Students:
  - Based on your attainment at Primary school we believe you can and should be getting better outcomes overall than you are currently estimated.
  - Do some learning and share this with parents
  - Find out where to get support
- Parents/Carers
  - Understand the demand and quality of work needed for the NEW GCSE's
  - Learn how we think you can help

Format of evening

- 6.00-6.10 Welcome Mrs McDougall
- 6.10-6.35 English Miss Savidge
- 6.35-7.00 Maths Mrs Wilmot
- 7.00 -7.15
  - Students - break
  - Parents with Mrs McDougall
- 7.25-7.50 Science Mr Lowrie

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NO Study Leave

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English

Miss Savidge

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Mathematics

Mrs Wilmot

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GCSE Mathematics

AQA Mathematics
8300

Still 2 Tiers – Foundation and Higher

https://www.aqa.org.uk/subjects/mathematics/gcse/mathematics-8300

What is new?

3 examination papers.

Paper 1 is 1 hour 30 minutes without a calculator.

Papers 2 and 3 are also 1 hour and 30 minutes, both of these are with a calculator.

What is new?

There is far more content and a greater emphasis on the application of this content to solve problems.

It is harder than the “old” GCSE.

Paper 1: non-calculator	Paper 2: calculator	Paper 3: calculator
What's assessed Content from any part of the specification may be assessed	**What's assessed** Content from any part of the specification may be assessed	**What's assessed** Content from any part of the specification may be assessed
How it's assessed • written exam: 1 hour 30 minutes • 80 marks • non-calculator • 33⅓% of the GCSE Mathematics assessment	**How it's assessed** • written exam: 1 hour 30 minutes • 80 marks • calculator allowed • 33⅓% of the GCSE Mathematics assessment	**How it's assessed** • written exam: 1 hour 30 minutes • 80 marks • calculator allowed • 33⅓% of the GCSE Mathematics assessment
Questions A mix of question styles, from short, single-mark questions to multi-step problems. The mathematical demand increases as a student progresses through the paper.	**Questions** A mix of question styles, from short, single-mark questions to multi-step problems. The mathematical demand increases as a student progresses through the paper.	**Questions** A mix of question styles, from short, single-mark questions to multi-step problems. The mathematical demand increases as a student progresses through the paper.

The weighting of the topic areas has been prescribed by Ofqual and is common to all exam boards. The table below shows the approximate weightings of the topic areas for the overall tier of assessment, **not** for each individual question paper.

Topic Area	Foundation Tier (%)	Higher Tier (%)
Number	25	15
Algebra	20	30
Ratio	25	20
Geometry	15	20
Probability and statistics (combined)	15	15

In line with the requirements set by the Department for Education, the expectation is that:

- all students will develop confidence and competence with the content identified in the "basic foundation content" column
- all students will be assessed on the content identified by the "basic foundation content" and "additional foundation content" columns; more highly attaining students will develop confidence and competence with all of this content
- only the more highly attaining students will be assessed on the content identified in the "higher content" column. The highest attaining students will develop confidence and competence with this content.

Students can be said to have confidence and competence with mathematical content when they can apply it flexibly to solve problems.

Weighting of assessment objectives for GCSE Mathematics

Foundation tier

Assessment objectives (AOs)	Component weightings (approx %)			Overall weighting (approx %)
	Paper 1	Paper 2	Paper 3	
AO1	40–60	40–60	40–60	50
AO2	15–35	15–35	15–35	25
AO3	15–35	15–35	15–35	25
Overall weighting of components	33⅓	33⅓	33⅓	100

Higher tier

Assessment objectives (AOs)	Component weightings (approx %)			Overall weighting (approx %)
	Paper 1	Paper 2	Paper 3	
AO1	30–50	30–50	30–50	40
AO2	20–40	20–40	20–40	30
AO3	20–40	20–40	20–40	30
Overall weighting of components	33⅓	33⅓	33⅓	100

4.2 Assessment objectives

Assessment objectives (AOs) are set by Ofqual and are the same across all GCSE Mathematics specifications and all exam boards.

The exams will assess the following AOs in the context of the content set out in the Subject content section.

- AO1: Use and apply standard techniques

  Students should be able to:

  - accurately recall facts, terminology and definitions
  - use and interpret notation correctly
  - accurately carry out routine procedures or set tasks requiring multi-step solutions.

- AO2: Reason, interpret and communicate mathematically

  Students should be able to:

  - make deductions, inferences and draw conclusions from mathematical information
  - construct chains of reasoning to achieve a given result
  - interpret and communicate information accurately
  - present arguments and proofs
  - assess the validity of an argument and critically evaluate a given way of presenting information.

- AO3: Solve problems within mathematics and in other contexts

  Students should be able to:

  - translate problems in mathematical or non-mathematical contexts into a process or a series of mathematical processes
  - make and use connections between different parts of mathematics
  - interpret results in the context of the given problem
  - evaluate methods used and results obtained

There are 3 lists of content:

Basic Foundation, Additional Foundation (Crossover Topics) and Higher.

Basic Foundation and Additional Foundation are assessed on the Foundation Tier question papers.

All content can be assessed on Higher Tier question papers.

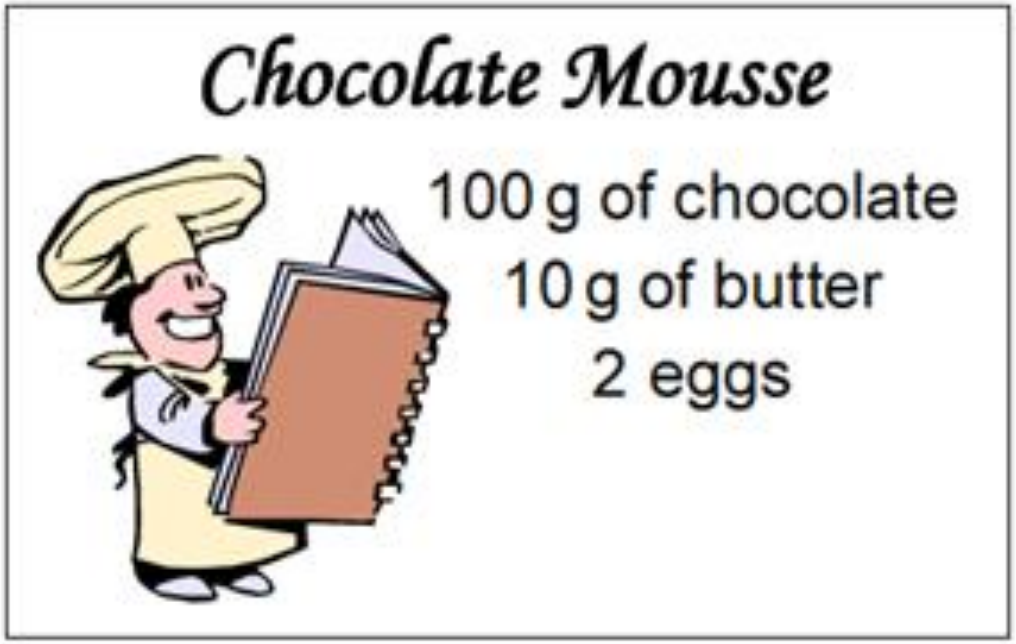
In addition to the subject content, students should be able to recall, select and apply mathematical formulae.

This means that they must learn the content and the relevant formula and then how to apply it.

There are no formulae given in the new GCSE.

Chocolate Mousse

Here is a recipe for chocolate mousse:



This makes enough chocolate mousse for two people.

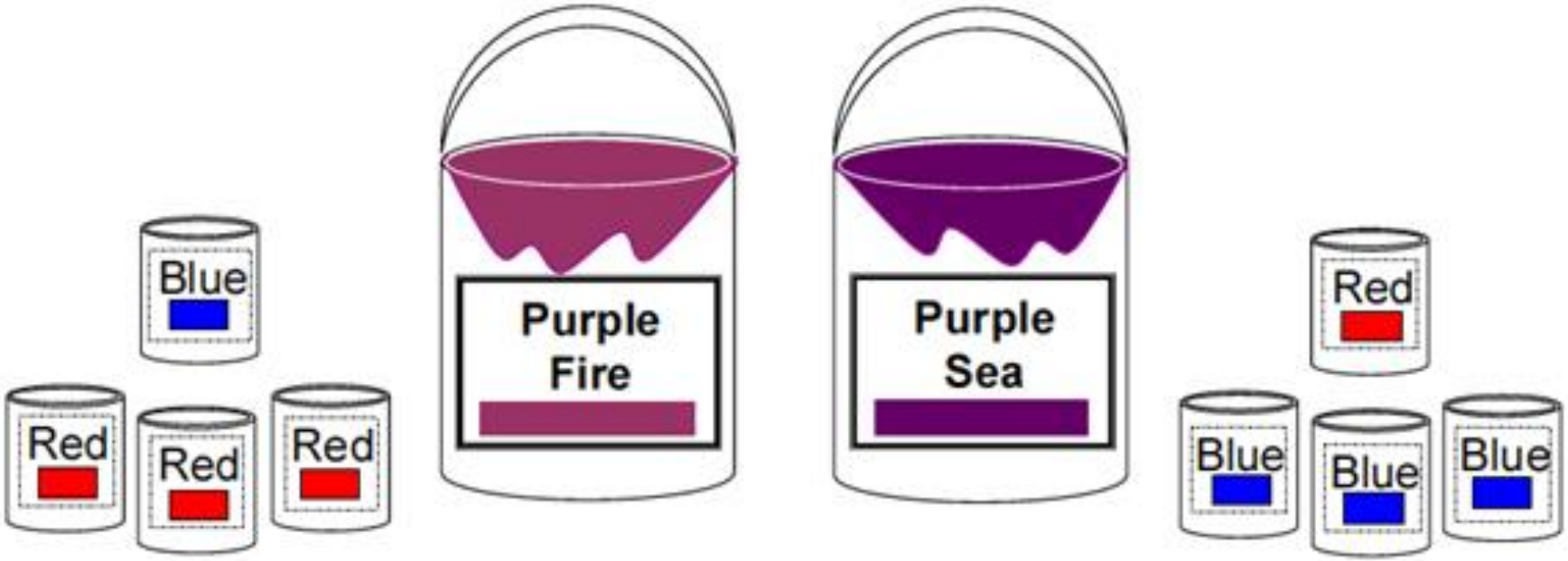
I have 8 eggs, 45 g of butter and 350 g of chocolate.

What is the maximum number of people I can make chocolate mousse for?

Purple Paint

'**Purple fire**' paint is made by mixing red and blue paint in the ratio 3 : 1

'**Purple sea**' paint is made by mixing red and blue paint in the ratio 1 : 3



1 litre of purple fire paint is mixed with 500 millilitres of purple sea by mistake.

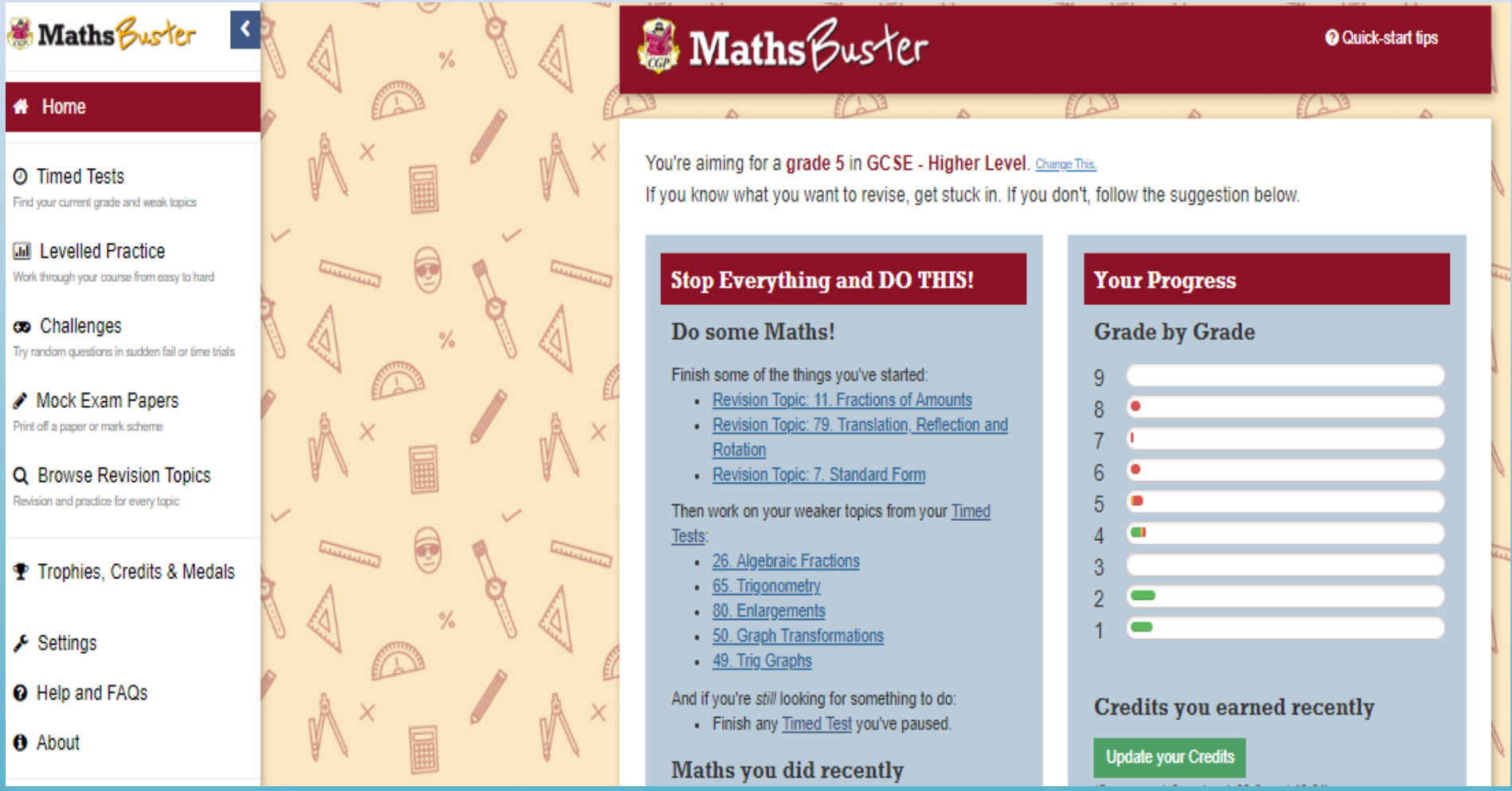
How much red paint needs to be added to the mixture to make it purple fire again?

Teaching Groups 2018 – 19

11X1 – Mrs Wilmot	fwi@bewdley.worcs.sch.uk
11X2 – Ms Walker	swa@bewdley.worcs.sch.uk
11X3 – Mrs Kirby	ski@bewdley.worcs.sch.uk
11X4 – Miss Turner	btu@bewdley.worcs.sch.uk
11Y1 – Mr Cannon	rca@bewdley.worcs.sch.uk
11Y2 – Mrs Kirby	ski@bewdley.worcs.sch.uk
11Y3 – Mrs Wilmot	fwi@bewdley.worcs.sch.uk
11Y4 – Mrs Wilkes	kwi@bewdley.worcs.sch.uk

Homework

- A Complete Maths Quiz a week which is based on the last month's work of taught content. (This will be replaced by a Practice paper a week after the Trial Exams).
- At least one Diagnostic Quiz a week – these are a mixture of;
  - Content just covered
  - Content taught 3 weeks previously
  - Content taught at this point in Year 10
  - Content taught 3 weeks previously than at this point in Year 10
- MathsBuster Practice



How can you support your child?

- Encourage them to complete homework to the best of their ability rather than rushing it to get it out of the way.
- Help them to organise their time so that homework can be spaced out over the week.
- Do you have your “Parent Code” for Eedi and are you using it to its full effect?
- If they are struggling remind them about Maths Club – Wednesday evenings.
- Sympathise about the work, but remind them it will be worth it next summer.

Useful Websites

- https://online.justmaths.co.uk

User name: BewdleyStudent Password: Bewdley

- https://completemaths.com/login

They each have an individual login for this site.

- https://corbettmaths.com
- http://www.mrbartonmaths.com
- https://senecalearning.com/
- https://diagnosticquestions.com/

Conclusions

- Please feel free to contact the Mathematics Department at any time to ask for information or further advice.
- Please contact us if you have any queries regarding the work that your child is doing.
- Your support is invaluable to us if we are all to help your child to achieve their full potential.

Parents only….

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Elevate Education

Elevate Education

- **September 11th – Study Sensei**
  - We address the question: “What is study?” This seminar breaks down the study techniques of the top students, providing students with a roadmap for what work they need to be doing across the year and how to do it.
- **January 10th – Ace your exams**
  - With the arrival of exams knowing the material is no longer enough. It now becomes a case of application. This seminar outlines the critical exam skills that will allow students to excel in the exam room, whilst also demonstrating that exams are not just about the exam room - the preparation is where the marks are.
- **January 10th – Parental session 6.00pm**
  - How to best support students over the coming months
  - How to help them revise
  - How students should be revising
- **April 4th – Memory Mnemonics**
  - The Memory & Mnemonics workshop teaches students how to harness their most powerful resource in any exam: effective recall of content. Students learn how the memory works, how to boost attention while studying, as well as effective mnemonic strategies to increase confidence leading into exams. Students will leave this session excited to put the new memory strategies to use.

Health and wellbeing

- Make sure your child eats well
- Help your child get enough sleep
- Be flexible during exams
- Help them to study
- Talk about exam nerves
- Watch for signs of stress
- Encourage exercise during exams
- Don't add to the pressure
- Make time for treats

Motivation

- **Intrinsic** motivation refers to behaviour that is driven by internal rewards. In other words, the motivation to engage in a behaviour arises from within the individual because it is naturally satisfying to you.
- **Extrinsic** motivation refers to behaviour that is driven by external rewards such as money, fame, grades, and praise. This type of motivation arises from outside the individual

Increase motivation…

- Praise
  - LOTS OF IT!
- Rewards
  - Notice the small things they are doing
  - Cook favourite meals
  - Small gifts
  - Time off
  - Doing jobs around house for them
- Sense of control
- Threat free environment

Increase motivation…

- Change of scenery
- Competition
- Working with others
- Self reflection
- Optimism
- GOALS….

WORK HARD | PLAY HARD

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Write to them….

- Each letter is a tangible expression of your love and pride, combined with the hopes and dreams you have for their future.
- Cards, notes, letters
- It communicates love, pride, and commitment beyond the power of everyday spoken words

8 words:

- Love
- Notice
- Enjoy
- Proud
- Cherish
- Hope
- Believe
- Promise

Year 11 GCSE Science

Mr Lowrie
Head of Science
(glo@bewdley.worcs.sch.uk)

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Which Course Does My Child Follow?

- ‘Combined’ Science (Double)
- ‘Triple’ Science

Look in the front of your child's exercise book:

Ready, Respectful & Safe

Year 11 Combined Science Course Details

- In Year 11, you continue to follow the AQA GCSE Combined Science: Trilogy course.
- Remember, this course leads to two grades awarded in Science for the work studied in Years 10 and 11.
- There are six 1 hour 15 minute exams at the end of the course – 2 each in Biology, Chemistry and Physics.
- Each exam is worth $16\frac{2}{3}$% of your final Combined Science grades.
- The dates for these are:
- Biology Paper 1 is on Tuesday 14th May 2019
- Chemistry Paper 1 is on Thursday 16th May 2019
- Physics Paper 1 is on Wednesday 22nd May 2019
- Biology Paper 2 is on Friday 7th June 2019
- Chemistry Paper 2 is on Wednesday 12th June 2019
- Physics Paper 2 is on Friday 14th June 2019.
- Your Science teachers will give you more information about the content that is assessed in each exam throughout the year.

My end of Year 10 Science grade was: ☐

Year 11 Triple Science Course Details

- In Year 11 you will continue to follow the AQA GCSE Biology, Chemistry and Physics courses.
- This will lead to 3 separate GCSE grades – one each in Biology, Chemistry and Physics.
- Each subject is assessed by two 1 hour 45 minute exams each counting towards 50% of each Science GCSE grade.
- The dates for these are:
- Biology Paper 1 is on Tuesday 14th May 2019
- Chemistry Paper 1 is on Thursday 16th May 2019
- Physics Paper 1 is on Wednesday 22nd May 2019
- Biology Paper 2 is on Friday 7th June 2019
- Chemistry Paper 2 is on Wednesday 12th June 2019
- Physics Paper 2 is on Friday 14th June 2019.
- Your Science teachers will give you more information about the content that is assessed in each exam throughout the year.

My end of Year 10 Science grade was: ☐

‘Combined’ Science

- 2 GCSEs awarded
- Grades awarded on a 17 point scale (99, 98, 88, 87, 77, …, 21, 11) based on their performance in the final exams
- Pupils are 100% externally assessed with 6 final exams – 2 each in Biology, Chemistry and Physics (7½ hours in total)
- No more coursework
- Instead, pupils complete 21 required practicals which they will be tested on in the final exams

Triple Science

- 3 GCSEs awarded – Biology, Chemistry and Physics
- Grades awarded on the 9-1 scale
- Pupils are 100% externally assessed with 6 final exams – 2 each in Biology, Chemistry and Physics (10½ hours in total)
- No coursework
- Instead, pupils complete 28 required practicals which they will be tested on in the final exams

When are the exams?

Before May half-term:

- **Biology Paper 1:** Tuesday 14th May
- **Chemistry Paper 1:** Thursday 16th May
- **Physics Paper 1:** Wednesday 22nd May

After May half-term:

- **Biology Paper 2:** Friday 7th June
- **Chemistry Paper 2:** Wednesday 12th June
- **Physics Paper 2:** Friday 14th June

What will the Science Department do to help?

- Promote the enjoyment and importance of Science
- Order revision guides at a ‘knock-down’ price
- Run weekly revision sessions (during the school day AND after school) throughout Year 11
- Provide revision booklets for homework on all topics from Biology, Chemistry and Physics
- Monitor the completion of these booklets
- Keep you informed if your child is underperforming or does not complete the revision booklets

Tracking Achievement

Ready, Respectful &

Physics Energy Self Assessment

P1.1 Energy changes in a system, and the ways energy is stored before and after such changes

P1.1.1 Energy stores and systems	☹	😐	☺
A system is an object or group of objects.			
There are changes in the way energy is stored when a system changes.			
Students should be able to describe all the changes involved in the way energy is stored when a system changes, for common situations. For example: • an object projected upwards • a moving object hitting an obstacle • an object accelerated by a constant force • a vehicle slowing down • bringing water to a boil in an electric kettle.			
Throughout this section on Energy students should be able to calculate the changes in energy involved when a system is changed by: • heating • work done by forces • work done when a current flows heating • use calculations to show on a common scale how the overall energy in a system is calculated when the system is changed.			
P1.1.2 Changes in energy			
Students should be able to calculate the amount of energy associated with a moving object, a stretched spring and an object raised above ground level.			
The kinetic energy of a moving object can be calculated using the equation: kinetic energy = 0.5 × mass × speed² $E_k = ½ mv^2$ kinetic energy, E_k, in joules, J mass, m, in kilograms, kg speed, v, in metres per second, m/s			
The amount of elastic potential energy stored in a stretched spring can be calculated using the equation: elastic potential energy = 0.5 × spring constant × (extension)² $E_e = ½ k e^2$ (assuming the limit of proportionality has not been exceeded) elastic potential energy, E_e, in joules, J spring constant, k, in newtons per metre, N/m extension, e, in metres, m			
The amount of gravitational potential energy gained by an object raised above ground level can be calculated using the equation: gravitational potential energy = mass × gravitational field strength × height $E_p = m g h$ gravitational potential energy, E_p, in joules, J mass, m, in kilograms, kg gravitational field strength, g, in newtons per kilogram, N/kg (In any calculation the value of the gravitational field strength (g) will be given.) height, h, in metres, m			
P1.1.3 Energy changes in systems			
The amount of energy stored in or released from a system as temperature changes can be calculated using the equation: change in thermal energy = mass × specific heat capacity × temperature change $\Delta E = m c \Delta \theta$ change in thermal energy, ΔE, in joules, J mass, m, in kilograms, kg specific heat capacity, c, in joules per kilogram per degree Celsius, J/kg °C temperature change, Δθ, in degrees Celsius, °C			
The specific heat capacity of a substance is the amount of energy required to raise the temperature of one kilogram of the substance by one degree Celsius.			

Surname		Other Names	
Centre Number		Candidate Number	
Candidate Signature			

Leave blank

General Certificate of Secondary Education
Physics Termly Assessment Paper

TRIPLE SCIENCE
Unit Physics 2

PHYSICS
Unit Physics 2

Higher Tier

Date: OCTOBER/NOVEMBER

For this paper you must have:
- a pen and pencil
- a formula sheet

You may use a calculator.

Time allowed: 50 minutes

Instructions
- Use blue or black ink or ballpoint pen.
- Fill in the boxes at the top of this page.
- Answer all questions.
- Answer the questions in the spaces provided.
- Do all rough work in this book.
- Cross through any work you do not want marked.

Information
- The maximum mark for this paper is 49
- The marks for questions are shown in brackets.
- You may lose marks if you use a calculator where appropriate.
- You are reminded of the need for good English and clear presentation in your answers.

Advice
- In all calculations, show clearly how you work out your answer.

For Examiner's Use Only			
Number	Mark	Number	Mark
Total (Column 1) →			
Total (Column 2) →			
TOTAL			
Examiner's Initials			

Physics Termly Assessment Examination Paper PHY2

PHY2

Year 11 Physics Autumn Term Assessment
Assessment for Learning

Question Number	Topic	Number Marks	Marks lost because…			
			Didn't know the answer	Didn't read the question properly	Didn't understand the question	Couldn't do the calculation
1	Describing motion of a car/work done calculation	/8				
2	Weight calculation/description of forces on a parachute	/12				
3	Gravitational potential energy calculation/description of static electricity	/7				
4	Use of graph to calculate acceleration and distance	/8				
5	Thinking distance definition/kinetic energy calculation/work done calculation	/14				
	Total marks:	/49				

Which topics do I need to focus on to improve my grade?

How can you help your child?

- Ensure they complete all homework set
- Buy them the relevant revision guides
- Make them use it!
- Get your child to go to revision sessions
- Help your child access revision websites and materials (eg BBC Bitesize; www.aqa.org.uk)
- Encourage your child to speak to their teacher if they are finding work difficult
- Speak to your child about their work/results
- Contact the Science Department if you have any concerns

The Science of Revision

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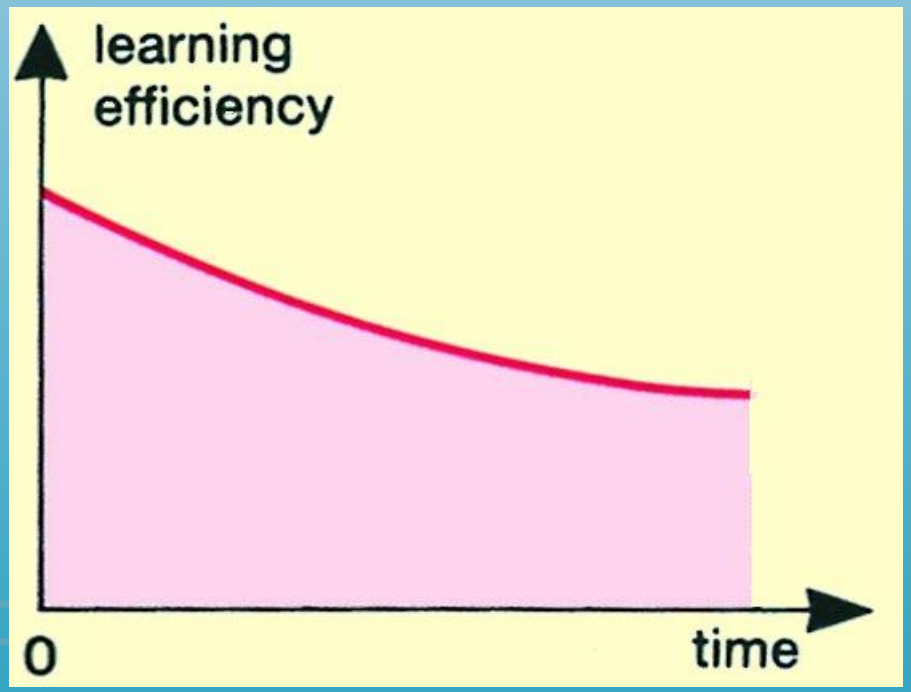
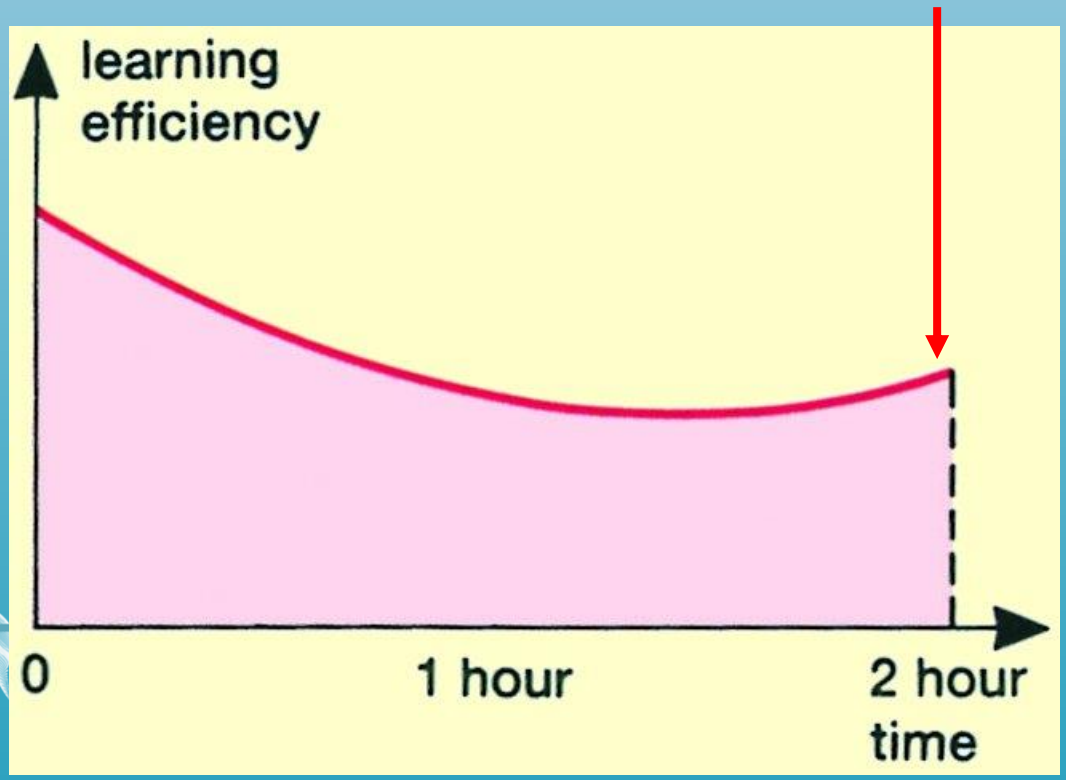
How should you revise?

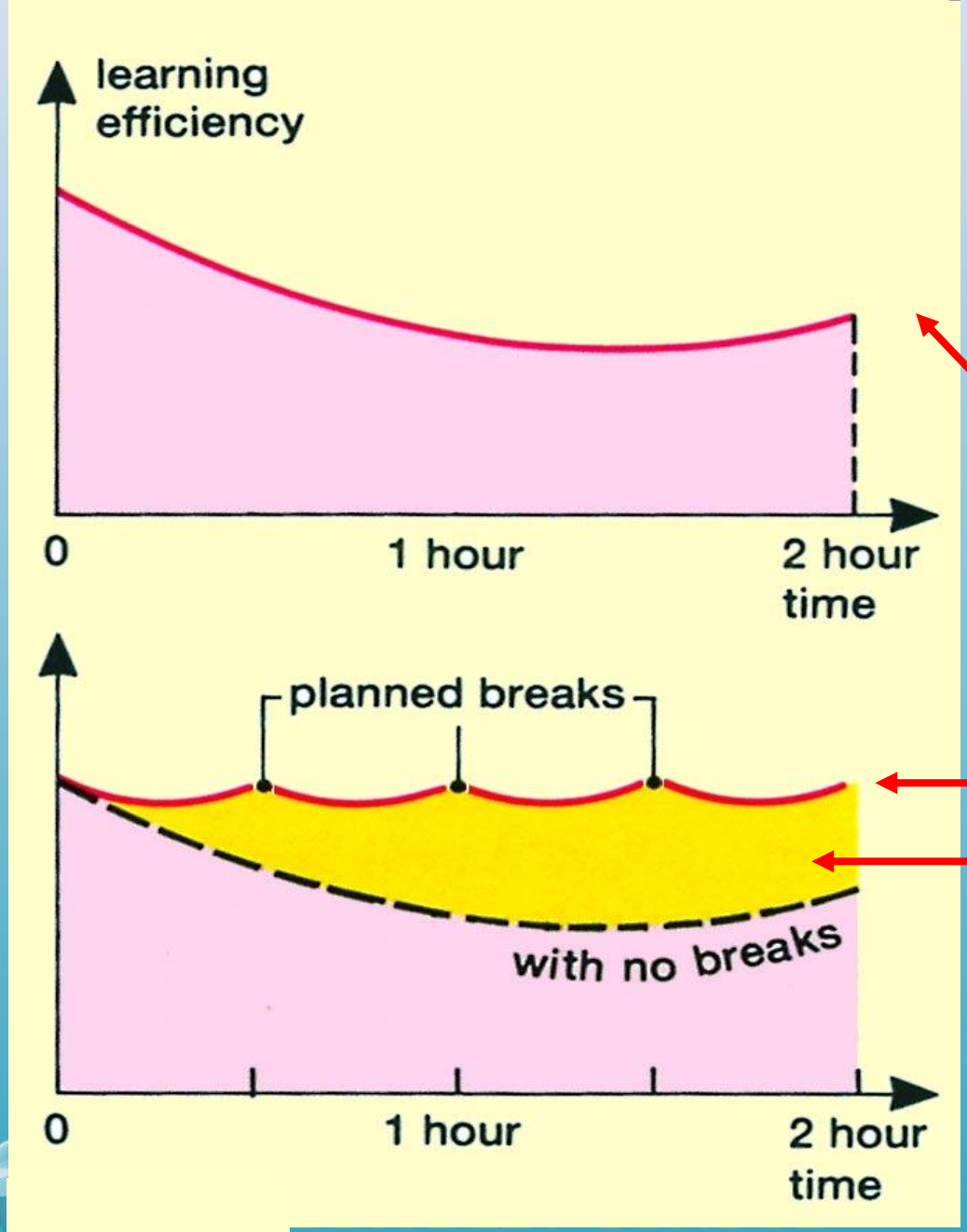
If you just sit down to revise,
without a definite finishing time,
then your **learning efficiency**
falls lower and lower,
like this:



How can you improve this?

If you decide <u>at the beginning</u>
<u>how long</u> you will work for, <u>with a clock</u>,
then as your brain <u>knows</u> the end is coming,
the graph <u>rises</u> towards the end





One solid session

4 shorter sessions

The yellow area shows the improvement.

For example,

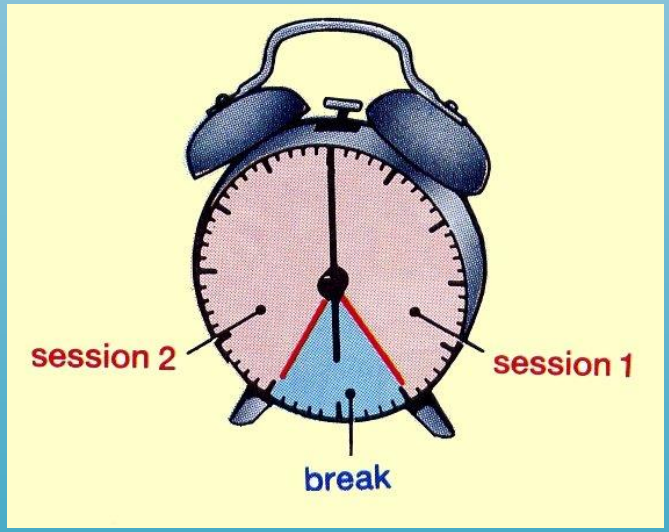
Suppose you start work at **6 pm**.

You should decide, looking at your clock or watch, to stop at **6.25 pm** --and no later.

Then at 6.25 pm have a break for **5-10** minutes.

When you start again,
look at the clock and decide to work until **7 pm** exactly, and then have another break.

This way, you are working more efficiently, as the previous slide showed.

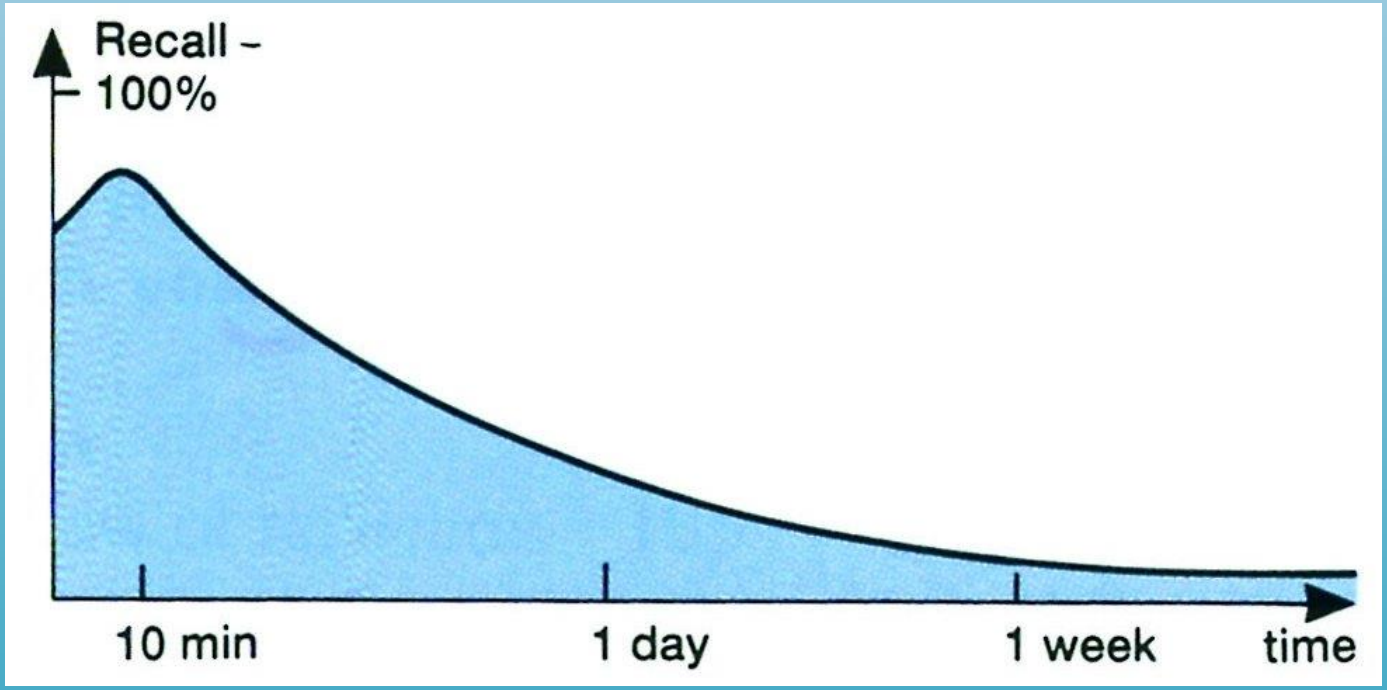


How often should you revise?

Look at the graph below:

It shows how much your brain can recall later.

It rises for about 10 minutes …and then falls.

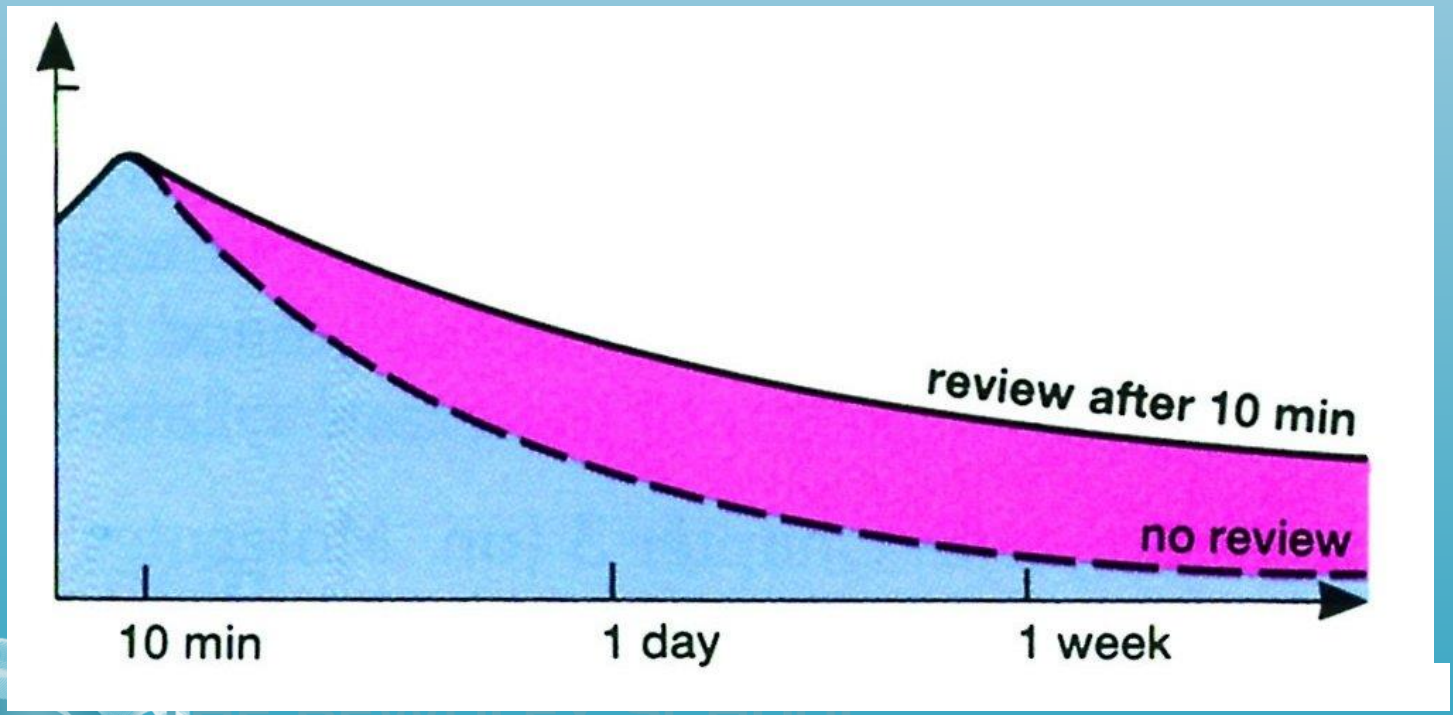


<u>However</u>,

if you quickly re-revise after 10 minutes,

then it falls <u>more slowly</u>! This is good.

Analyse the new graph:

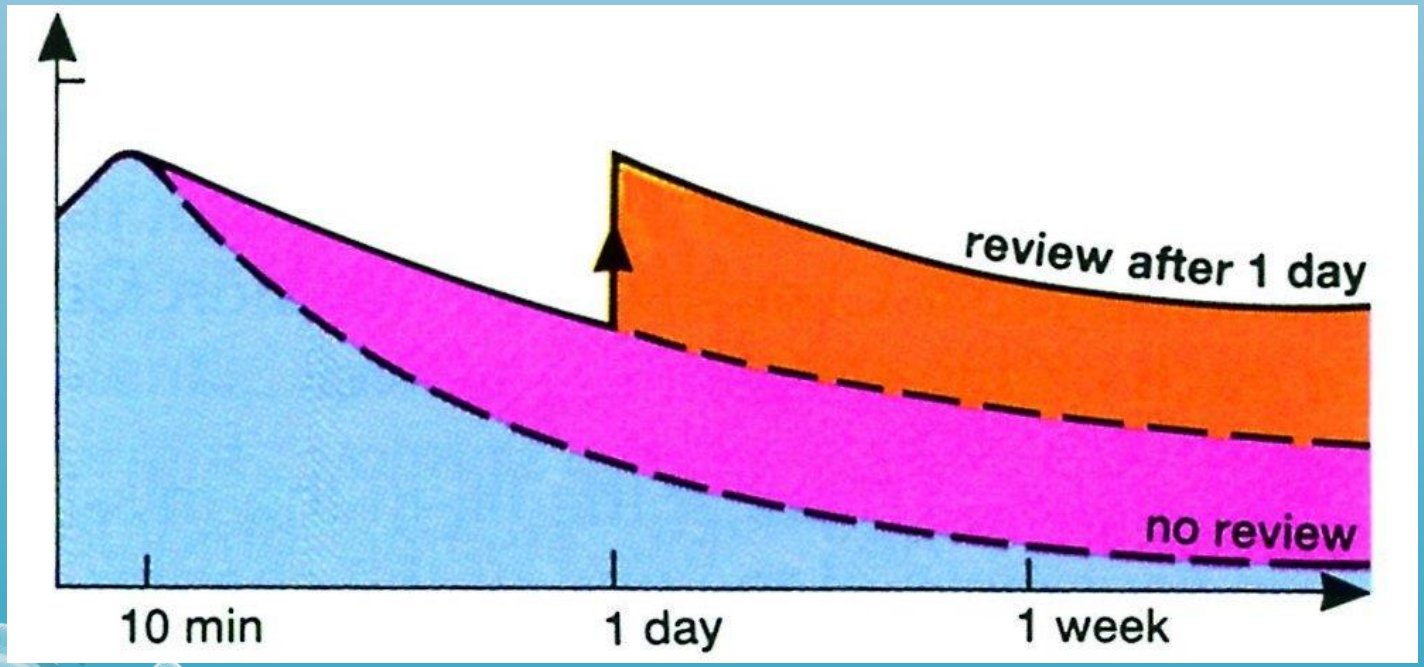


Even better,

if you quickly re-revise again, after **1 day**,

then it falls even more slowly! Good !

Analyse the new graph:

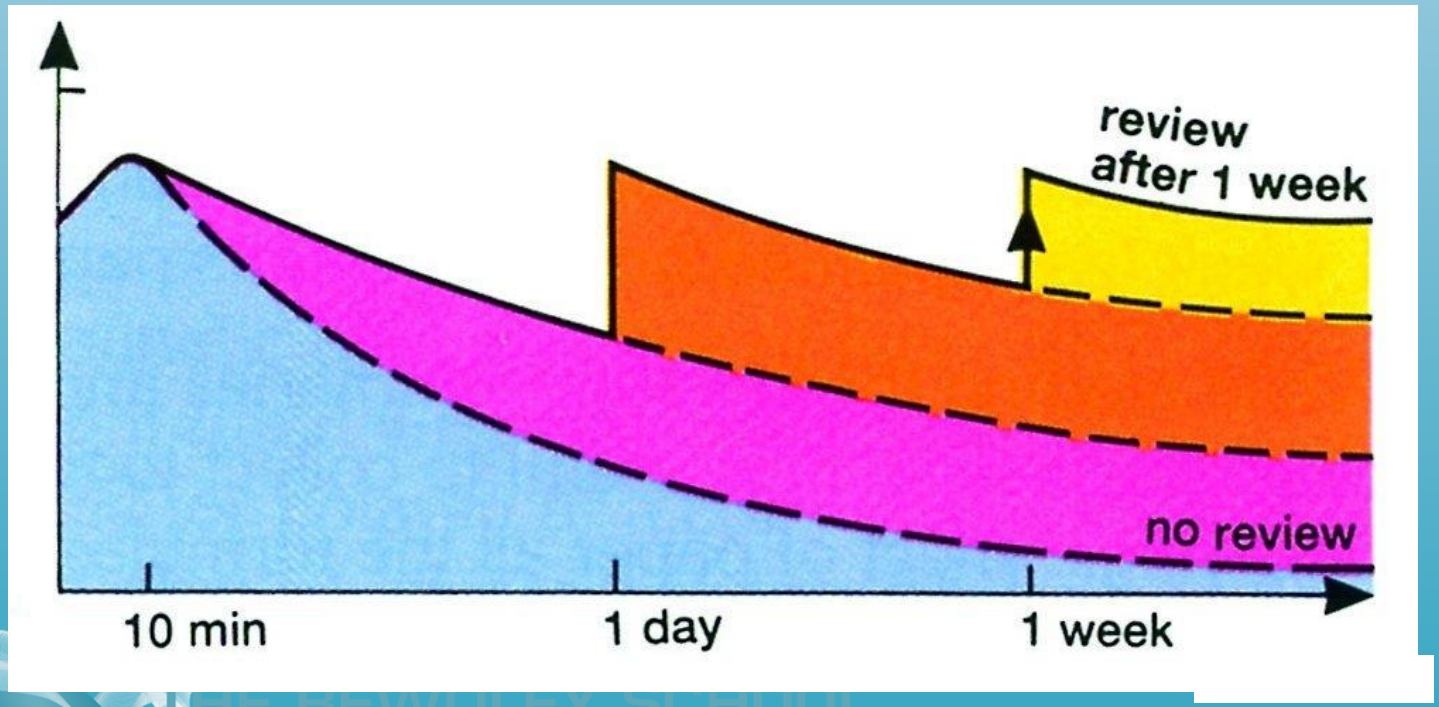


And even better still,

if you quickly re-revise again, after **1 week**,

then it falls even more slowly! Great!

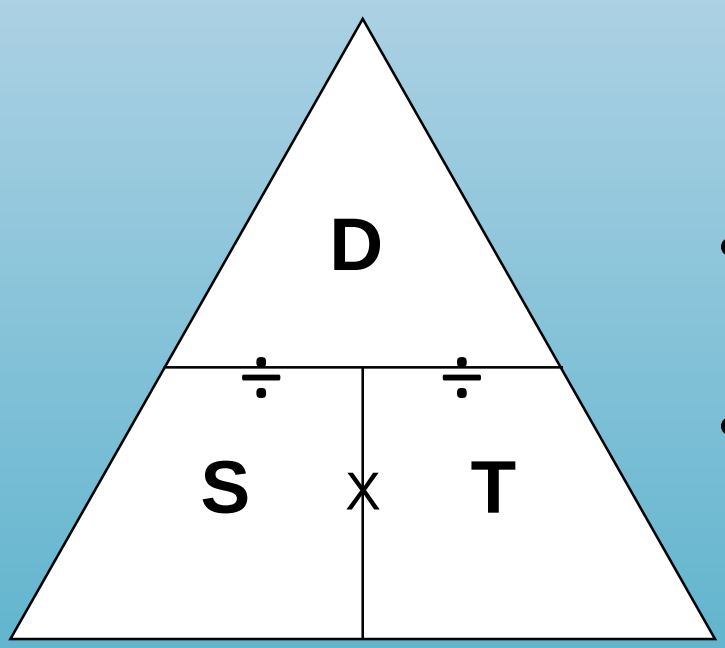
Analyse the new graph:



So the best intervals for ‘topping-up’, by reviewing or briefly re-revising are:

- ✓ 10 minutes
- ✓ 1 day
- ✓ 1 week
- ✓ …and then 1 month.

The equations:



- 23 equations to learn for Triple
- 21 for Combined!

Don't **S**top **T**rying

Look, Say, Cover, Write, Check

Look	Say	Cover	Write	Check (✗ ✓)	Write	Check (✗ ✓)
speed = $\frac{\text{distance}}{\text{time}}$						
acceleration = $\frac{\text{change in velocity}}{\text{time}}$						
force = mass x acceleration						
momentum = mass x velocity						

Revision Progress

Physics Forces Self Assessment

P5.1 Forces and their interactions

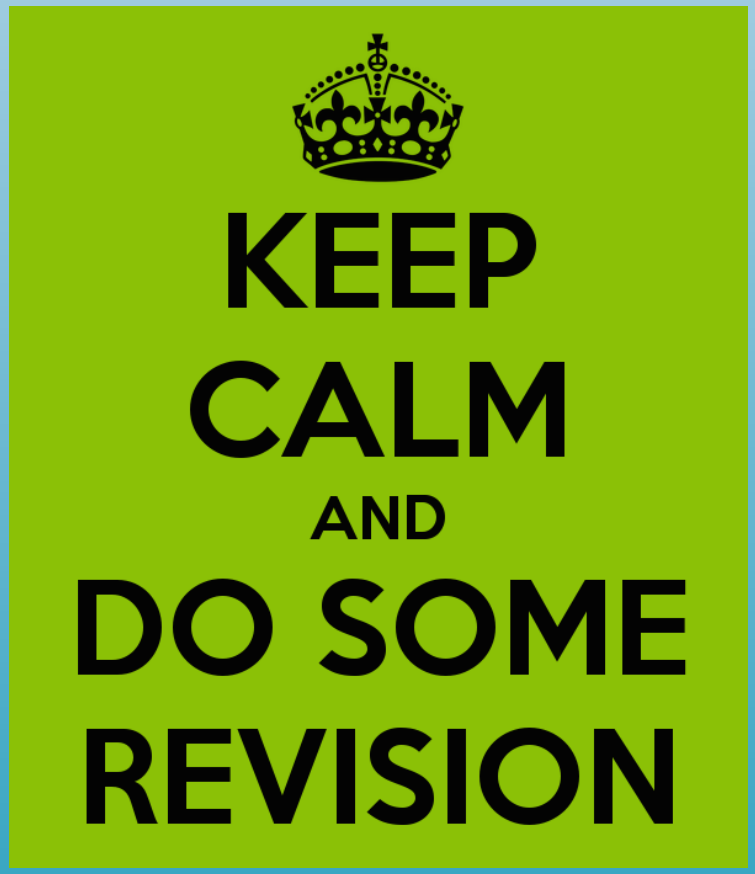
P5.1.1 Scalars and vector quantities	☹	😐	☺
Scalar quantities have magnitude only.			
Vector quantities have magnitude and an associated direction.			
A vector quantity may be represented by an arrow. The length of the arrow represents the magnitude, and the direction of the arrow the direction of the vector quantity.			
P5.1.2 Contact and non-contact forces			
A force is a push or pull that acts on an object due to the interaction with another object.			
All forces between objects are either: • contact forces – the objects are physically touching • non-contact forces – the objects are physically separated.			
Examples of contact forces include friction, air resistance, tension and normal contact force.			
Examples of non-contact forces are gravitational force, electrostatic force and magnetic force.			
Force is a vector quantity.			
Students should be able to describe the interaction between pairs of objects which produce a force on each object. The forces to be represented as vectors.			
P5.1.3 Gravity			
Weight is the force acting on an object due to gravity. The force of gravity close to the Earth is due to the gravitational field around the Earth.			
The weight of an object depends on the gravitational field strength at the point where the object is.			
The weight of an object can be calculated using the equation:			

Revision Progress

Topic	Revised None/Some/All	How Good Am I? 1 2 3 4 5
5.1.1 Scalars and vector quantities	A	4
5.1.2 Contact and non-contact forces	S	2
5.1.3 Gravity	N	1

Suggested Websites

- BBC GCSE Bitesize
- aqa.org.uk
- s-cool.co.uk
- gcsescience.com
- getrevising.co.uk
- revisionworld.com



The Exam

- ‘Triple’ – 100 marks in 1 hour 45 minutes
- ‘Combined’ – 70 marks in 1 hour 15 minutes
- **About a minute a mark!!**

Grateful….

- Home support is proven to increase outcomes at every level of education
- This means you need to thank your parent/carer for coming this evening
- And for nagging you to “do your best”!

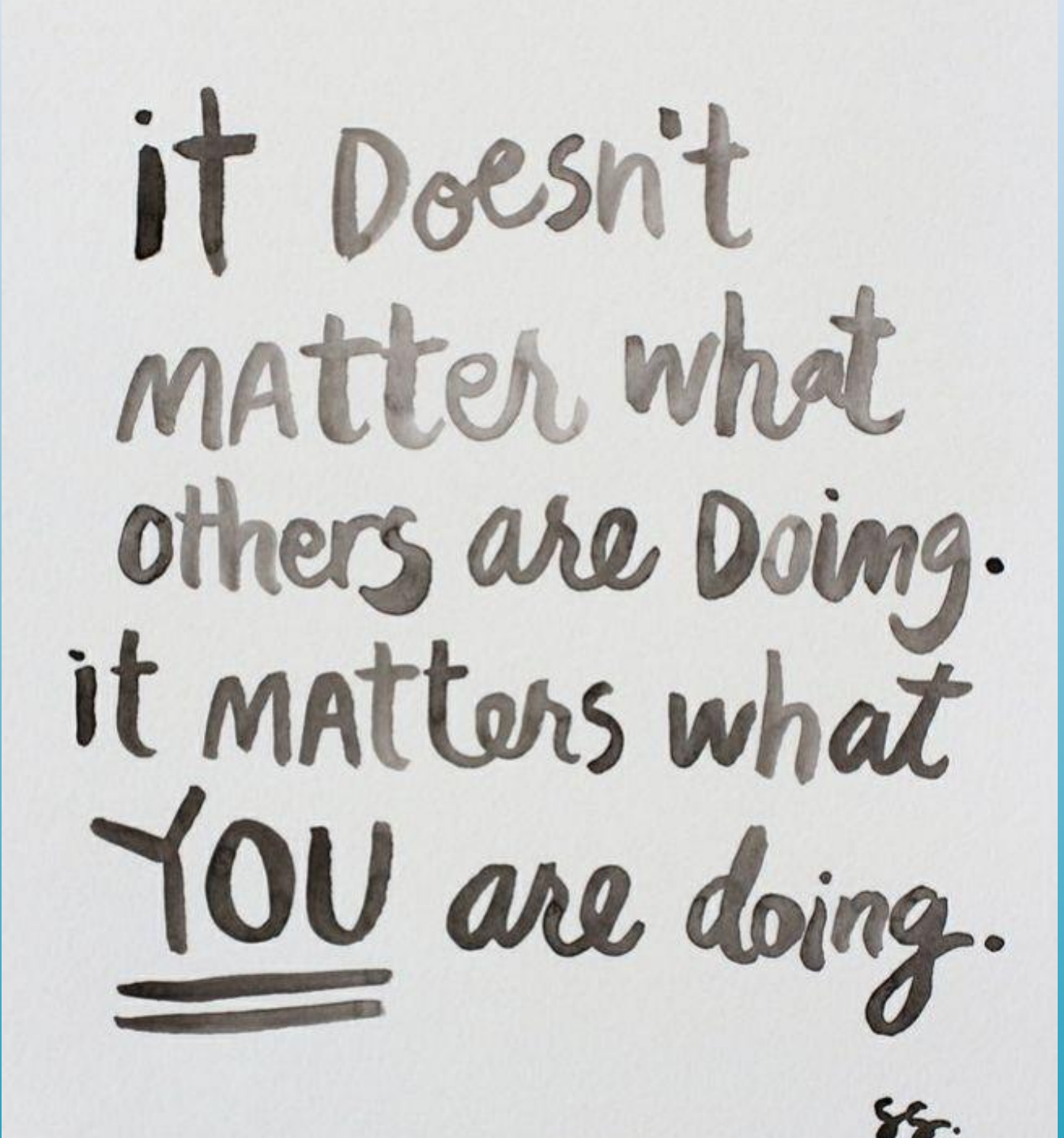
THE BEWDLEY SCHOOL
Learning for Life - Achievement for All

If you want to succeed in life, always remember this phrase:

That past doesn't equal the future.
It doesn't matter you failed yesterday,
or all day today.

What matters is...

What are you going to do,
right now?


it Doesn't
matter what
others are Doing.
it matters what
YOU are doing.


Ready, Respectful & Safe
Prepared

Evaluation

- I would really welcome your thoughts / observations on this evening. Please email me.

- cmc@bewdley.worcs.sch.uk