My Knowledge Expert Companion

Co-op Academy Belle Vue

They organise their revision using a weekly timetable

They create powerful flashcards to self-quiz

They use the Leitner system to practise recalling knowledge from their flashcards

They will ask lots of questions in ambition briefings and lessons

They know the importance having no distractions during study time

They amend their knowledge expert and ambition sheets to self-quiz in their expert booklets

They will show exemplary behaviour in lessons and aim to achieve a golden ticket

1 What are the characteristics of a knowledge expert?

‘Knowledge is power’

This knowledge expert companion is a complete guide to support you with your time at Belle Vue so that you can work to achieve mastery in your subject knowledge over time. At Belle Vue, a knowledge expert displays the following characteristics.

2 How do we learn?

‘Learning happens over time’

Learning is a complex process and requires effort. One of our CARE principles is endeavour and this is key to becoming a knowledge expert.

Your ability to learn something is easier when you can connect it to something you already know. However, how well you learn new knowledge, even if you can connect it to previous knowledge, will be dependent upon using effective learning strategies. This knowledge companion will help you to choose the most effective learning strategies to do this.

Before we look at some of the strategies that can help you to become a knowledge expert let’s review how our memory works. Our memory is like a large network of elements that connect to each other. Your brain makes connections between old memories and relatable knowledge. The more knowledge you have about something the greater the connections you can make and the easier it is for you to learn. This is why when you learn something new that you haven’t come across before you will find it challenging.

When we spend time thinking about what we are learning and try to link it to something we are familiar with we are likely to learn better. The more we elaborate about what we are learning the more we can see how knowledge connects together.

To improve our elaboration we can do the following.

Strategy 1

Take regular breaks when learning something new and saying it out loud or to another person.

Strategy 2

When learning something new, think about other things you already know that might be similar to build stronger connections.

Strategy 3

Try to think of images that relate to what you are learning about.

Strategy 4

Create your own rhymes to help you remember something. For example, to remember compass points; Never, Eat, Shredded, Wheat.

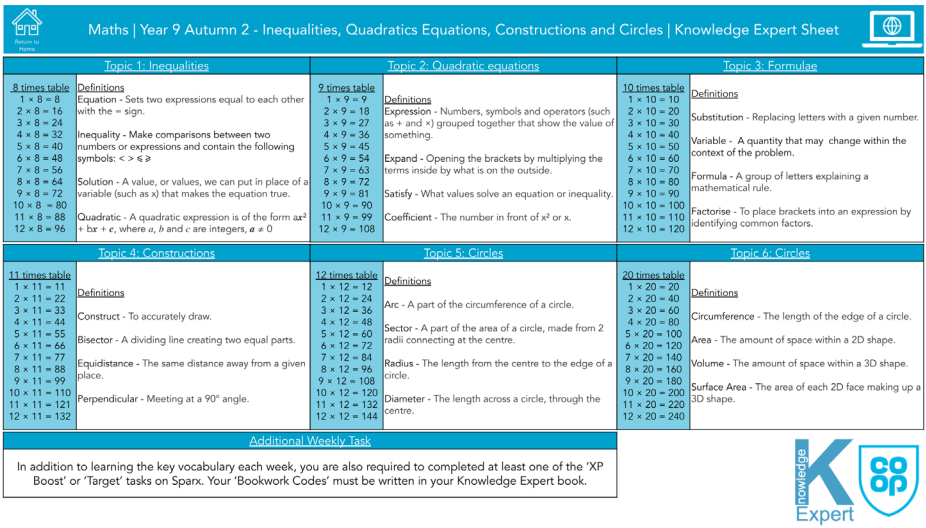
3 How do I use my knowledge expert sheets?

‘Knowledge is treasure and practice is the key to access it’

To help support your revision your teachers have provided you with knowledge experts and ambition sheets.

The knowledge expert sheets indicate the core knowledge that you should know when studying a unit in your subjects.

You can access your knowledge expert sheets by using the student portal on your Chromebooks. The sheets are broken down into 6 weekly blocks of key knowledge so that you can focus on a set of them at a time. You can use your knowledge expert sheets in a variety of ways which we will outline in this companion.



Maths | Year 9 Autumn 2 - Inequalities, Quadratics Equations, Constructions and Circles | Knowledge Expert Sheet

Topic 1: Inequalities

8 times table
1 × 8 = 8
2 × 8 = 16
3 × 8 = 24
4 × 8 = 32
5 × 8 = 40
6 × 8 = 48
7 × 8 = 56
8 × 8 = 64
9 × 8 = 72
10 × 8 = 80
11 × 8 = 88
12 × 8 = 96

Definitions

Equation - Sets two expressions equal to each other with the = sign.

Inequality - Make comparisons between two numbers or expressions and contain the following symbols: < > ⩽ ⩾

Solution - A value, or values, we can put in place of a variable (such as x) that makes the equation true.

Quadratic - A quadratic expression is of the form $ax^2 + bx + c$, where a, b and c are integers, $a \neq 0$

Topic 2: Quadratic equations

9 times table
1 × 9 = 9
2 × 9 = 18
3 × 9 = 27
4 × 9 = 36
5 × 9 = 45
6 × 9 = 54
7 × 9 = 63
8 × 9 = 72
9 × 9 = 81
10 × 9 = 90
11 × 9 = 99
12 × 9 = 108

Definitions

Expression - Numbers, symbols and operators (such as + and ×) grouped together that show the value of something.

Expand - Opening the brackets by multiplying the terms inside by what is on the outside.

Satisfy - What values solve an equation or inequality.

Coefficient - The number in front of x^2 or x.

Topic 3: Formulae

10 times table
1 × 10 = 10
2 × 10 = 20
3 × 10 = 30
4 × 10 = 40
5 × 10 = 50
6 × 10 = 60
7 × 10 = 70
8 × 10 = 80
9 × 10 = 90
10 × 10 = 100
11 × 10 = 110
12 × 10 = 120

Definitions

Substitution - Replacing letters with a given number.

Variable - A quantity that may change within the context of the problem.

Formula - A group of letters explaining a mathematical rule.

Factorise - To place brackets into an expression by identifying common factors.

Topic 4: Constructions

11 times table
1 × 11 = 11
2 × 11 = 22
3 × 11 = 33
4 × 11 = 44
5 × 11 = 55
6 × 11 = 66
7 × 11 = 77
8 × 11 = 88
9 × 11 = 99
10 × 11 = 110
11 × 11 = 121
12 × 11 = 132

Definitions

Construct - To accurately draw.

Bisector - A dividing line creating two equal parts.

Equidistance - The same distance away from a given place.

Perpendicular - Meeting at a 90° angle.

Topic 5: Circles

12 times table
1 × 12 = 12
2 × 12 = 24
3 × 12 = 36
4 × 12 = 48
5 × 12 = 60
6 × 12 = 72
7 × 12 = 84
8 × 12 = 96
9 × 12 = 108
10 × 12 = 120
11 × 12 = 132
12 × 12 = 144

Definitions

Arc - A part of the circumference of a circle.

Sector - A part of the area of a circle, made from 2 radii connecting at the centre.

Radius - The length from the centre to the edge of a circle.

Diameter - The length across a circle, through the centre.

Topic 6: Circles

20 times table
1 × 20 = 20
2 × 20 = 40
3 × 20 = 60
4 × 20 = 80
5 × 20 = 100
6 × 20 = 120
7 × 20 = 140
8 × 20 = 160
9 × 20 = 180
10 × 20 = 200
11 × 20 = 220
12 × 20 = 240

Definitions

Circumference - The length of the edge of a circle.

Area - The amount of space within a 2D shape.

Volume - The amount of space within a 3D shape.

Surface Area - The area of each 2D face making up a 3D shape.

Additional Weekly Task

In addition to learning the key vocabulary each week, you are also required to completed at least one of the ‘XP Boost’ or ‘Target’ tasks on Sparx. Your ‘Bookwork Codes’ must be written in your Knowledge Expert book.

4 How do I use my knowledge expert book?

‘Success is the product of daily habits not once-in-a-lifetime transformation’

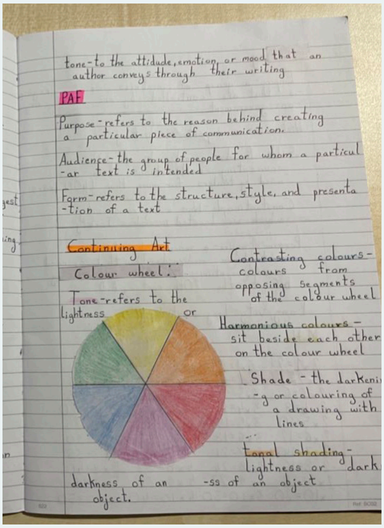
Your knowledge expert book is for you to use throughout the academic year to organise your revision notes. The book can be used for all your subjects and there is no specific way to set out your notes.

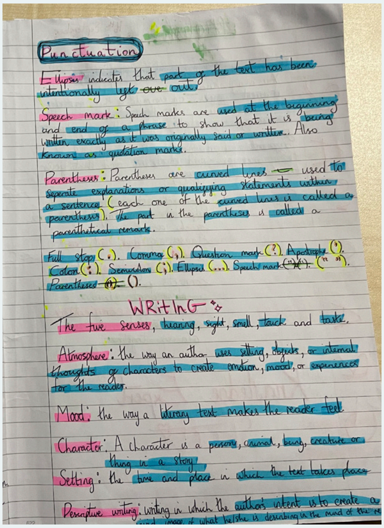
There will be several strategies you can use when creating your revision notes which will include:

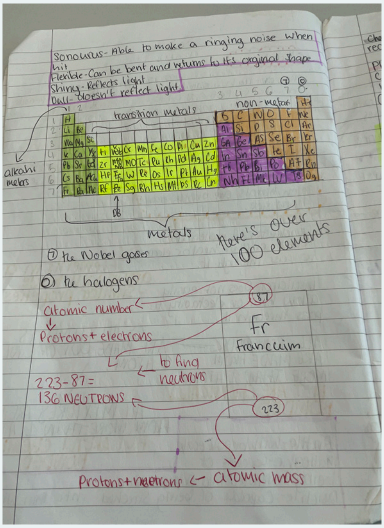
- Look, cover, write, check (with green pen)
- A knowledge drop (gaps in green pen)
- A graphic organiser / memory map

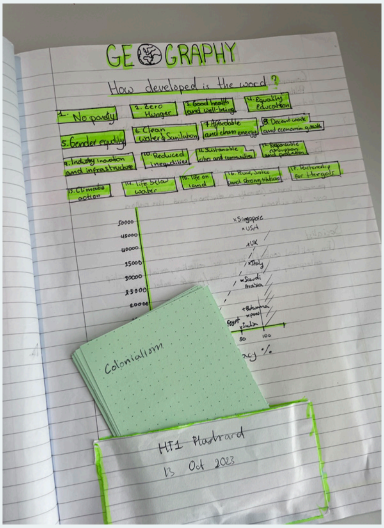
When you complete a page in your book we want to see them to give you feedback and it is a great opportunity to receive a CARE card for a golden ticket.

A few examples of how you might set out your notes in your knowledge expert book are illustrated opposite.


tone-to the attitude, emotion, or mood that an author conveys through their writing
PAF
Purpose-refers to the reason behind creating a particular piece of communication.
Audience-the group of people for whom a particular text is intended
Form-refers to the structure, style, and presentation of a text
Continuing Art
Colour wheel:
Tone-refers to the lightness or darkness of an object.
Contrasting colours-colours from opposing segments of the colour wheel
Harmonious colours-sit beside each other on the colour wheel
Shade - the darkening or colouring of a drawing with lines
Tonal shading-lightness or darkness of an object


Punctuation
Ellipsis: indicates that part of the text has been intentionally left out.
Speech mark: Speech marks are used at the beginning and end of a phrase to show that it is being written exactly as it was originally said or written. Also known as quotation marks.
Parenthesis: Parenthesis are curved lines used to separate explanations or qualifying statements within a sentence (each one of the curved lines is called a parenthesis). The part in the parentheses is called a parenthetical remark.
Full stop (.). Comma (,). Question mark (?). Apostrophe ('). Colon (:). Semicolon (;). Ellipsis (...). Speech mark (" ").
Parentheses ().
WRITING
The five senses, hearing, sight, smell, touch and taste.
Atmosphere: the way an author uses setting, objects, or internal thoughts of characters to create emotion, mood, or experiences for the reader.
Mood: the way a literary text makes the reader feel
Character: A character is a person, animal, being, creature or thing in a story
Setting: the time and place in which the text takes place
Descriptive writing: writing in which the author's intent is to create a vivid image of what he/she is describing in the mind of the reader


Sonorous- Able to make a ringing noise when hit
Flexible-Can be bent and returns to its original shape
Shiny- Reflects light
Dull- doesn't reflect light
transition metals
non-metals
alkali metals
metals
there's over 100 elements
⑦ the Noble gases
⑥ the halogens
atomic number
Protons + electrons
to find neutrons
223-87=
136 NEUTRONS
Fr
Francium
87
223
Protons+neutrons ← atomic mass


GEOGRAPHY
How developed is the world?
1. No poverty
2. Zero Hunger
5. Gender equality
Colonialism
HT1 Flashcard
13 Oct 2023

5 Why is sleep important?

'The most practical way to change who you are is to change what you do.'

Sleep is essential for you because it plays an important role in supporting your physical and mental development.

The National Sleep Foundation recommends teenagers should get between 8-10 hours of sleep every night.

One of the key benefits of getting the right amount of sleep is it helps to increase attention and memory. When you get the right amount of sleep it will help you to think clearly. In several studies, the research has shown that if you don't get the right amount of sleep it can have an impact on your academic performance. There are some myths about sleep.

Myth 1

Getting just one hour less sleep per night won't affect your daytime functioning.

Myth 2

Your body adjusts quickly to different sleep schedules.

Myth 3

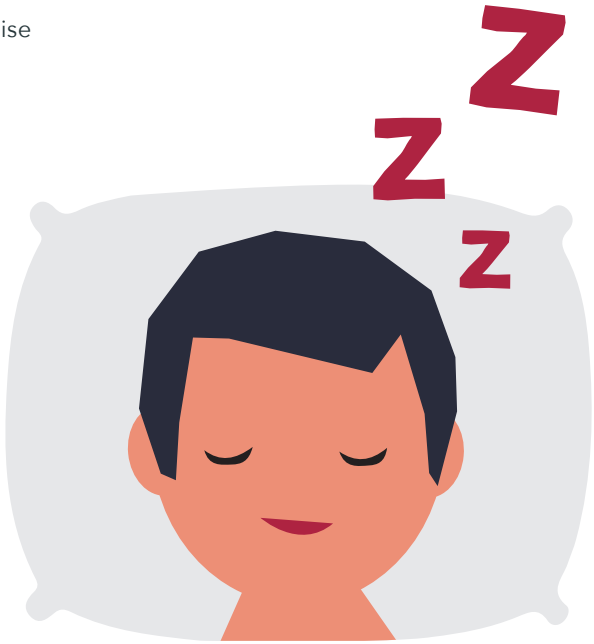
Extra sleep at night can cure you of problems with excessive daytime fatigue.

Myth 4

You can make up for lost sleep during the week by sleeping more on the weekends.

We can improve our sleep by.

1. Plan to have eight hours of sleep every night.
2. Aim to keep to a sleep schedule by going to sleep at the same time for weekdays and weekends.
3. Create a consistent pre-bed routine to help with relaxation and falling asleep fast.
4. Avoid drinking caffeine and energy drinks later in the afternoon and in the evening before going to bed.
5. Reduce your use of electronic devices before going to bed. Plan to put your devices on silent mode at least 30 minutes before going to bed.
6. Try to avoid checking your electronic devices during the night.
7. Keep your bedroom cool and dark.
8. Avoid noise



6 Why do we need to remove distractions?

‘Attention is the mechanism to enable learning to happen’

When you are completing a study or review session you should remove distractions so that you don’t split your attention. When we split our attention between multiple activities this can reduce our learning potential.

One of the biggest distractions is electronic devices such as mobile phones. A Uswitch report illustrated how many hours the average person spends on popular apps.

Excessive mobile phone use leads to poor concentration. Having your phone out whilst doing homework or revision can reduce your performance by up to 20%.

Tip 1

When studying put your phone in a different room so you are not tempted to go on it or switch it off so that you don't receive any notifications.

Tip 2

Set aside some phone-free time where you do a hobby to reduce your reliance on checking and scrolling through your phone.

Tip 3

Use apps such as Mute to track your usage of social media apps and give you a notification when you have spent a certain amount of time to encourage you to put your phone down and do something else.

Tip 4

Put your phone in a different room when you go to bed and use an alarm clock to wake you up.

7 What is the most effective study environment?

‘Building habits in the present allows you to do more of what you want in the future.’

When doing your study and review sessions at home it is important to find a suitable space to work without any distractions. An example of the characteristics of an effective study environment is shown below.

1. Keep your desk tidy

A clean and tidy work environment can boost productivity and help you focus.

2. Avoid listening to music

If you have to, listen to calming music without lyrics. Many studies on the subject found that music can impact your recall of information and your ability to focus.

3. Maintain a routine

Having a routine allows us to divide our time and prioritise what is important.

4. Set a designated area for learning

Find a space away from distractions that you can use solely to study and complete homework.

8 Creating an effective revision timetable

'A dream becomes a goal when action is taken toward its achievement.'

1st Revision Session
30 mins

BREAK

2nd Revision Session
30 mins

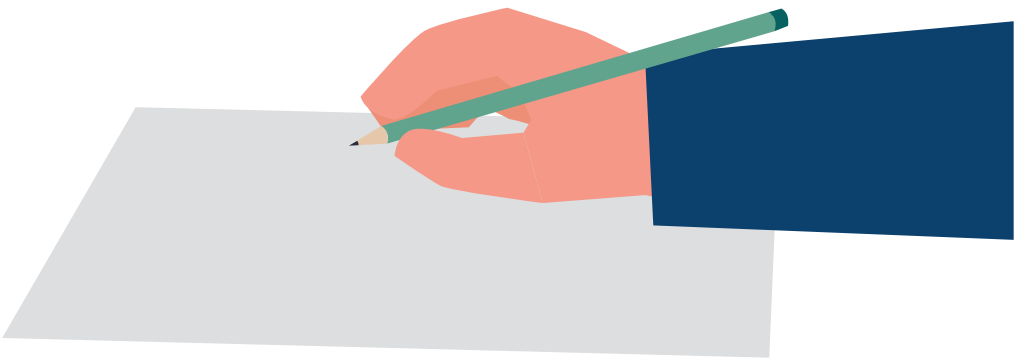
During your time at Belle Vue you will face many challenges when studying to become masters of knowledge in your subjects. To overcome these challenges one factor that will support you is being organised. A knowledge expert will allocate:

- 2 x 30 minute study sessions, 5 days per week (breakfast club/after school)
- 2 subjects prioritised per day

In order to stick to your two study sessions you should set out when you plan to do them so that it holds you accountable.

To mix up the subjects you study, create a new timetable for each school term. An example of a revision timetable you could use is illustrated below.

Monday	Tuesday	Wednesday	Thursday	Friday
Maths	Geography	English	Textiles	RS
Science	Art	Drama	Music	PE



9 What are the characteristics of a powerful flashcard?

‘Expert Learners build habits which lead to success.’

Flash cards promote studying through active recall, which is one of the practices through which our brains learn most effectively and are a great way to put spaced repetition into action. Before we can use them to space our practice we need to know what a powerful flashcard looks like.

Attrition	**The action of rock fragments colliding into each other causing them to become smaller and rounder over time.**

Scan the QR code and watch the video on creating powerful flashcards.

Tip 1

Create your own revision cards it will help to retrieve information.

Tip 2

Adding pictures to your flash cards will make them more memorable.

Tip 3

Use mnemonic devices to help you remember important points about your subject.

Tip 4

Stick to one point per card. It's important not to overload them with too much information.

10 How can we use flashcards to support our revision?

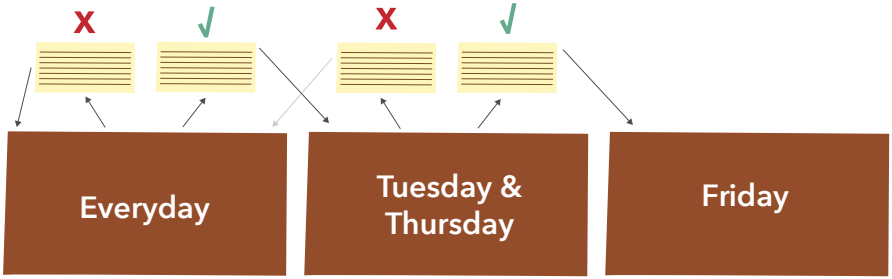
Now that you have created your flashcards, how you use them will be key for supporting you to remember key facts in your subjects.

You can use your flashcards in a number of different ways. Recalling from memory rather than just copying from your flashcards is most powerful. As you start to learn new knowledge you may find it difficult to recall correctly, this is normal and all part of the learning process.

Firstly, you can test your memory by asking a friend or family member to read out a question / key word on the flashcard and you recall it. They can test you using the flashcard in both directions. Keep the ones you get wrong in a separate pile so you can come back to them later.

Secondly, if you are revising independently you can recall the information out loud and then check the answer. If you get it wrong, put it into a separate pile and come back to them later.

You can also use a series of boxes with time intervals which is known as the Leitner system.



11 How can we use look, say, cover, write, check to support our revision?

When revising knowledge for your subjects we have discussed the importance of doing it from memory and not copying from one piece of paper to another.

This is why using the strategy of look, cover, write, check can support you with this.

A study was conducted with violin students at a music academy in Berlin. The study found that the most accomplished of the students had put in 10,000 hours by the time they turned 20.

Gladwell also estimates that the Beatles put in 10,000 hours of practice playing in Hamburg in the early 1960s, and that Bill Gates put in 10,000 hours of programming work before founding Microsoft.

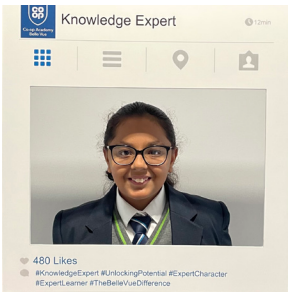
The 10,000 hour rule was born: put in your 10,000 hours of practice, and become an expert in a given field.

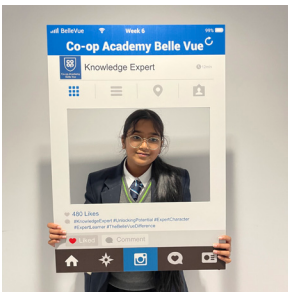
Look	Look at your knowledge expert sheet and identify something you want to focus on.
Say	Say the knowledge out loud to yourself, a friend or family member.
Cover	Cover your knowledge expert sheet so that you can't see it anymore or shut your Chromebook
Write	Write downwyou can remember in your knowledge expert book.
Check	Check back at your knowledge expert sheet to see if you got it right. Correct any mistake or missing part with a green pen.

Green pens are really important when completing your look, say, cover, write, check sessions. It allows you to know what you were good at and what you got wrong when you come back to revise again.

12 Gallery


Co-op Academy Belle Vue
Knowledge Expert


Knowledge Expert
480 Likes
#KnowledgeExpert #UnlockingPotential #ExpertCharacter
#ExpertLearner #TheBelleVueDifference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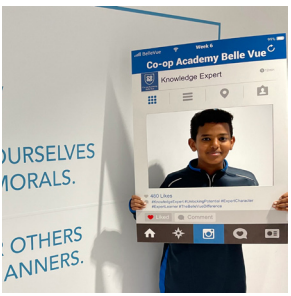
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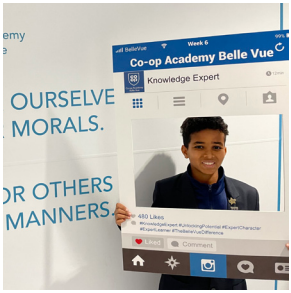
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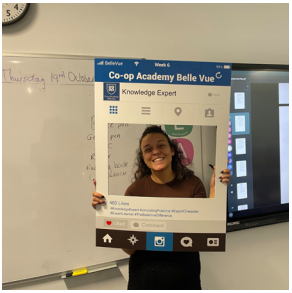
Knowledge Expert
OURSELVE
MORALS.
OR OTHERS
MANNERS.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