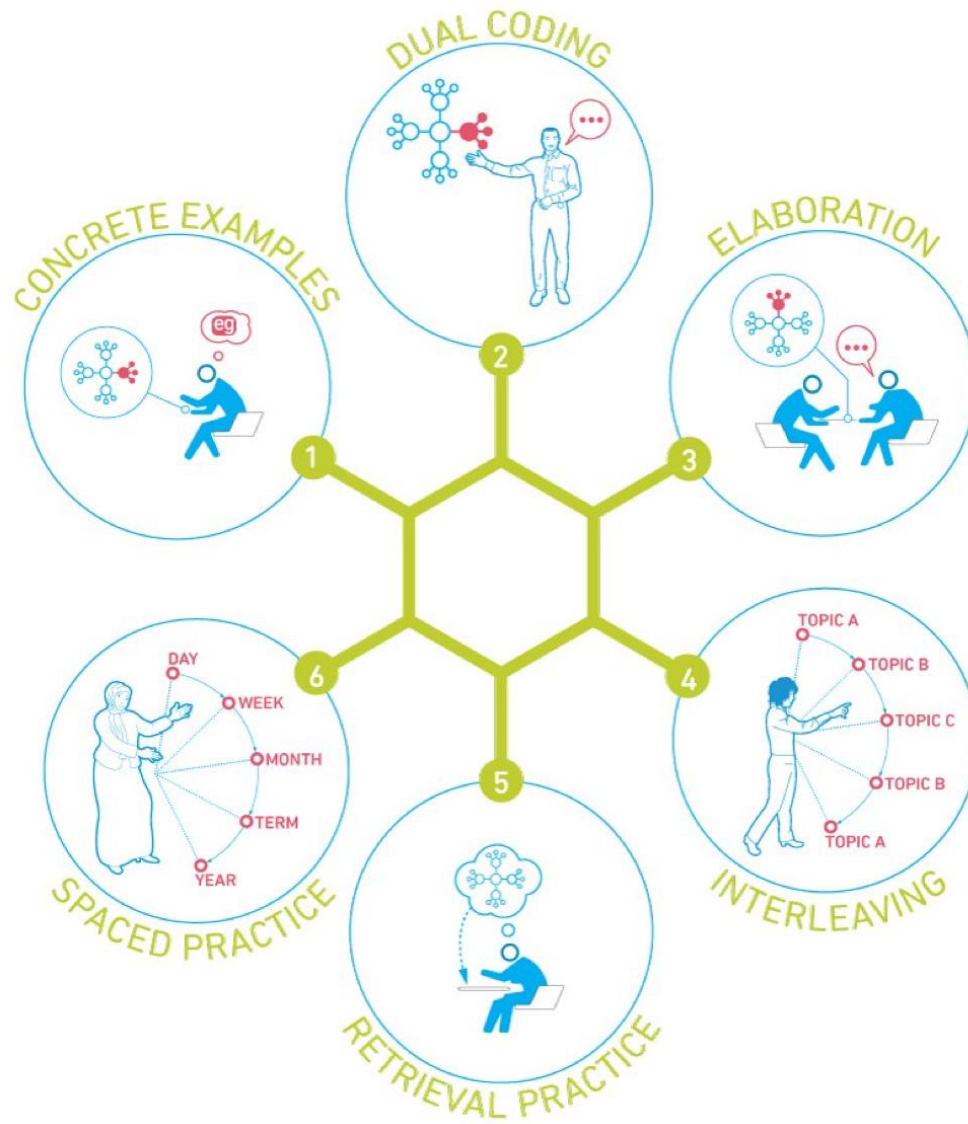


6 strategies in PSHE and computing

6 POWERFUL LEARNING STRATEGIES





1. SPACED PRACTICE

Space out your studying over time.



“Every time you leave a little space, you forget a bit of the information, and then you kind of relearn it,” Weinstein explains. “That forgetting actually helps you to strengthen the memory. It’s kind of counterintuitive, but you need to forget a little bit in order to then help yourself learn it by remembering again.”



Examples of Spaced Practice:

Revisiting concepts over time –

e.g. day, week, term, year

Drip feeding a skill/concept

Pre-teaching

Spiral curriculum



2. RETRIEVAL PRACTICE

Practice bringing information to mind without the help of materials.



“Put your class materials away, and then write out or maybe sketch or speak everything you know and try to be as thorough as possible, and then check your materials for accuracy,” Smith advises. “You’re bringing information to mind almost like you’re testing yourself; though it can be a practice test, it doesn’t have to be. You can just sort of go through and explain what you know, or teach a friend or a pet or even an inanimate object everything that you learned in school. By bringing that information to mind, you’re changing the way that information is stored so that it’s easier for you to get to later on.”



Examples of Retrieval Practice:

Working walls

Warm ups

What do we remember
from last year/term/lesson?

Recall facts



3. ELABORATION

Explain and describe ideas with many details.

This method asks students to go beyond simple recall of information and start making connections within the content. Students should ask themselves open-ended questions about the material, answer in as much detail as possible, then check the materials to make sure their understanding is correct.



Examples of Elaboration:

P4C - deeper thinking

Adult questioning to draw

out how, why, when

Reasoning

Explaining

Talk partners



4. INTERLEAVING

Switch between ideas while you study.

Common knowledge tells us that to learn a skill, we should practice it over and over again. While repetition is vital, research says we will actually learn that skill more effectively if we mix our practice of it with other skills. This is known as interleaving.



Examples of Interleaving:

Cross curricular skills

Warm ups practising variety of skills (revisiting)

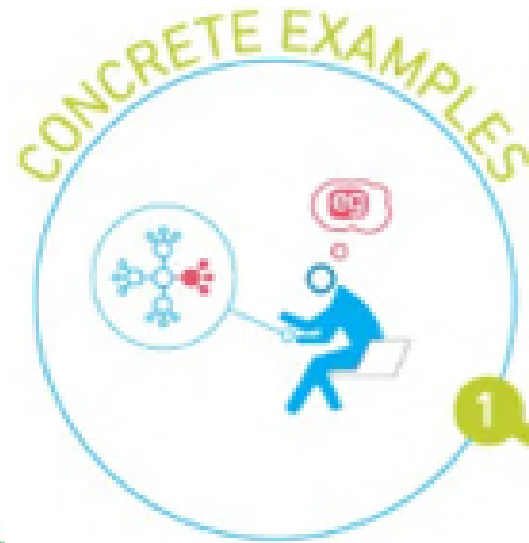
Applying taught skills within new learning



5. CONCRETE EXAMPLES

Use specific examples to understand abstract ideas.

Most teachers already use this strategy in their own teaching; it's a natural part of explaining a new concept. But what we don't necessarily do is help students extend their understanding by coming up with examples of their



Examples of Concrete

Examples:

Objects e.g. maths resources

Photos

Pictures

Acting out scenarios

Real life problems - linked to

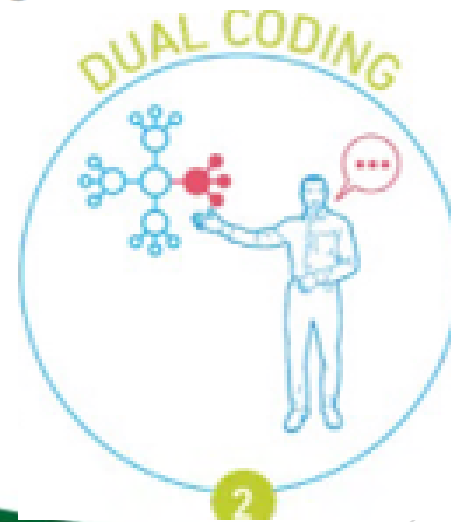
learning



6. DUAL CODING

Combine words and visuals.

When information is presented to us, it is often accompanied by some kind of visual: An image, a chart or graph, or a graphic organizer. When students are studying, they should make it a habit to pay attention to those visuals and link them to the text by explaining what they mean in their own words. Then, students can create their own visuals of the concepts they are learning. This process reinforces the concepts in the brain through two different paths, making it easier to retrieve later.



Examples of Dual Coding:

Labels on drawers

Visual timetable

picture and word

BSL and cued articulation

Maths problems - pictures

Drawing and labelling



Combine them. These strategies don't necessarily work in isolation. You can space out your retrieval practice, and when doing retrieval practice, try to recall concrete examples, elaborate, or sketch out a concept. When doing retrieval practice, you can interleave between different concepts.



Using the 6 learning strategies?



PSHE medium term plan

| | | | |
|---|---|---|---|
| <p>Summer 1 Who helps us keep safe?</p> | <p>Health and wellbeing Keeping safe; people who help us <u>PoS</u> refs: H33, H35, H36, R15, R20, L5</p> | <ul style="list-style-type: none"> • that people have different roles in the community to help them (and others) keep safe - the jobs they do and how they help people • who can help them in different places and situations; how to attract someone's attention or ask for help; what to say • how to respond safely to adults they don't know • what to do if they feel unsafe or worried for themselves or others; and the importance of keeping on asking for support until they are heard • how to get help if there is an accident and someone is hurt, including how to dial 999 in an emergency and what to say | <p>Spaced practice - PSHE to be taught once a week</p> <p>Retrieval practice – recall jobs people do that help us to stay safe.</p> <p>Interleaving – P4C – e.g. Little Red Riding Hood/ stranger danger</p> <p>Elaboration – P4C – allow opportunity for children to agree/disagree with one another's ideas about how to keep safe – give reasons and explanations for their thinking.</p> <p>Concrete examples – video clip scenarios – British Red Cross, scenario cards – decide/discuss/debate what you would do.</p> <p>Dual coding – firefighter wake and shake (with words, pictures, actions) to learn what to do in emergency: https://www.youtube.com/watch?v=zf2fxiu8TtI</p> |
| <p>Summer 1 What can help us grow and stay healthy?</p> | <p>Health and wellbeing Being healthy: eating, drinking, playing and sleeping <u>PoS</u> refs: H1, H2, H3, H4, H8, H9</p> | <ul style="list-style-type: none"> • that different things help their bodies to be healthy, including food and drink, physical activity, sleep and rest • that eating and drinking too much sugar can affect their health, including dental health • how to be physically active and how much rest and sleep they should have everyday • that there are different ways to learn and play; how to know when to take a break from screen-time • how sunshine helps bodies to grow and how to keep safe and well in the sun | <p>Spaced practice - PSHE to be taught once a week. Links to 'What helps us to stay healthy?' Y1 Spr1. Highlight key learning during everyday activities e.g. healthy snack time, water to drink, lunch, active play times, PE, wake and shake, hand washing, mindfulness activities, etc.</p> <p>Retrieval practice – At start of the unit draw/label/write about/list all ways they know to stay healthy. Repeat at the end of the unit (could add to original in different colour) – what new learning do we now have about how to stay healthy?</p> <p>Interleaving – PE skills, Science – growth/healthy bodies</p> <p>Elaboration – explain ways they can stay healthy, giving details to say how, and reason why these things are important.</p> <p>Concrete examples – Food tasting using range of healthy foods, sort examples of real food/food packets, practice healthy habits as part of school day – e.g. exercise</p> |

Computing medium term plan

| | | |
|--|---|---|
| <p>Summer 1</p> <p>Computer Science (7 sessions)</p> | <p>Scratch Jr</p> <ul style="list-style-type: none"> I can produce a set of algorithms that others can usually follow I can read a set of algorithms and usually predict the correct outcome I can debug algorithms to create a different outcome I understand that an algorithm is a set of clear and precise instructions to complete a task | <p>Spaced practice - Last taught Computer Science in Autumn 2.</p> <p>Retrieval practice - What is an algorithm? Children to give real life examples. What do we use algorithms for?</p> <p>Interleaving - Maths - geometry: positional language, fractions</p> <p>Elaboration - What is coding? Why do I need to predict what my program is going to do? Why do we need to debug algorithms? See key questions on knowledge organiser.</p> <p>Concrete examples - What algorithms do we use in our everyday lives? Relate what the children are doing to games they may play at home - Roblox, Minecraft etc. Children to work in pairs, sharing an iPad - first-hand experience.</p> <p>Dual coding - Use 'Air Server' to allow children to see you modelling. Children can also use Air Server to share their work. See knowledge Organiser for images too.</p> |
| <p>Summer 1</p> <p>IT (6 sessions)</p> | <p>Purple Mash 2.8 - Presenting ideas</p> <p>I can type sentences using a keyboard I can reformat text I can begin to use short cuts on the keyboard e.g. hold down the shift key and number 3 to get a £ sign I can use a mouse to make selections and move objects I can save, print and open work I can begin to use a variety of software tools</p> | <p>Spaced practice - Last taught IT in Year 2, Autumn 2.</p> <p>Retrieval practice - Why would I want to change the format of the text? I am clicking on the bold button but the text is not changing. Can we only use WordPad for word processing? See key questions on Autumn 2 knowledge organiser.</p> <p>Interleaving - Can link to current learning in other curriculum area e.g. English, science etc.</p> <p>Elaboration - How do I decide which program to use? Why would I want to change the format if the text? See key questions on knowledge organiser.</p> <p>Concrete examples - Children to all have access to a laptop (working individually or in pairs) to apply the learning. Teachers to begin to now comment on the program they are using to teach and why.</p> <p>Dual coding - Teach/model learning using IWB and use the key images section in knowledge organisers.</p> |



Year 1 Maths Planning

Year 2 Maths Planning

Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.

Tell the time to the hour and half past the hour.

COMPLETE DAILY CALENDAR – include day, date, month, year and refer to this vocabulary each day. **Interleaving** – link to Oliver’s Vegetables in **English**, saying, ordering and writing days of the week.

Mental oral – Retrieval practice, dual coding, interleaving

Sing the days of the week song: <https://www.youtube.com/watch?v=mXMofxtDPUQ>

Count around the clock face in 1s (hours and minutes) and 5s (minutes) and 10s (count 10 minutes, 20 minutes, 30 minutes).

Which answer?

How many minutes in an hour?



Input – Retrieval practice, dual coding, interleaving

Whole/parts, half, quarter – shapes including circles. Count around clock face saying: quarter of an hour, half an hour, three quarters of an hour, a whole hour (quarter, half, another quarter, whole).

Fill the gaps

I brush my teeth before OR after I eat my breakfast.
 I get dressed before OR after I wake up.
 I do maths before OR after my lunch.

Which measure?



Task - concrete example

Practise making and recognising o'clock and half past times on small individual clocks. Use the small clocks to solve oral problems such as: Oliver started cooking his vegetable stew at 5 o'clock. It took half an hour. When did he finish cooking?

| Objectives | Possible tasks |
|--|---|
| Recognise and uses symbols for pounds (£) and pence (p); combine amounts to make a particular value. | <p>Mental oral – retrieval, spaced practise, dual coding, concrete examples</p> <p>Discuss difference between pounds and pence. What is different about 2p and £2. Why would we prefer to have £2?</p> <p>Make sure pupils can write the symbols p and £ correctly – practise on whiteboards.</p> <p>Recognise all the British coins and notes by matching amounts – Children to have real coins to handle on tables as well as on IWB.</p> <p>Input - retrieval, spaced practise, dual coding, concrete examples</p> <p>Give children a range of problems to solve involving money. Discuss how we can use our addition and subtraction skills even though the numbers have a p or £ sign. Children to practise adding and subtracting 1-digit and 2-digit numbers to and from a 2-digit number, as well as adding more than two amounts. Use the summer holiday shop images to add context.</p> <p>Children to have coins/notes to handle on tables as well as on IWB. Ensure problems involve whole pounds OR pence, but not both together.</p> <p>PK – Ensure children can recognise the coins and go through task.</p> |

Year 1 English Planning

Capture, Sift and Sort

Session 4: Noun phrases

Learning objectives: I can use noun phrases to describe the vegetables.

(RETRIEVAL PRACTICE & DUAL CODING) -

What is a noun? Hold the vegetable. - carrot
What is an adjective - a describing word - orange

Hold up each vegetable and ch to give you a noun phrase orally e.g. crinkly spinach, long carrot, purple beetroot, bumpy cabbage, straight rhubarb, round peas, earthy potatoes etc.

Session 5: Suffixes

Learning objectives - I can add the suffixes er and est where no change is needed in the spelling of root words. I know how the meaning of the word changes.

(INTERLEAVING) & (RETRIEVAL PRACTICE) from phonics and lockdown learning

Look at the pictures of the carrots and then the word long. What suffix can I add to the word to describe the carrots?
long longer longest
Emphasise the suffix by writing it in a different colour.
Ch to have white boards. Repeat with other adjectives where the root word/adjective doesn't change e.g. short, tall, near, bright, round, small, green, fast, slow, great, fresh.
Discuss the meaning of the words.

Year 2 Phonics Planning

Dual coding – turn the word into a picture that will help you remember how to spell it!

| | | | | | |
|---|--|---|---|--|---|
| Ph 3/4/5 – Sight reading was gr cluster grill grand grumpy grandpa Circle the cluster and practice blending. | Ph 6 – pretty Use spelling strategies | Ph 3/4/5 – Sight reading his her mp cluster limp lamp bump jump Circle the cluster and practice blending. | Ph 6 – fast last past Use spelling strategies Use dual coding images to help children remember | Ph 3/4/5 – Sight reading have has + Blends of the week | Ph 6 – both Use spelling strategies o for /ow/ |
| Retrieval practice Look at the Year 1 and 2 words ppt (on the system) children to read out loud. Make it fun by adding silly voices, singing, clapping, etc. | Retrieval practice Contractions – teacher says two words and children write the contracted form on white boards. Watch out for the correct position of the apostrophe | ABC song https://www.youtube.com/watch?v=XC6wQQHo8uU | | | |

Year 2 Science Planning

Interleaving: Track pattern within weather and tree longitudinal study. Use this information to predict about their microhabitats. What impact does summer have on an animals needs to survive.

AFL – **Retrieval** – using hook In learning partners - use concept cartoon to define key vocabulary: seasons, habitat, food chain, energy/food source (IWB) **(P4C pedagogy)**

Quick Teach if needed - A Habitat is the natural home or environment of an animal, plant, or other organism. A 'food-chain' is series of animals and plants each dependent on the next as a source of food. Linking the properties of the seasons to the changing populations.

- **Retrieval:** re-cap plan for longitudinal study - what do we want to find out - what working scientifically skills do we **Same:** 4 investigation areas
Change: times of year (Sept, October, December, January, March, May, July)
- **Measure:** photos, annotations, drawings, tally charts, discuss what we see, rolling conclusions, observation using magnified glass. .

Main Task (concrete examples): In Groups of 3, children visit their small area of the school grounds and collect and identify the plants and mini-beasts that live there (1 square metre test areas). Complete rolling conclusions.