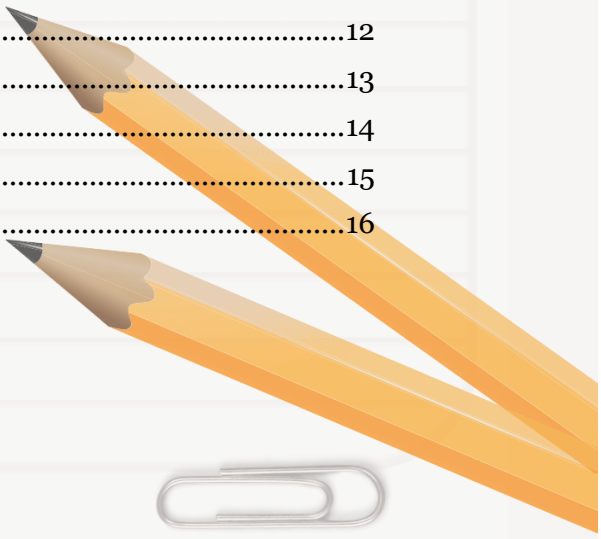
The Guide to Incredibly Powerful Homeschool Instruction

How to Master 14 Best Practices

Improve your teaching power with these proven techniques! Bring the secrets of master teachers into your home classroom.

Contents



How to Use Your Guide

By James Haupert

Recent scientific studies have shown that better learners are not born with some special gift; instead, we know they use better and more powerful learning strategies. Amazingly, students who know how to use science-based learning strategies can learn 2x, 3x faster, or more because of these more powerful methods.

We can attain these same benefits through the smart application of scientific principles to our teaching! By focusing on a small number of better practices and powerful ideas, you can become a much better instructor with the ability to help your children learn faster.

This is why I created this Guide for homeschooling families. Following these fundamentally sound instructional strategies, along with a few sound teaching tips, can transform your home instruction. If you like the ideas, you are most welcome to share these with other homeschooling parents. The journey is easier when you have the right tools.

Here, you have a distillation of proven powerful teaching strategies. I've selected for you a short list of the best and easiest ones to apply to your homeschool instruction. And I've also added a few gems that I gained from my years as an educator and instructor that I know you will find helpful.

There's never been a better time to "up your teaching game" with new ideas! Better methods pay dividends – they can reduce your teaching time because your kids learn faster. They can energize your home classroom. I encourage you to experiment with these *fabulous fourteen* and discover how they can work for you to accelerating learning for your kids.

James Haupert is the founder and CEO of the Center for Homeschooling. His background in learning and teaching is broad: he has served as a high school teacher, a professor in the graduate school of Engineering at Santa Clara University, an executive coach, he has trained over 25,000 managers and professionals in the disciplines of management and organizational behavior, and he now wants to serve as a resource to help homeschool parents become better and more confident instructors, and your kids to become expert learners.

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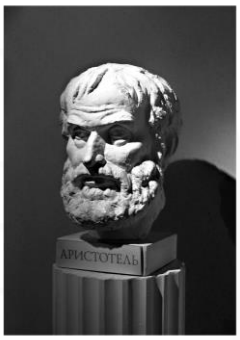
3 TEACHING TIPS FROM ARISTOTLE



This guide begins with this three-step technique that will show you many of the most powerful teaching techniques are also easy to do. When I began my career as a junior trainer many years ago, a senior trainer mentor shared with me this great advice about teaching.

"There are three things you always need to do, James." I recall him saying. "*Tell them what you are going to tell them, tell them, then tell them what you just told them.*" Later in my career, I started to appreciate the deep wisdom in this advice.

But what I didn't realize at that time was this advice originally came from the master of rhetoric himself, Aristotle! It has served me well in my career as a trainer and public speaker. You will find this simple "triptych" (originating from the Greek word 'triptykhos' meaning three-layered) to be one of the most valuable methods to use for all your homeschool lessons.

Follow these three simple teaching steps:

1. **Tell them what you will tell them**. When you open your lesson, explain *why* you are teaching it. This step has two components – describe what you *intend* to talk about in broader terms, and then highlight what you *most want* your kids to learn. Inexperienced instructors tend to cover the former, while better instructors do both. You want to focus learners on what they will get from this lesson. If you have learning objectives, share them here to provide supporting detail.

Then. . .

2. **Tell them**. This step is the heart of your lesson or learning exercise, where you present all the details. As you cover your lesson and your exercises, don't focus only on the content, but also point out the personal *benefits* of knowing this information. Good teaching connects to both the learner's heart and mind.

Then. . .

3. **Tell them what you just told them**. As you close, you again review the most important points. Students need to hear them at least one more time. This step also allows you to correct any misunderstandings, answer questions, and narrow gaps in their understanding. Cover the things you most want them to remember.

> "Tell them what you are going to tell them, tell them, then tell them what you just told them."

These 3 steps provide structure for leading all your lessons. Sometimes your instructor's guide gives you ideas for opening or closing, but often not. When it doesn't, in advance of your lesson take a few minutes and write down the bullet points you will cover for steps #1 and #3. You become a better instructor when you pay attention to fundamentals. For more, see *learning objectives*.

Follow Aristotle's triptych – it was a solid idea then - and a useful one today.

RETRIEVAL PRACTICE

Many science-based learning methods are counter-intuitive, like this one. We know most instructors emphasize one thing when they teach – encoding or getting information into the student's heads. Makes sense, this is how we were taught as kids.

But instruction that emphasizes encoding alone, is not the most effective method.

One of the most robust findings from years of cognitive science research is the importance of efforts to also get information *out of* student's heads. Effective teaching requires you to balance two processes - the step of *inputting* information and the efforts to encourage *retrieving* that information.

Go back and forth between the two - this is how we improve memory and the ability to recall information. Of course, you already do this now – but probably not often enough.

While classical teaching emphasized it, most teaching today (and also individual study) vastly underuses retrieval practice as a learning strategy. You can achieve major improvements to learning by *greatly increasing* the use of retrieval in your instruction. Do it in every lesson – and don't limit it to the end of the day, or the end of the week.

Why is retrieval so important? Because it's is part of these 3 steps of learning:

> **Encoding** – this describes the student efforts to input the information in the form of new neural circuits to remembered it.
>
> **Storage** – this is the process of working with the information in a way to form long-term memories.
>
> **Retrieving** – these are the efforts of the student to try to pull out or retrieve the information to strengthen neural circuits.

To achieve a balance to these steps, you need to encourage retrieval and explain why it's so important. Follow this scientific principle:

the process of trying to retrieve something makes that information more retrievable later.

Boom - that's it! When you teach, periodically pause your lessons and ask your kids to try to recall the information without looking at their notes. Initially, this will seem harder for kids, so they may tend to resist it – until they start to see the benefits.

The key to maximizing retrieval effectiveness is timing - wait a short while *after* you've taught it, when your kids start to forget it, then help them bring it back into their minds (or "retrieve" it). Take advantage of the ironic scientific connection between when we start to forget things and strengthening our memories. Well-timed retrieval helps our brains identify what is important to remember.

To start doing this, set aside time for retrieval sessions in your daily lesson plan. Include lots of retrieval exercises in both the middle and end of each lesson. Also, in your homeschool schedule, set aside time to retrieve last week's and last month's lessons.

See **Stop and Jot** and **Think-Pair-Share** in this Guide for ideas to do more retrieving.

LEARNING OBJECTIVES ARE YOUR GOLD STANDARD

You've likely noticed most of your instructor's guides include learning objectives. They usually read something like this – "*At the end of this lesson, you should be able to do X, Y, and Z.*" This is interesting, but how can you use them to teach better?

Learning objectives are the gold standard to educators because they serve many purposes - from guiding the creators of the content, to focusing the teacher on outcomes, to helping us measure the effectiveness of that lesson. They state the lesson's purpose in very clear words.

The statements should be specific and described in behavioral terms because learning outcomes should be easy to observe and measure. Here is an example,

> "*At the end of today's lesson, you will know how to safely change a flat tire on your Ford pickup truck.*"

If you have that truck, you know exactly what you are expected to learn. And if the instructor wished to give you an official certificate of completion in tire changing, she would likely test your knowledge during a demonstration using this learning objective.

For instructors, learning objectives are there to help you. Explain them at the start of a lesson because they remind you ***why*** you are teaching that lesson. But they serve the learners too because they provide *focus* on expected outcomes.

These dual benefits mean always share and discuss the learning objectives with your kids before you start the lesson. Better learning happens when everyone in the room is on the same page – don't skip this step.

What happens if your instructor's guide doesn't have them? First, this should be a warning sign the lesson may not have design rigor. But don't worry, you are not dead in the water if you don't have them. Beforehand, sit down, think about why you are teaching this lesson and write your own.

As a trainer, one of my *first activities* is writing my learning objectives on a prominently placed whiteboard or flip chart before the trainees come into the room.

When the lesson begins, I walk my trainees through each bullet point, one by one, so we establish a clear roadmap for learning. This also provides a useful reference during the lesson where we can pause and discuss our progress. This holds me, and my students, accountable for making the lesson successful.

At the end of the lesson, here I go again. I use them to go back and evaluate how well we accomplished them by asking questions and then ticking them off like a checklist. When I do this, I can feel the student's sense of satisfaction and accomplishment.

To summarize, students need to clearly know what is expected of them and better teachers know the brain learns better when we establish clear learning goals.

The more razor-sharp your expectations (especially high-level ones that involve deep analysis and conceptual understanding), the more likely your kids will meet them. Practice the discipline of discussing the learning objectives – get them to work *for* you.

Share and Explain them – Discuss them –then Review them at the lesson's end.

How Much is TMI? (Too Much Information)

Kids like the shorthand term TMI. But we can also use it as a way to talk about our teaching. Students with *too much information* stumble. But how do you know when you have passed this limit and are teaching **too much information**? Don't keep going until your kids' eyes start to roll! There's a better way.

This tip helps you know *how much new content is the right amount before discussing it*.

The "*Magical Number Seven, Plus or Minus Two*"

Research studies in neuroscience tell us this is the optimal amount of new information the brain can process in working memory.

The magical number tells us when we should stop giving new information and start processing or practicing it. Research shows most people are able to store no more than 5 to 9 new pieces of information in their working memory at any given time. When this capacity is reached, the brain must forget one piece of information in order to add another.

This applies to everything educational - lists of new information, chapters loaded with new ideas, videos, and online lectures are subject to this limitation.

Working memory is one of the most important things to monitor as an instructor. We should plan and limit the amount of new information we provide so we do not overload because we will risk part of our message being lost, or young minds frustrated.

Of course, the human brain is incredibly powerful and has almost unlimited capacity. But this is restricted in our working memory, the area of the brain where we hold new ideas before that information can begin to be transferred to our much bigger long-term memory.

We use short-term memory when we are learning new or unfamiliar things. Your brain takes the new pieces of information and must work with them to make sense of them and derive meaning. The implication to your teaching is this - your lesson plan should be oriented to the working memory of your learners. Your job is to introduce the right amount of information - then encourage mental processing necessary for transfer into the long-term memory of your kiddos.

> Present new ideas in small chunks so your kids have an opportunity to work with a manageable number of new ideas.

Examine your lessons and decide if they are too dense – if you need to, break them into smaller units.

Once you hit the magical number, shift classroom gears, have your kids manipulate that new information with interactive exercises, problem-solving, and discussions. Allow time for processing and working with new ideas, help them chunk smaller bites into larger units, then begin activities designed to form long-term memories.

Improve your teaching with the "*Magical Number Seven, Plus or Minus Two" rule!*

OPEN-ENDED QUESTIONS ARE BEST

Questions for the instructor are like *power tools* to the carpenter. They help us get the job done faster and better. Like power tools, we also need to use them properly.

Someone said, "*If you only have a hammer, every problem looks like a nail*." The point is you need enough tools in your bag to handle all the learning situations your will face. You need to cultivate your inquiry skills to expand your capability to ask a broad range of better questions that can promote better and deeper thinking in your kids.

The instructor's primary job is getting our students to *think*. When you ask a question, you are not rushing in to provide the answer, or give the solution.

Your questions serve many purposes: to promote discovery, encourage deeper thinking, to stimulate deeper conversations, and to generate better solutions to problems. The exciting news is you only need a few powerful questions to turn a good lesson into a great one.

We can categorize questions as either *open* or *closed*-ended. Your learning power resides in your open-ended questions.

Closed-ended questions are defined as those questions that can be answered by a single word, or with "yes" or "no" - meaning they can be quickly answered by the learner. But there is a potential cost to this efficiency, they require little or no thought to answer them. Even if your intent is only to verify, yes or no can mislead us because it lacks enough information to validate the response. Close-ended questions are not your power tools.

Open-ended questions by definition cannot be responded to with a one-word or yes or no response. They require student elaboration to answer them, which means they promote thinking. We use them to seek detail, and to stimulate examination and exploration from other perspectives. They are used to gently guide students who are getting off track. These are some of the reasons why the open-ended questions are your teaching power tools.

When we observe master teachers, we notice a pattern - they avoid using closed-ended questions in their classrooms. Why? Because these questions tend to end conversations rather than encourage them. Try to make this subtle shift in style in your home classroom. Monitor yourself, and whenever you are about to ask a close-ended question, pause, then turn it into an open-ended question that will draw your kids deeper into the lesson materials. Ask it patiently, then give time for thinking about the answer.

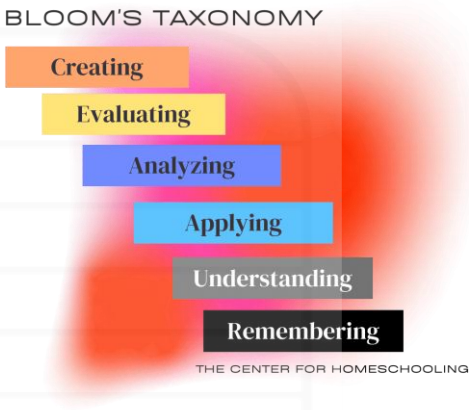
To illustrate, examine the difference in potential learning power of these two questions, (1) "*Do you understand this*?" or (2) "*What can you tell me you know about X*?" The second requires retrieval and gives you better information on what the student knows. The first question provides limited information – and it does not promote the retrieval of information.

If open-ended questions are so much better, why do we use closed-ended questions? I think it's because they are much easier to craft on-the-fly – and perhaps they have become an accepted shorthand way of communicating as a well-entrenched habit hard to dismiss.

Here's a great exercise to transition to more and better open-ended questions – teach an entire day <u>without using even one</u> closed-ended question! Try it. You will find yourself asking deeper and more penetrating questions. This will make you a much better instructor.

TEACH UP!

How do we instruct so kids develop deeper levels of understanding? It's possible to get stuck teaching to only a shallow level of knowing – many do. Bloom's taxonomy provides a useful framework for expanding our methods by "teaching up" to progressively deeper levels of understanding.



Teaching up is a great term to know, following the taxonomy to the right. It shows us how to move a child through six sequential levels of learning. You progressively advance your kids to a higher level of knowing by moving to the next level of the taxonomy one step at a time, hence "teaching up."

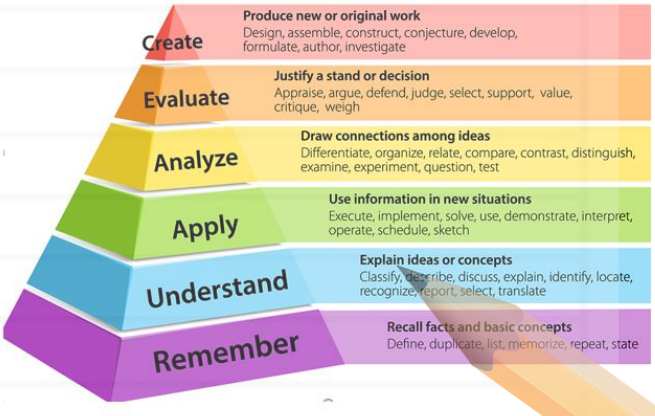
The lowest level of knowing is **Remembering** information, this is the base of building knowledge. When the child develops competency at this, you next **teach up**, moving to **Understanding**, then **Applying,** and so on. Each step builds on the knowledge in prior steps.

The six levels of the taxonomy are detailed below, beginning first with the lowest level *remembering* to the highest level of *creating*.

- **Remembering** – Teach your child to recall relevant knowledge from long-term memory. At this level, you work on inputting and retrieving facts and concepts.
- **Understanding** – When the child is ready, teach up by helping him to explain the ideas or concepts to demonstrate their deeper knowing.
- **Applying –** After practice with understanding, you teach up by emphasizing the application of the facts, rules, concepts, or ideas. Practice solving problems here.
- **Analyzing** – Once your child can apply, then teach up by encouraging her to compare or examine ideas. Conduct experiments and ask them to analyze results.
- **Evaluating –** After analyzing, you teach up again by working on skills to evaluate, critique, judge, or defend a position or decision.
- **Creating –** At the top, you teach up by helping your child to use an idea or concept to create something new. Encourage the transfer of knowledge to a new domain.

Don't get stuck teaching only at the lower levels of the taxonomy, "teach up" to promote a much deeper grasp of any subject. Use this to evaluate your lesson plans and to adjust your instructional strategies.

A detailed article on the taxonomy is available in our parent resources.



PRACTICE STOP AND JOT

I feel this is the most fun and dynamic teaching technique in this Guide, but don't let this lead you to think it isn't a powerful and proven teaching method.

This is another great way to encourage *retrieval practice* you can seamlessly plug it into your existing lesson plans and activities several times a day. After you gain comfort with it, you should be able to easily do it in less than 5 minutes.

Effective learning involves putting information into the brain, then practicing retrieving it. (See *Retrieval Practice* on page 4.) As mentioned, you likely already do some retrieval, and this teaching technique allows you to deftly do it more often. And it doesn't take any preparation time to add this powerful tool to your instruction.

Stop and Jot is a fun alternative to kids passively taking notes. Use it during your class presentations, lectures, readings, and watching online videos. You can even deploy this during field trips. The technique is simple – during your activity, call a "Stop and Jot" pause, then encourage your kids to individually write down brief notes describing what they just learned. But always do this with closed books or a covered whiteboard – because you are encouraging the *retrieval* of information, not reviewing it.

After the kids have written their notes, lead a brief discussion of what they learned. Correct and explain where needed. Do this several times during a lecture, reading, or presentation. This complements note taking because it promotes longer-term retention through retrieval. Here's the steps:

Step 1. **Stop** – At the start of the lesson, ask your learners to draw a rectangle on the page where they are taking notes for that lesson. Refer to this as their "stop box."

Step 2. **Jot** - At least once during each lesson, strategically call for a "stop and jot" and ask a question that prompts recalling key information that students list in their "stop box." (Keep it simple so that it only takes a minute to do – "*List 3 of the main points we have covered so far.*" Or "*List at least 3 bullet points you learned about George Washington from this video that you did not know before.*"

Step 3. **Share** – Quickly process this information – in larger groups by asking for volunteers to share a few responses with the whole class. Add your comments, expansion, or corrections when needed, provide praise, then resume the lesson.

When to Use it

- Before introducing new material to activate prior knowledge
- During the middle of a lesson to provide an opportunity to make sense of the material
- During a lesson as a "check for understanding"
- After a lesson to clarify key ideas or critical pieces of information
- After the lesson to allow students to make connections to previously learned material
- After a lesson to allow students to find personal relevance

See *Retrieval Practice* for more information.

USE THINK-PAIR-SHARE

This is an interactive exercise that encourages that important *retrieval practice*. I like it because it also encourages an important learning process called metacognition or "thinking about your thinking."

Think-Pair-Share can be used almost anywhere during your lessons, at segues, breaks, or the end of the lesson. It's a teaching strategy that inserts a short activity to boost learning.

You will like it because it provides a refreshing shift in classroom activities and it adds that much-needed energy from participation to those lessons starting to droop from fatigue.

Three Steps

Here's how it works:

1. **THINK** - Pause your classroom activity and announce, "It's time for TPS! Ask each kid to individually **think** about what they *are learning*. (This is not a review of what you *have* learned.) You ask an insightful question or provide a discussion prompt to focus the kids. Each kid takes a minute or so to note or record their ideas on paper, but without discussion.
2. **PAIR** - Next, each kid **pairs** up with another to talk about their reflections or insights. Encourage them to share, listen and learn from one another and to write down ideas they learned from their partners. Additional thinking and learning will occur during this pairing step.
3. **SHARE** - At the end of these paired discussions, bring everyone back together and briefly process their discoveries. Encourage the student pairs to **share** with the larger class what they wrote down. Introduce a visual element by recording and summarizing insights on a whiteboard and, if necessary, expand on them, then return to your lesson.

This is easy to do – and a popular science-based learning activity. Once kids get accustomed to *Think-Pair-Share*, they will welcome this refreshing change of pace in your lesson, and the good news, you are promoting more of that much-needed retrieval practice.

You can keep this simple or try embellishing it to make it more fun.

Kick off TPS with an enthusiastic segue and introduction, I like to do it with my "TV announcer" voice. Save time by designating partner pairs at the start of the day if you have a larger group. Quickly follow up with your question or discussion prompt - this is your *trigger* that initiates the exercise. Write the question down on your whiteboard for visibility. It's simple - the only thing you need to do is come up with one good question that promotes student thinking, summarizing, and retrieving. ("*Let's think pair and share – take a minute to think first, then list the reasons why George Washington crossed the Delaware.*")

Keep your "think" question simple, crisp, and short, and encourage interactive sharing and listening. This is your **Think-Pair-Share** technique.

How to Wear the Right Hat

I like to use imagery because visualization helps us remember. Try this - imagine you wear multiple hats at home, and all the hats are fine and proper when worn at the right time. Picture you wear your *parent hat* most of the time when not homeschooling, and this hat has one set of skills, and when you walk into your classroom, you switch and put on your *teaching hat* with a different set of skills.

Now what's different about those hats? Each hat helps to remind us of our best actions to handle different situations.

For example, when we wear the parent hat, we are more directive, and we set standards. Parents need to do a lot of *telling* and that comes with the hat. With your teacher hat on, use less telling and start *asking questions* to guide thinking. Pay attention to your hats because when you wear the wrong hat, your effectiveness can decline. And wearing both hats at once is a no-no, because it is confusing to kids, and also a bad fashion statement!

Here's how to do it. When you walk into your home classroom, remember you remove your *parent hat,* and put on your *teaching hat*. Now you are ready to instruct. You wouldn't wear your cowboy hat to the opera now, would you? OK - maybe I won't ask that question.

For example, you will assume a different role when you handle questions. With your parent hat, you handle questions this way. When your kids ask you a question, you might welcome their curiosity and promptly respond because you fill their need to know. That's what good parents do. Parents inform and share information – this is how you expand your kids understanding of the world around them. That's part of your parent hat.

But with your "teacher's hat" on, you need a different behavior. The teacher's hat contains the skill of answering most questions with another question designed to encourage deeper thinking. The "inform" role of the parent hat changes into the "ask" of the teacher hat because the classroom is your forum for encouraging independent thinking.

Another example. When your kid begins to struggle with a life problem outside the classroom, you put your parent hat on to support and nurture. But when the child begins to struggle with a concept in the classroom, with your *teacher hat on,* you step back and let the kid wrestle a little bit with it because this is a necessary part of learning.

You get the idea. There are different roles and responses between the two hats. Visualizing the hats will remind you of the flexibility you need when you homeschool. This doesn't mean you become a different person, but you are assuming a different role with a different set of verbal skills.

Separate your *parent self* from your *teaching self*. The parent provides the information when needed, and the teacher provides the opportunity to think and learn. Of course, both hats are attractive and stylish, but you should know when to put one in the closet and when to pull the other out.

You likely have many other hats in your vast imaginary closet. We all need to wear different roles at times. Let's close with the old slogan - *if the hat fits, wear it*, but add this to it - *pick the right one for the situation*. My hat's off for your hard work as a homeschooler! (Sorry – couldn't resist the pun)

For more on Parent, Teacher, and Coach hats, see the article in parent resources.

SPACED PRACTICE OVER MASSED PRACTICE.

Spacing is another powerful teaching strategy you should be using. The science of learning has proven that spaced practice, where one longer lesson is divided into shorter lessons, and spaced out over multiple days, is much better for learning.

For example, four 30-minute study sessions over two weeks, are much better than one two-hour session. Research informs us that *massed practice* (such as cramming for exams) does support short-term performance, but spaced practice supports long-term retention. The benefits of spacing for long-term retention, called the *spacing effect*, have been demonstrated for all manner of materials and tasks.

It easy to fall into the trap of thinking once a topic has been "covered," we don't need to cover it again, or at least not until the end of the unit. But students who are learning information for the first time need to absorb it, think about it, review it, and process it multiple times. Shorter lessons spaced out over several days accomplish this better. But after first exposure, review combined with spacing is your secret weapon.

Spacing certainly helps because of the short attention span of kids. But the compelling reason for spacing is the repetition, with space between sessions, which strengthens the neural circuits in the brain necessary for remembering and recalling information.

Here's an important point about *when* to space practice. Research has determined the best time to strengthen those mental circuits through review, is at the point where we are just beginning to forget that information. Surprisingly, the role of forgetting information and learning are have a connection! After those first sessions with new material, you should time the spaced review to capitalize on this characteristic. This means when information *just starts to get fuzzy* in your kids' minds, that is the ideal time to review it.

The good news with spacing is you don't need to review everything all the time. You don't need to set aside every Friday for review. Knowing about the spacing effect allows you to do it more expeditiously. To space efficiently, use your calendar.

Here' how to strengthen memory. Gradually increase intervals of time between review sessions. For example, teach something on day one, review it on days two and three to make it "sticky." Then again, briefly review it the next week, followed by every other week for a short time. Then quarterly. Over time, once long-term memory is thusly strengthened, the need for review will disappear.

You don't always need dedicated review sessions. You can also accomplish spacing by planfully incorporating bits and bytes from past lessons into new lessons.

And of course, don't abandon those cumulative quizzes and recitations at the end of the month and term. They have a place – but when you do them is driven by spacing.

Try a real-time experiment – select a subject you have taught before for an hour or two in one day. The next time you teach it, break this into half-hour sessions every other day for 4 sessions. Then compare the difference. You should observe better long-term retention.

In summary, break your longer lessons into smaller units, space them, then space your review over time using a schedule driven by the point where kids *just begin* to forget the information.

TEST AND QUIZ OFTEN

Did you realize tests are powerful learning tools?

It's probably safe to say that most of us grew up disliking them. Perhaps we felt graded and evaluated by them, sometimes unfairly. Even when we knew the information; we dreaded that end-of-the-chapter test or that gotcha pop quiz. Our willingness to use tests may be biased by these negative personal experiences as kids. Don't let this pull you back from using them as educational aids.

Recent scientific research reveals a lesser-known side of testing where tests have a value way beyond merely assessing what we know. They are now appreciated as retrieval tools that have the important benefit of improving learning. (see *retrieval practice* in this guide.) Here' the benefit – frequent quizzes and tests help will help your kids learn faster. Here's why.

When expert learners train and learn, they actively seek to uncover the gaps in their knowledge – they try to find those things *they think they know but don't*. Test and quizzes are the paper equivalent of getting on the basketball court to discover your free throw shooting isn't as good as you thought. Tests are merely practice sessions intended to inform us, and we seek feedback through them to identify what we don't know. We use them to make adjustments to our training.

Reframe your thinking about them as learning experiences, instead of negative evaluations, and use them as fuel for additional learner motivation to get better. Share this idea:

"The ability to know what you don't know is a skill. And like every other skill, it can be improved and made better."

We need to promote quizzes and test as powerful learning aids. The more we can move away from the negatives of tests and toward a more collaborative effort where parent and child together actively seek feedback, the better learners, and instructors we become.

Test and quizzes are easy to design – they can be oral or written, formal or informal. You can easily design them, and so can your kids for themselves. Show your kids how to design self-quizzes while they study. Create them in your home classroom as you go. As you teach ask, "*What are some good quiz questions we can use later to help us review this topic."*

Another way to understand this - quizzes help us identify our *illusion of knowing* – our finding those things we really thought we understood – but didn't. Conversations on this illusion are a way you can improve your child's *metacognition,* another important skill to learning.

"Congratulations! You missed three questions!

Yes, it's a better learning environment when you can say this! Celebrate the discovery of gaps in knowing – then add, *"Now you can do a little work and come back much smarter!*"

Of course, some testing to measure progress is helpful so, don't throw them all out. But take the stress and anxiety away by reframing them as useful learning tools. When the gotcha factor goes away, kids *welcome* them because they know they boost their learning!

ESTABLISH RELEVANCE

Students learn best when they connect the relevance of your lesson content to their interests and personal aspirations. However, as instructors we sometimes make the incorrect assumption that the connection is obvious to the learners - when it may not be. Are you taking enough time to review and discuss this connection to make sure it has sunk in?

I grew up with school experiences that seemed to me to use the "trust me" approach to education. ("*You may have no idea now why you need to know this stuff but, trust me, in a few years you'll see how important it is!*") It didn't inspire a burning desire for me to learn. For those who have homeschooled for a time, you have certainly learned this lesson already.

We must not forget how vital student motivation is to effective learning.

So, what tools are available to help us establish the relevance of our lessons? There are two big buckets full of ideas for doing this – the *Big Picture* approach and the *Personal WIIFM* approach.

The Big Picture connects how the content relates to larger themes you and your child value like important technological or social problems, spiritual or family values, or human aspirational themes such as self-sufficiency or good citizenship.

The Personal WIIFM approach must answer this question – *What's In It For Me* from the child's perspective. Here, you appeal to your kid's aspirations, longings, capacities, and secret talents, or perhaps their career desires to connect the topic to them.

Personally, I prefer to do both when I have this information. But whenever I train or coach clients, I often don't start with much about the students, but you do.

As a homeschooler, this is where your deep knowledge kicks in as a BIG advantage. You can make these connections at home, where the teacher in a 30-person class in a public school cannot. You choose what you teach, you know your kids, so you are already empowered to answer the big question of relevance, "why is this content being taught to me?" Think a little about relevance and you will certainly find ways to establish it.

Tips to Create Relevance

- Frequently tie the material to the personal goals and aspirations of the child.
- Allow the child choices and control over the topics and assignments they study.
- Apply inductive methods such as guided inquiry and problem-based learning, which use real-world problems to provide that context.
- Connect new information to prior lessons or related material the child already knows.
- Make this case - *learning this information creates a framework that enables you to learn other things more easily in the future*. For example, we know that music training prepares kids to become programmers because musicians tend to be analytical, logical, and methodical—skills that the best coders also possess.

Don't assume that relevance is obvious. The greater the relevance you establish the more you have going for you in your classroom. Take that moment to establish it.

TEACH TO MULTIPLE LEARNING STYLES

Many homeschooling parents embrace teaching to the child's preferred learning modality or style. We believe this can be an effective practice, but there is another view to learning styles that homeschooling instructors should consider.

Granted, some kids learn better when you appeal to their learning style. But there is a potential problem, as highlighted in several studies, where teaching this way could hold some students back. Playing to one's strength might seem like a good idea, but in adulthood, we need to be able to learn in all sorts of different ways. We may not have choices in how we learn in those situations. So perhaps it is more useful to practice teaching using all of the senses, and with emphasis on growing the ones that are underutilized and do not service well.

The science of learning tells us the brain remembers information better when we build multiple neural connections between new information to the networks of already existing information in memory. Why might you remember something minor like your grandmother's special pie from your childhood and forget that important call today? Because you remember that pie because you can see it, smell it, taste it, touch it, and hear it bubble when hot – you have created this strong memory through your multiple senses.

Effective instruction works the same way – you mix things up: multimedia, storytelling, discussion, hands on activities, individual assignments, and group work. The more variety you build in, the more connections in the brain get wired. This is why dual-coding theory suggests that it's better to combine images with words when you want to remember or teach something.

Does this suggest you should abandon teaching to a preferred learning style? No, I think you can do both. You can appeal to a primary style if you wish, but emphasize the other senses, too.

Learning does not happen at once but builds upon and is shaped by existing knowledge.

The senses are the gateway to better memory. Leverage all of them.

The seven learning styles are displayed in this graphic.

Yana Weinstein from *The Learning Scientists* offers a useful four-step summary of the science behind learning styles:

- *People have preferences for how they learn.*
- *All people learn better when more senses are engaged.*
- *Some people benefit from emphasizing style modalities more than other people.*
- *No one suffers from the addition of a modality that's not their favorite.*

BEGIN WITH BIG BEGINNINGS

The first minute of every lesson provides an opportunity to shape the learning environment – and it belongs to you. Use it to establish an upbeat tone for the task ahead, to inspire, and to capture the hearts of your learners. You only need a little bit of creativity to do this well, and the benefits are immense. How? Present a challenge or cite an amazing fact. Mix it up with an occasional pre-quiz that evokes curiosity, or confidently predict that everyone will learn X., Y, and Z by the end of the lesson. Tell a good story that fans the desire for more information.

The art historian **Gustav Friedrich Waagen gives** great advice on teaching:

"First delight, then instruct."

As the instructor, you are the leader, you are responsible for engagement. No one else can do this for you. Professional speakers know this. The principle holds true when there are 500 adults in the convention room, or two kids at home.

The reason we start with an interesting beginning is explained by science - the human brain is hard-wired to be attracted to that which is novel or different. Familiar tasks get assigned to the subconscious part of the brain to be handled automatically. Your lesson should reach the prefrontal cortex in the brain, where thinking and learning occur, but which is always looking for information that is new and different. This is why a good beginning helps you. Make the effort to engage young minds with your opening, don't skip this and send the wrong message that this lesson isn't worth the brain's attention.

The first minute matters – with everyone, adults, or kids. So why might we skip over this? Sometimes we get distracted and let this opportunity slip away because of a classroom business item, small talk, or maybe we give priority to reviewing an unfinished topic from yesterday's lesson. Do these things later – the first moment is yours.

The 60-Second Rule

Change your thinking - the first minute is your most important minute each instructional day. I've learned when a lesson disappoints, it's usually not the information that wasn't right, it's because the learners weren't engaged. That's on us as instructors to get right.

The 60 second rule states:

> **Use the first 60 seconds to engage and motivate your audience. This is your big opportunity to get them to want to listen and learn.**

Do this well and you will discover a whole world of energy in your classroom. OK, this puts a little pressure on us as instructors to start well, doesn't it?

But I know you are up to motivating your kids and it's not as hard as some might think. You just reach a little deeper into your creative side and find something unique about the subject you are about to lead. You know your kids' interests; you can do this.

Effective teaching means good content mixed with motivated learners. Both matter. Take the time to plan your first 60 seconds! It makes your job easier.

Starting with a quiz is "teaching backward." Learn more in the *parent resources* on our website https://centerforhomeschooling.com/.