

## Bending the curriculum:

### Building bookshelves in the brain.

- The bookshelves are the brain's readiness. This cannot be hurried – think of a baby's readiness to roll over or a toddler's readiness to speak words. There are similar points of readiness for schoolwork. Wait for bookshelves to be "built" before you can start filling them.
- Next we need to provide 3-ring binders for the bookshelves. They start out empty, and our students add pages to them as they come to understand new things. The more experiences your student has outside of formal schoolwork, the more binders they have sitting ready on their shelves. Make connections to these experiences, those binders, when you sit down to your schoolwork – and you'll engender wonderful "a-ha" moments (as well as helping the information to stick). Meaningless information doesn't get filed anywhere – it has to make connections and find a relevant binder to reside in or it drift out as soon as you shove it in. **This is a very important reason to take your children with you when you are out and about doing things – it builds more connections in their learning!**
- Things stick in our memory best when they trigger an emotional response. Humor, fear, empathy, and surprise are usually linked to our strongest memories. If you are trying to get your student to memorize facts, humor is the most powerful tool you can use – because we all like to remember things that make us laugh. Rote memorization does work, but it's painfully boring. Acting out, sketching funny notes in the margins, sing-songing, memory tricks, or other ridiculous methods will speed up memorization exponentially.
- Make your student aware of these bookshelves – it will help them understand how they learn. It also removes much of the self-condemnation and frustration of students who haven't been able to grasp new concepts. Once they realize that is isn't a deficiency on their part, but just a simple lack of the necessary bookshelf, it depersonalizes the failure and puts it into perspective. They know the bookshelf will be built when their brain is ready, and it's okay until then.

### Brain capacity

- Our brains are like any other muscle in our body. They start off fresh and ready to learn, but get tired out after a certain amount of exertion.
- Watch for this tiredness, especially in young children, and teach them how to watch for it. Little ones want to push farther than their brains than their brains can "stretch". Learning to recognize this helps to head off feelings of "stupidity" that come when the brain is too tired to continue. If school work must continue, allow for a few hours of physical, non-mental play or work first.
- For boys especially, physical energy needs to be spent before the mind is free to concentrate. Chores or playtime outside first to wear out their bodies will greatly enhance their ability to think once it is school time.
- For children, the best learning time is in the first half of their waking day. They get more scatter-brained as the day progresses.
- For teens, the best learning time is after their body has been moving for a minimum of 2 hours (adolescent hormones delay the brain's wake-up time considerably).

### The where and how of studying

- A quiet desk in a neat room with no distractions – is it your idea of a haven or a torture? The environment around your student when they are learning is very important – and helping them figure out what they need is one of your primary chores. It's also easier than you might think, since it's a matter of preferences.
- Realize that your preferences, your "must-haves" may be the exact opposite of your student's preferences. What matters is not whether you can function in a given environment, but rather your student thrives in it. Aspects to consider:

- Noise level: Some people can't think if it's noisy, others can't think if it's quiet. Some of your students may need quiet bedrooms to work in, and others may need to be at the kitchen table in the midst of chaos. Music, background conversations, life swirling about – help your student realize what aids their concentration and what breaks it.
- Light level: Aside from having enough light to avoid eye strain, the level and type of light affects how one feels. My oldest needs natural sunlight to feel his best. My third likes it to feel cozy (which can be a bit darker). Florescent lights are harder on the eyes, and there are indications that compact florescent lights might mess with blood sugar and hormones. (Legally, if you break a compact florescent bulb, you need to call Hazmat to clean it up – since the amount of mercury in it is considered an environmental hazard.)
- Body Position: Working at a desk delights some and leaves others feeling confined. Extremely active children will do much better sitting on a exercise ball (so they can bounce) or running around with homework on a clipboard! Lying on the floor, surrounded by chaos, is most suited to others. When we are working together, my kids like to do seatwork on chairs and stools in front of TV trays more than they like sitting at the dining table – it gives them more space and choice of scenery. A pile of pillows on the floor with coloring books in hand is their favorite way to listen to a story.
- Clutter: If your student is highly distractible, you need to limit the amount of clutter around them. If not, chaos may actually relax them!
- Snacking: Munching, especially during tedious tasks, helps to relax and focus some people – and at a deep level, helps us to remember better what we are studying. Avoid sugar and caffeine, though – these do mess with our brain significantly.
- Interruptions: Some folks need regular “shopping breaks” when they are working, and others need focused time alone.
- Time of day: Individuals have distinct preferences for when they work best. Early birds, night owls, before or after meals – all of these factors will influence your child's best thinking time.
- As homeschoolers, the world can be our classroom. Consider making a blanket tent in which to sit while studying caves. If you are learning about the great outdoors – do it outdoors! Do math in the grocery store, measuring in the kitchen, physics in the workshop – learning is real and doesn't need to be packaged into a sterile classroom or text!
- For young students, start with the least distractions. Attention span is generally the student's age+1 minute. Watch for what pulls your student off task, and eliminate those things. If you are finding that they don't concentrate well in a void of distractions, introduce background music (classical is a very good place to start). Allow for a variety of settings (floor, desk, couch, table) and see where they perform best. You can also discover their preferences by noticing where and how they play when they are on their own. If your child is particularly bouncy, give lots of opportunity for movement during work times.
- Once your student is old enough to have independent work times, challenge them to design their ideal study environment. The challenge is simple – anything goes within the laws of the land and the rules of the house. You provide two weeks for the adjustment – and if they are accomplishing more at the end of the two weeks than they were at the start, the changes stick. If not, they have to try it your way. You will have to shut your eyes (and possibly your ears), but after the first few heady days of freedom, your student will most likely realize they had better get serious or loose their freedom of choice! This is good training for adulthood – when we make our own choices and live with the consequences.

Understanding where your student is coming from, and where you are.

1. Consider how your student remembers
  - a. Visual
    - i. Need to build pictures in their mind of what they are learning
    - ii. Associating pictures with words or concepts

- iii. Bright colors & crayons
- iv. Cartooning & doodling
- v. Building stories around details to remember

b. Auditory

- i. Need to hear themselves saying/explain facts
- ii. Reading aloud to themselves
- iii. Repeating instructions
- iv. Learning songs and rhymes
- v. Flash card drills, oral drilling
- vi. Need minimal visual distractions

c. Kinesthetic

- i. Need to be moving to remember what is learned
- ii. Need breaks every 10 minutes
- iii. Using bodily movements to bring concepts home
- iv. Find ways for them to be active – doing something while listening
- v. Offer big spaces to draw and write
- vi. Specifics:
  - 1. learning how to write letters (jumping off stool)
  - 2. pounding up and down stairs to learn facts
  - 3. listening to reading while quietly playing/drawing
  - 4. bouncing ball at end table
  - 5. clipboard jogging
  - 6. running breaks and/or play/work before study

2. Consider how your student understands the world

a. Global

- i. They listen for the “gist” first before they can focus on details. Give them an overview first – let them experience the idea - then bring them back to the details or steps needed.
- ii. Expect lots of questions (some seeming rather unrelated) when giving directions. Globals are thinking such big thoughts and so many thoughts that they are often distracted from the details.
- iii. The global version of “organized” looks horrendous. To help globals be organized, help them identify the purpose of organization (the goal), and as long as they can meet the goal, don’t worry about what it looks like.
- iv. Help them organize their “pile and bulldoze” system with big baskets or colorful folders for general categories.
- v. They are very easily distracted, especially when working alone. They’ll start on one idea, notice another and move to it, and then notice a third. Working with a partner can help them stay on task.
- vi. If you want a global to get started, work with them for the first portion – get the momentum started.

b. Analytic

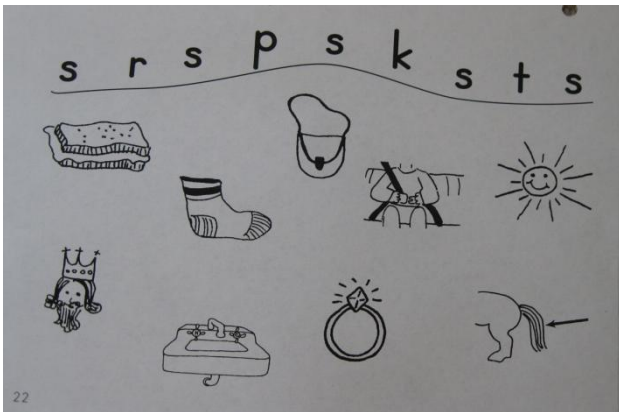
- i. They naturally notice the details – even remembering specific words used, but have trouble seeing the big picture.
- ii. They are good at catching directions the first time, and want to be left alone to immediately get to work.
- iii. They find it hard to work with distractions or interruptions. Let them work alone, and if you need to speak with them about something else, make a note of it for afterwards.

- iv. Help them divide large tasks into small portions. They would rather make a big difference in a small part than a small difference in a large area.
  - v. They need systems – a definite and consistent method for doing things. The best systems are the ones they create themselves. Present what needs to be accomplished, and get their input on how this will be done!
3. How do your children take in information?
- a. Concrete
    - i. They love facts and details; things they can see, hear, touch, feel, or taste.
  - b. Abstract
    - i. They are very good at reading between the lines and seeing what isn't said.
4. How does your child deal with information?
- a. Sequential
    - i. These children love charts, lists and outlines. Neat and orderly results please them. Doing things in order makes sense to them.
  - b. Random
    - i. These children think of things to do with their information that would never occur to you. Creative and unpredictable – start in the middle, jump to the end, finish at the start.

Now consider the curriculum that you are working with

1. Curriculums were written by humans – fallible, opinionated humans. These people may have a degree in education and great quantities of experience, but they have never met your child! Public school teachers who are worth anything take creative license with their curriculums, too!
  - a. Take your curriculum as a suggested outline, not a confining prison.
  - b. It's more important to go at your student's speed than to finish in the predicted amount of time. What's the point? To finish the curriculum, or to see your child learn?
  - c. Do you need to follow a faithful schedule that incorporates all subjects every day (or week)? What 's the point? To make homeschooling work for your family, and to see your child has a well-balanced education in the end. Do what works for you.
  - d. Is it okay to skip entire sections of your curriculum? Public school teachers do it all the time! If it is going to leave a gap in your student's education, just keep track of that need and address it later – when you and they are ready.
  - e. How should the work be done? Always consider “ What's the point?”
    - On a math page, what's the point? To demonstrate mastery of the concept!
      1. Does your student need to do all of the problems? Not if you are satisfied of their mastery.
      2. Does your student need to write their own answers? Not if it will hinder their learning – you can be their secretary if writing is causes difficulties. **If you have a sizzler, have them do their math on a white board – it's much more kinesthetic.**
      3. Do the lessons need to be done in order? Normally yes. Math is a very sequential subject where one lesson usually builds on another. If your student just can't wrap their mind around the next concept, don't move forward. Stay on the same concept for as many days as it takes, re-explaining it from as many different angles (and by different people). If they still can't get it after best attempts, set math aside for a week or a month – long enough for their brains to build the needed new bookshelf.
      4. A note on teaching about money – use real currency!
    - What's the point of history and geography? To know where we've come from and know how to avoid the mistakes of others.

1. Do students need to read the materials for themselves? No, they need to comprehend it. If your reading aloud (and ensuing discussions) work better, carve out the time and do it! If you are already reading aloud and one or more of your students can't focus, challenge them find meaning. For a visual child, taking doodle notes (and explaining them to you later) may be the answer. For an auditory child, talking about what they understand will drive it home. For a kinesthetic, doing something mindless with their bodies while listening will free up their attention span (treadmill, building legos, doodle notes, etc.). **If you have a really fidgety child (a sizzler), consider teaching them to knit or crochet!**
  2. How detailed do you need to be about names and dates? Analytics will do very well with this, and globals will be hopelessly lost! Isn't it more important to understand the big picture of history and how one thing leads to another than to be able to point to names and dates? If you have a global who is struggling with specifics (especially on tests), give them essay questions instead (written or verbal, formal or informal) to reveal their level of understanding. You can really fire a global's imagination with vivid details and stories from history - create emotional connections! Teaching progression is more important than teaching dates.
  3. Consider building a where-and-when wall, with a large world map and a 6,000 year timeline. Every item from history (or historical fiction) gets posted on the wall with a string leading to the "where" and a string leading to the "when". This builds a powerful overview of place and time without any struggle over the details – as it can always be consulted. We have put ours in the central hallway of the house!
  4. Another insidious way to insert geography into your student's bookshelves is to have a world map covering your dining table, posted on the wall beside the toilet, hanging from the shower rod, or mounted on the wall beside their bed – wherever they are "stuck" with time on their hands and a mind searching for engagement!
  5. Media is a powerful way to make history come alive. Your Story Hour is my favorite historical radio drama – very engaging and accurate. Comparing the facts to dramatized movies is also a great way to deepen historical knowledge.
- Handwriting is ever so important – both to be understood and respected. However, does your student need to practice in meaningless ways? The point is to develop good script – not to fill a workbook acceptably. Challenge your student to provide you with a certain quota of good handwriting every school day – rather it's in their English paper, phonics book, a letter to Grandma, or a list for the shopping. One only needs to do handwriting pages if nothing else calls for handwriting in a day!
  - What 's the point of your worksheets? There is no need to follow the instructions when you can see a better way to go! Any worksheet (or task) can be used at an assisted, competent, or challenging level. Consider this:



Always consider “What’s the point?”

For my little guy, I would work through the sheet asking questions like, “What picture starts with the same sound as ‘s-s-soldier’? His reward is then to color the pictures (practicing handwriting by controlling his crayon).

For my letter-conscious student, I would challenge him to draw lines between the letters and their pictures (without any aid to recognize the letters or sounds).

For my beginning reader, who loves trying to write words, I would challenge her to write the names of each picture on the page – and then use her phonetic attempts to teach “actual” spellings.

If any answer appears to be quite wrong, I first ask what they thought the picture was and judge their answers based on their perceptions rather than the book’s key.