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How to Choose
the Right Science Curriculum for your Kids

Includes six keys for selecting a science curriculum that your kids will learn from and enjoy, while being easy for you.

www.SuperchargedScience.com

by Al and Aurora Lipper
Supercharged Science

How to choose the right science curriculum for your kids

What this guide will do for you

First, I want to thank you for caring enough about your kids' education to take the time to read this. This alone sets you apart from most parents.

Within the next 10 minutes, you'll have a clear idea of how to choose a science curriculum that is really great for your kids, and is easy for you to use.

If you can't wait, click here to jump to "Two Quick Steps to picking a great curriculum".

I'm guessing that you're reading this because you want your kids to learn science for a reason (not just to check off the box for some requirement). If you do just want to check off a box, this guide won't be of much use for you (Just get a textbook and have your kids plow through it). But, if you really want your kids to have an exceptional science learning experience, then keep reading!

In this guide, I'll tell you the ***real*** things you should look for when you invest in a science curriculum (or if you compile your own for that matter). Some things are obvious, others not.

I know you're busy, so I've organized this guide by giving you a quick summary below first. Maybe it's all you need. But, if you want to learn more about each area, I've gone into additional detail later on.

Before you listen to what I have to say, you probably want to know who I am and what qualifications I have to be talking about this subject (something you should ask ANYONE who wants to teach you or your kids anything). My name is Aurora Lipper, I have been teaching science for over 15 years, I'm a Mechanical Engineer, have been on the faculty at California Polytechnic University, worked for NASA (no rocket scientist jokes, please ☺), been featured in science videos sold by the Discovery Channel, did PhD studies at Stanford University, I'm a licensed pilot, I have personally taught science to more than 5,000 students in classes and workshops over the years, and lots more. **I'm also author of over 15 award-winning science curriculum programs.**

Plus, I'm devoted to my husband of 14 years and I'm a mom of 4 amazing kids.

Okay, enough about me… Let's get on to finding a curriculum that will really supercharge your kid's science education.

The problem with most curriculums

Many curriculums fall stunningly short of teaching real science (or they make it way harder than it needs to be). I define "real science" as learning science so we can use it to understand the physical world around us in a practical way. Can you relate to any of these qualities?

A lot of science curriculums are:

- Not written in a way that applies science to the world around us.
- Requiring you to spend too much time learning/teaching science yourself
- Dry and boring.
- Mostly abstract concepts and memorization with few hands-on experiments.
- Make it hard to get the experiments to work.
- Provide little in the way of long-term science learning or critical thinking skills.

Choosing the wrong curriculum can immerse your kids in learning that is inadequate, boring and just plain wrong. Thankfully, there are some good alternatives out there.

Why it's important (and easy) to pick a really good curriculum

Choosing the right curriculum will:

- **Be easy for you to teach (even if you're not good at science or don't have time to teach it)**
- **Continually connect what your kids are learning with the world around us.**
- Make science something your kids really enjoy and look forward to learning.
- Help your kids develop critical thinking skills.
- It's just a plain important part of our world today as science and technology are critical areas in college and careers.

Two Quick Steps to picking a great curriculum

Step 1 – Define your goal

If you don't know where you're going, you probably won't get there. First, you want to define your educational goals. I mean WHY do you want your child to learn science anyway (or any subject for that matter)?
Here are some common reasons parents want their kids to learn science. What are yours?

- ☑ To better understand the world we live in and how things work
- ☑ To learn to think in a logical and methodical way
- ☑ It's just something they should know to be well-rounded
- ☑ To have the right background for college (and beyond)
- ☑ Because it's just plain fun
- ☑ Any other reasons you want your kids to learn science

Step 2 – Qualities to look for in a great science curriculum

This is where the rubber meets the road. Here is a summary of what to look for (and what to avoid) when you pick a curriculum. Just go down the list and ask yourself how your current curriculum or one you're considering meets each criteria. You can simply mark them yes/no, or score them on a scale of 1-10 to help make comparing several of them easier.

Ideally you want to pick a curriculum that:

1. **Can be self-guiding** so you don't have to be the one preparing and conducting every lesson (even if you plan to do science alongside them, the option is very nice). This is critical if you don't have a solid science background yourself, or know you won't have time to teach each lesson.
2. **Excites your kids enough that they look forward to each science lesson.** If it's dry and boring, you're wasting your kids' precious learning capacity. They'll spend hours learning stuff because they're "supposed to." Then, they'll forget most of it within a couple of weeks.
3. **Mostly uses inexpensive easy-to-find everyday materials.** Real science is learning about the real world. This means working creatively with everyday materials. Expensive specialized kids are generally unnecessary until kids are doing advanced high-school level projects.
4. **Is filled with hands-on experiments and activities as a primary part of each lesson** (not as an afterthought to pages of reading). Kids learn from actually doing experiments – They will forget 70-80% of what they read within 60 days. Real science MUST be done with real experiments and activities. Few areas of science can really be learned just with pencil and paper.
5. **Has experiments that really work.** Look for a curriculum by an actual science teacher or scientist who conveys their passion for the topic. The level of passion (or lack thereof) that the author has will largely determine your kids' own level of interest and excitement. Get a science curriculum for your kids that was created by someone who knows science and has actually done the experiments themselves (Many are written by academic writers, not scientists). Avoid silly cartoon animation type science lessons (these are used in some curriculums because the lessons are created by professional course-writers, not science teachers).
6. **Uses video extensively to demonstrate concepts and experiments.** You can spend pages trying to explain a concept or show how to do an experiment that can be much more clearly demonstrated in a video. With technology these days, there's no reason a curriculum should do this.
7. **Is affordable for you.** Consider both the cost of the curriculum and the cost of materials for experiments. Does it use special expensive kits, or can you use everyday materials? Keep in mind that you often get what you pay for. Less expensive curriculums are usually just dry textbooks. Get the best curriculum you can afford which meets your goals (without breaking the bank).
8. **Is right for the age/grade-level of your kids**, without leaving gaps. You want them to learn age-appropriate science that prepares them for the next level.

9. **Is compatible with your religious or secular viewpoint.** You don't want to have to spend lots of time explaining "This isn't really right…"
10. **Has support if you or your kids have science questions**. It can be very helpful to know that you can always get a good answer for your kids.
11. **Lets you try a sample of it (or lets you return it if you don't like it)** before committing to a whole year of it. You wouldn't buy a car without test-driving it. Why would you and your kids devote many hours of study to something that you didn't try first?

There you have it! These are the keys to picking a really great curriculum for your kids.

By the way, people always ask me about my own curriculum. As you might guess, yes, it does meet all these criteria. If you want to try a free sample of it, you can by clicking here or visiting this link: **www.superchargedscience.com/opt/curriculum-guide-savs1-opt**

I hope it's okay to mention my own curriculum in this guide.

I want you to have the tools you need to decide what curriculum is right for you and your kids. They deserve it.

If you want to learn more about why I think these criteria are important, then keep reading. If not, then best of luck in giving your kids a really fantastic science education!

Warmly,
Aurora Lipper

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Expanded Version – Includes The How and Why of these criteria (optional reading)

1. **Can be self-guiding** - so you don't have to be the one preparing and conducting every lesson (even if you plan to do science alongside them, the option is very nice). This is critical if you don't have a solid science background yourself, or know you won't have time to teach each lesson. A lot of parents don't have the background to teach science, or they don't have the time. It's still helpful to go through the lessons with kids if you can, but shouldn't be required (except for young children).
2. **Excites your kids enough that they look forward to each science lesson.** If it's dry and boring, you're wasting your kid's precious learning capacity. They'll spend hours learning stuff because they're "supposed to." Then, they'll forget most of it within a couple of weeks.

   As a parent, you know when a child is personally interested in learning or doing something, they'll do whatever it takes to learn about it or achieve it. Most curriculums use the "good book" or "entertainment" approach. The "Good book" approach is a curriculum that is interesting to read, but isn't teaching a lot that kids can remember OR apply to the real world. This is what science is all about! It's about explaining the real world – not about doing abstract problems on paper!

   The "entertainment" approach is sometimes used by curriculums that have silly cartoon animated lessons or computer games to "teach" science. These keep kids engaged and kids say they enjoy these lessons. BUT… If you ask them to apply what they learned, they can't. Just because a child is engaged and having a good time, DOESN'T mean they're learning what they should be.
3. **Mostly uses inexpensive easy-to-find everyday materials.** Real science is learning about the real world. This means working creatively with everyday materials. Expensive specialized kids are generally unnecessary until kids are doing advanced high-school level projects.

   Real science deals with forces and heat and light and electricity, and things like that. Most concepts in K-8 science can be understood well using everyday materials that come from the supermarket or hardware store. I mean popsicle sticks, paper clips, empty soda bottles, batteries, wire, etc. Plus, when kids use everyday materials, they are not limited by the parts in some custom-molded plastic kit – the only limit is their imagination. Even better, they will try new variations of an experiment, most of which WON'T work. This is great! Any good scientist will tell you that they learned as much from their mistakes as from their successes (if not more). It just plain wrong for kids to think that science should work the first time – it doesn't for real scientists. Kids should learn that mistakes are part of the learning process and know to expect them!

4. **Is filled with hands-on experiments and activities as a primary part of each lesson** (not as an afterthought to pages of reading). Kids learn from actually doing experiments – They will

forget 70-80% of what they read within 60 days. Real science MUST be done with real experiments and activities. Few areas of science can really be learned just with pencil and paper.

Think about what you remember from your science education as a kid… Was it a cool experiment, or some textbook you once read?

Have you ever heard of a great scientist say something like "I first got inspired by science when I read this textbook…" NO! Of course not! Real scientists will tell you things like "Well, when I was a kids, I was always pulling apart old stereos in my basement…" or, "When I was a kid, I built a model rocket, and when I saw it take off, I was hooked…" or, "When I was 7, we grew tadpoles in a tank, and I was blown away by how day by day it transformed into a frog – I knew I wanted to learn all I could about living things!"

These are how real scientists learned about science, and it's no coincidence. THIS is how kids learn. By actually doing experiments! The academics and reading are simply tools to explain and support what they observe and experience in the real world by doing experiments (or just plain observing the world around them).

When kids build a robot or wire a circuit that makes a light bulb turn on, they become curious. Then, they WANT to learn the academics. This makes it so:

a. It's easy to teach
b. Kids learn the topic more deeply
c. Kids can apply what they learn to the real world
d. Kids remember what they learned for years – often a lifetime

I consider this essential. Any good science curriculum MUST have LOTS of hands-on experiments.

5. **Has experiments that really work.** Look for a curriculum by an actual science teacher or scientist who conveys their passion for the topic. The level of passion (or lack thereof) that the author has will largely determine your kids' own level of interest and excitement. Get a science curriculum for your kids that was created by someone who knows science and has actually done the experiments themselves (Many are written by academic writers, not scientists). Avoid silly cartoon animation type science lessons (these are used in some curriculums because the lessons are created by professional course-writers, not science teachers).

   Get a science curriculum for your kids that was created by someone who knows science and has actually done the experiments themselves. Many curriculums are written by professional academic writers who also write history and English books.

   I remember contacting the publisher of a very popular science curriculum (I won't mention names out of professional courtesy). It turns out they were having too many complaints about the experiments in their textbook not working. It turns out that they just had an academic writer compile text and experiments from other textbooks and similar sources and

create a book out of them. THEY NEVER EVEN TRIED THE EXPERIMENTS THAT THEY SOLD TO THOUSANDS OF PARENTS TO HAVE THEIR KIDS DO! This made me so mad that I looked into it further. It turns out that LOTS of big-name publishing companies do this. In fact, I just called one today to ask about the authors… They had a hard time figuring out who in their own company had written it. Then, they couldn't find any qualifications at all for the author (I looked her up online and couldn't find a single indication that she had any background in science – just that she was an employee of this publishing company)

Okay, I'm done with my rant… I just feel really strongly that whoever is teaching your kids should have a strong background in what they're teaching.

Think of the time spent using a curriculum as you would time that your child spent with a private tutor. If you wouldn't feel good about having the author of a curriculum to tutor your child in person, then why would you let them do it via a curriculum?

Here are some ways to check the background of a curriculum author:

a. Look on Amazon.com or the publisher's website to see who the curriculum author is. Amazon.com also has author bio info. It should be easy to get the author's name and qualifications. If the publisher gives you an answer like "That's confidential" or "Our research team wrote it", it's time to move on. Or, if it's hard to figure out who wrote it, there's probably a good reason they didn't make it public in the first place.
b. Is the author a science teacher/scientist, or just an academic writer?
c. Are they passionate about teaching?
d. Google the author's name. Look at what comes up. Any teacher or scientist who has made their focus on teaching science will most likely have numerous articles by them, blog posts or a website. Also, look at their Facebook profile.
e. Do a YouTube video search results and see if there are videos of them too.

Hopefully this will help you determine if the curriculum author is someone you feel good about you and your child spending precious hours learning from.

6. **Uses video extensively to demonstrate concepts and experiments.** You can spend pages trying to explain a concept or show how to do an experiment that can be much more clearly demonstrated in a video. With technology these days, there's no reason a curriculum should do this.

   These days, teaching science can be SO much more effective because we have videos that can demonstrate concepts that just can't be visualized by most kids through reading alone. Plus, they can make hard-to-explain experiments easy to do and understand.

7. **Is affordable for you.** Consider both the cost of the curriculum and the cost of materials for experiments. Does it use special expensive kits, or can you use everyday materials? Keep in mind that you often get what you pay for. Less expensive curriculums are usually just dry textbooks. Get the best curriculum you can afford which meets your goals (without breaking the bank).

   This is pretty self-explanatory. People sometimes ask me why they should pay for a

curriculum when everything is available on the internet for free. Yes, that's probably true. BUT…

There's also a lot of junk on the internet (do you want your kids browsing through that, and needing to explain overly explicit banner ads to your kids?) Also, what's your time worth? How long will you need to search to find the good stuff? Be sure to factor these elements in.

On the other hand, what's the value of a really great science education? How much is it worth for your kids to be excited and happy about their science lesson, and to really remember what they learn and be able to apply it to the real world?

I sometimes tell people to think about the cost per day of a curriculum. A mediocre curriculum might end up costing $0.75 per day, while a really excellent one is $0.98 per day. Is it worth an extra quarter each day for your kids to have a totally better learning experience?

Work within your budget, but don't sell your kids short on something important.

8. **Is right for the age/grade-level of your kids**, without leaving gaps. You want them to learn age-appropriate science that prepares them for the next level.

   This is also self-explanatory. Just make sure that you choose a curriculum of the right level. More is NOT better. Actual learning and understanding is better than trying to teach advanced concepts to a child who's just not there yet. In fact, it can discourage them and make them feel like science isn't for them.

9. **Is compatible with your religious or secular viewpoint.** You don't want to have to spend lots of time explaining "This isn't really right…"

   Whatever your religious or non-religious philosophy, it can help to choose a curriculum that's compatible with it. Either choose one that matches your beliefs, or one that's "creation-neutral."

10. **Has support if you or your kids have science questions**. It can be very helpful to know that you can always get a good answer for your kids.

    This is a big one. Whatever curriculum you choose, you want one that has a place you can ask questions. If it's a good curriculum, your child will be curious about things that aren't covered in it. You should have a place to ask these and get an answer from a real scientist or engineer (in all my curriculums I make sure I answer every question personally or have a real scientist do so).

Lets you try a sample of it (or lets you return it if you don't like it) before committing to a whole year of it. You wouldn't buy a car without test-driving it. Why would you and your kids devote many hours of study to something that you didn't try first?

This seems like it should be obvious, but so many companies don't let you try things out. Look for a free sample of a curriculum, or a curriculum that lets you get a refund if it doesn't work out for you. It should

give you a month or more to really try it out (If you want to try a free sample of one of my curriculums, you can get it here: **www.superchargedscience.com/opt/curriculum-guide-savs1-opt**).

Good luck!

If you have questions, please feel free to contact me at: science@superchargedscience.com

Aurora Lipper

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