



Teacher Tutorial #21
from Marcia:

How to Plan an Entire School Year Curriculum



How to Plan an Entire School Year Curriculum

So, you have just been assigned to teach an Earth Science course for the next school year. You will NOT have any textbooks and only the most basic of science equipment, such as beakers and scales.

In my early years of teaching, this would have filled me with **FEAR** of the worst kind! No sleep, tummy aches, the works. It would have consumed me.

Now, I look at things differently. Well, sorta. I would still be consumed by it. And I think

that's okay. This means I will get it done without using up all my precious summer days!

Here is my advice on how to plan out a brand new Earth Science curriculum for a new school year.

(1) **I suggest you first request review textbooks from a few companies.** This should be done before your current school year is finished. You want to be able to take them home with you for the summer. You don't have to purchase any of them!

Just get a couple different texts to give you an idea for how to set up the year, what order is "traditional." You are NOT bound by any of this but it's nice to have a skeleton to work with! It's also a great source for objectives!

(2) **Write out a skeleton of large units in a document on your computer.** Get a feel for this order. Play with it. You will be doing weather, astronomy, oceanography, and **LOTS** of geology! Don't worry about what comes first yet, just what



Marcia's Science Teaching Ideas was founded by Marcia Krech, a retired Earth Science Teacher from Missouri, who believes passionately in passing on what she knows about good science teaching. "I encourage teachers to use the active learning model including team games and foldables which puts the student to work and assigns the teacher the role of facilitator."

Email me with questions!

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(3) **Traditional order usually goes like this for the Geology part.** Minerals, Rock Cycle, Weathering, Plate Tectonics, Earthquakes, Volcanoes, and Geologic History.

(4) **Other units usually cover:** Weather and Climate, Landmasses and Map Skills, Natural Resources, Oceanography, Astronomy. Many districts now require some emphasis on technology, such as making PowerPoints, doing research and a long-term science project, presentations and the scientific processes. Add these to your document.

(5) **Rest assured about one important thing!** You **DON'T** need brand-new textbooks! Look around your building or district. Are there old texts lying around gathering dust? Even from different companies? Doesn't matter. They could sit in your room for reference. The most important thing, will you have a projection system? Most districts have something for you. That's really all you need! If not, at least try to negotiate for one!

(6) **Once you've decided on a basic skeleton, including a basic measurement, lab safety, and the nature of Earth Science at the beginning of the year, you want to generate your main objectives for each unit.** Objectives can be found in an old Earth Science text, in your district curriculum document, in your state's required curriculum document, or even from a national science group. Add those to your document.

(7) **Once you have your basic order and objectives, you can begin to look for units or pieces of units that will meet your objectives.** I hope your main teaching style will be the active learning approach, including plenty of labs, team games, team projects, movement around the room. Don't let any of that overwhelm you if you are a newer teacher! I have lots of advice on how to do all this without loads of chaos. Study my Teacher Tutorials, listen to my audio Podcasts for details.

(8) **If your school has given you a science materials budget, be sure to order a basic set of rocks and minerals for at least 6 teams.** [Email me for how to do this.](#) I have already figured this out!

(9) **If you are a newer science teacher, I would suggest you order at least one unit from me, perhaps the Metric/ Measurement unit.** This will give give you a good idea on how to arrange each day into blocks of activity, to achieve the best active learning without chaos. Or, you can do what many teachers have done, if you have a budget, which is to order my complete curriculum, which will give you a huge leg-up for your first year. It's not everything but it's enough to get you going and you will be able to plan the rest of your curriculum using my units as a guide! [Check out my Store Page for details.](#)

BUT WAIT! THERE'S MORE!

Goodies for the Teacher:



National Science Education Standards



[Click here for a Pdf copy!](#)

National Science Teachers Association Planning Suggestions



[Click here for a look!](#)

Next Generation Science Standards What are they?



[Click here for a look!](#)

Marcia's STI Science Lab Safety



[Click here to go my store!](#)

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(10) **You should now have a basic structure for your class.**

You have an initial order of units. This can change later. Just go with it now. You should have every objective that you think **MUST** be covered to (a) have a good unit that teaches the basics with a good flow and (b) covers every district and state requirement.

(11) **Now you need to work on the details.**

You are fleshing it out a bit! First, look through the text, surf online, check out my web pages for each main topic. You are looking for the **MAIN ACTIVITIES** that are traditionally used, such as a Mineral Identification Lab for the Minerals unit. A Rock Cycle Lab for the Rock Cycle unit. You can search for more modern, active learning ways to teach these labs and lessons later, but what are the most commonly used activities. Add these to your document.

(12) **I would suggest adding in any other good ideas you want to do, any other ideas you find on my other web pages, such as the Games and Puzzles page, the PowerPoints page.**

This is still a rough sketch, but you are adding more detail with each round. Study other websites you like, such as ScienceSpot.net and MiddleSchoolScience.com.

(13) **At this point you are ready to take each unit by itself and get really organized with detailed daily plans.**

I imagine you will start with what you will cover at the beginning of the year! <wink!> Our district always required us

to give a Science Lab Safety Test every year which every student had to get a 100%. So I always did a short Safety review the first day with the test the second day. Retests were easy. When the class was working, I would call those who needed a retest up, show them their test, talk about what they got wrong and then have them retake the entire 20 Question Quiz. Mixed in that first two weeks were always some basics of Experimental Design, a requirement of my state, a quick look at the four branches Earth Science, and a Metric/Measurement unit, trying to get everyone on the same page as far as using metric equipment and converting within the Metric System. You might want to order my unit, Back to School Special, to give yourself an already-worked-out first couple of weeks to start. Or you can surf around the Internet to find good activities to meet these objectives. On the first day you also want to do a quick review for your **Rules and Procedures**.

(14) **Many Earth Science teachers begin the year with an Astronomy unit. Others start with Weather before moving on to the traditional line up of Minerals, Rocks, Weathering, etc.** You can check out my blog about starting with Astronomy. It gets your students making some of their own science equipment and getting outside for part of every class period in the beginning of the school year. **Go here** to check out the details, called **A Great Way to**

Introduce Astronomy to Middle Schoolers.

I've also started with a Weather unit. Check out my **Teaching Weather** unit which includes an Interactive Science Notebook for every lesson, a great way to begin the year!

(16) **A great source for good ideas: check out all the Table of Contents for any of my units. This gives you a good list of lessons and activities for each unit.** Check out the Table of Contents and then make up your own lesson, surf the Internet, or purchase my unit. Any of these choices is fine. For some of you without a budget of any sort, you will have to wing it and that is totally fine! Others may have a budget and I hope you consider ordering some of my materials.

(17) **Lastly, don't think you have to get this perfect before school starts!** You will be constantly be revising this as you go. As your school calendar becomes clear, you should plan for how many weeks each unit might actually have. Much of what you plan won't be done as many other things will get in the way, such as state testing, assemblies, snow days, etc.

One teacher in Iowa a few years ago, had a **MUGE** textbook budget for the next year. Instead, she asked the principal if she could order two sets of textbooks, **my Complete Program**, a brand-new projection system with laptop, and some more science equipment. This was less than \$10,000, instead of the \$25,000 for books and her principal okayed it!