DIY Unit Study Guide

by

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How To Use This Unit Study Guide

Unit studies are a great way for the whole family to learn together. Kids of different ages, learning styles, strengths, weaknesses, and interests can all learn about the same thing together, each in their own way.

I enjoy throwing together what I think of as loose unit studies, but you could probably more accurately describe it as "themed unschooling." This means my kids get a lot of choice and agency in whether and how they interact with materials. I learned a long time ago that my family doesn't do schedules well, so we don't plan things out. However, if schedules work for your family, you are more than welcome and able to plan out individual days and lessons.

Above all, it's important to stay flexible. Your kids probably won't be into all the resources you find or everything you plan out, and that's okay. They'll take what they need from your unit study and you'll all learn a lot.

Happy learning!

For more resources and freebies, make sure you check out my shop.

Check out my book, *Gameschooling on a Budget*, for tips and games to play for less.

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Thanks again!

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DIY Unit Study Guide Instructions

Step 1: Determine Your Key

In this case, we're starting with a game, but you can start with a book, movie, interest, or a topic.

Step 2: Determine the Qualities and Related Topics

What does your key relate to? What skills does it foster or show? List everything that you can think of that relates to your key from Step 1.

Step 3: Work in the Core Subjects

Core Subjects include math, English/Language Arts, Science, and History/Geography/Social Studies. We'll cover these one at a time.

Math: I find math to be the most difficult to work into most unit studies, but the easiest to cover with games (especially elementary math). Because of this, I recommend still using your regular math curriculum. However, jot down any ways that you can incorporate math into your unit study. Sometimes, this is easiest to do while you incorporate science or history.

English/Language Arts is one of the easiest subjects to incorporate. I try to incorporate a variety of book levels and genres, such as picture books, easy readers, short chapter books, nonfiction, graphic novels, and more advanced books as your kids are ready for them. List the books you can incorporate into your unit study here.

I like to have several books for my kids to explore on their own and one or two we explore as a family. You can read these books to your kids or use audiobooks. Make sure to include books both above your kids' level and below. Easier books help build fluency and confidence, and your kids are more likely to understand what they read. Reading more advanced books to your kids helps them work on comprehension and higher-level thinking.

At the end of this guide, I included some sheets to help you add writing to your unit study. Writing could be expository (nonfiction; about a related topic), persuasive, or creative. There is a page to develop ideas for a creative writing piece, a page to create an outline for an expository piece, and rubrics you can use for grading your kids' writing.

If your kids are not yet confident writers, they can tell you a story. Dictation is a great way to introduce young kids to storytelling without them having to worry about actually writing.

Use this space to write out some prompts for your kids to choose from. Try to include a few different creative writing prompts and a few different expository or persuasive writing prompts.

Finally, there may be some other aspects of English/Language Arts you want to include. These might be literary devices, spelling words, or aspects of grammar. They should be included in the book you read to or with your kids as well as their writing assignment(s).

Science: What aspects of science would you like to include in your unit study? Often, I find more related science topics to cover as I go. Make sure there's a connection, but it's often easy to include physics and biology.

How are you going to introduce these science topics? Well, that depends on how your kids learn best. My kids learn really well with books and videos, but adding in an experiment is always fun and often leads to better learning. Science experiment write-up sheets are included at the end of this guide.

Documentaries are often great sources of information. My family used to use Curiosity Stream, but the History Channel is reliable, too. There are also many excellent YouTube channels full of reliable information! I have a curated list on this page of free homeschooling resources.

Your local library is a great source of excellent books, and if you need help locating any, librarians are usually happy to help! Finally, a local science museum might have an applicable exhibit you can explore with your kids, or even extra related materials online.

History: You might include inventions and technology, or how the world or a culture has changed over time. This can lead to learning about the lives of individuals, what else was happening in the world at the time, or how ordinary people lived during different times. Again, keep it related, but it's usually easy to expand from your initial key to several related history topics.

How will you introduce the history? Same as with the sciences, it depends on your kids! Books, documentaries, YouTube channels, museums, reenactments, even artwork or music can be great ways to explore history. (Although, we'll get more into these in Step 4.)

Geography: What countries, states, cities, or other places are related to your key, as well as the history and science that you have already covered? Find them on a globe, map, Google Maps, Google Earth, or if possible, you can physically go to them.

Cultures/Social Studies: What are the cultures like of the times and places you have studied? Culture is composed of language, clothes, food, music, religion, and many more aspects, so there are lots of ways you can expand this. My goal is always to expose my kids to a wide array of cultures so they can be tolerant, accepting individuals. Your goals may vary from mine, but you can use your goals to inform how you help your kids explore these other cultures.

Step 4: Incorporate Arts, Extracurriculars, or Special Interests

This step is often the most fun as there really aren't any limits here. You and your kids can look at paintings related to the key or any of the core subjects. They can try their hand at creating their own related works of art. You can listen to related music, read poetry, try a new skill or handicraft, build something, explore a sport, or more! As long as it can relate in some way to what you have already covered in your unit study, it's fair game.

Step 5: Assessment/Show the Learning

This last step is for your kids to be able to demonstrate what they have learned. If they have written up a science experiment or responded to one of the writing prompts you provided for them, that counts. They can draw or paint a picture, write a song or poem, create a diorama or model, or give a presentation. Anything they can create counts. To be honest, I usually don't worry about this step; my family has tons of conversations about what we're learning. However, if you need to submit a portfolio to follow your local laws, this can be an important part of your unit study. (Tip: Take a picture of a visual or physical creation for your portfolio.)

Throughout all five steps, don't be afraid to involve your kids. They might have some great ideas of how or what they want to learn or do to demonstrate their learning. And people are almost always more willing to participate in something they helped create. You also might find it easier to jump around a bit; this is okay. So, be flexible and creative and have some fun!

DIY Unit Study Guide

Step 1: Determine Your Key

Key: _____

Step 2: Determine the Qualities and Related Topics

Step 3: Work in the Core Subjects

Math

English/Language Arts

Books to read:

Books to listen to:

Writing prompts:

Literary devices, spelling, or grammar:

Sciences

Topics:

Books to read:

Documentaries:

YouTube videos or channels:

Science experiments:

Science museums:

History

Topics:

Books to read:

Documentaries:

YouTube videos or channels:

Activities, skills, or other hands-on learning:

History museums:

Geography

Places:

Cultures/Social Studies

Cultures to explore:

Elements of cultures to explore:

Resources:

Step 4: Work in Arts, Extracurriculars, or Special Interests

Topics to include:

Resources to use:

Arts:

Sports:

Skills:

Step 5: Assessment

Writing:

Build:

Present:

Create:

Other ideas:

Science Experiments

There are three important parts of any science experiment. Controlling variables, multiple trials, and recording results.

A variable is anything that can be different. Temperature, pressure, humidity, sun or light, the presence of different bacteria, viruses, or fungi, sound, moisture, and mineral and nutrient content are all different variables that could impact an experiment. Some variables are difficult for most people to control for (I don't know about you, but I don't have an environment in which I can control temperature, pressure, or humidity).

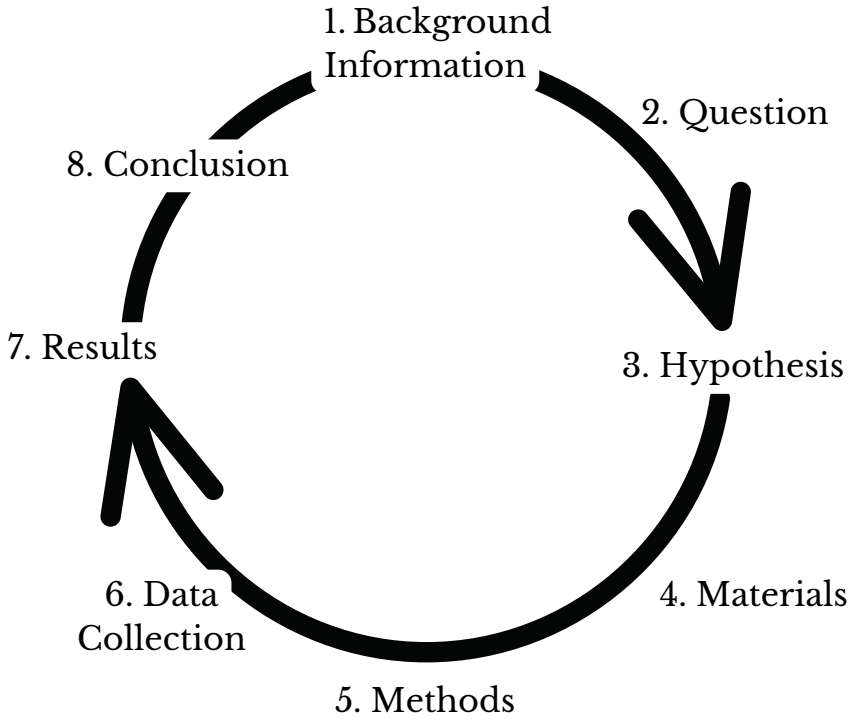
As you conduct your experiments, make sure as many variables as possible are kept constant, except for one. The variable you are changing is what you are testing.

This is where multiple trials come in. They can help to mitigate variations in your environment and human error. One way to have multiple trials is to have a larger sample size. A big experiment conducted by a scientist in a lab might have several thousand samples. That's beyond the scope of what we can do, but we can have at least a few samples.

Finally, recording your results makes it so you can share the information with others and they can reproduce your work (which adds to the multiple trials aspect).

Use the following pages to help you record your experiment, processes, data, and results. You can use extra sheets if needed.

The Scientific Method is a process that repeats over and over again, with the conclusion of one experiment leading to the background information of the next experiment.



Science Experiments, cont.

Background Information: Use this space to record prior knowledge or research you have done. Scientists never work in a vacuum; they're always building on the work of others. So, your background knowledge can be information you have learned previously, a study someone else has already conducted, or information you look up so you can design a better experiment.

Question: What do you want to test? Science is not able to disprove something, only support or not support. So, make sure you're trying to test something positive, ideally with a yes/no type of question. ("Does temperature impact the melting rate of ice?") Asking "how" is often beyond the scope of one experiment, particularly that we can do at home.

Hypothesis: This is what you think is the answer to your question. It's not a random guess; it's backed up by the background information you have already collected. ("I think that an increase in temperature will lead to an increase in melting rate of ice because temperature is a measurement of molecule movement. As molecules move faster, the temperature increased. Faster molecules should melt faster.") Again, your experiment can either support this hypothesis or not support it.

Materials: This should be a precise list of everything you used. Amounts (mass is often more accurate than volume), brands, types, etc. The more precise you can be, the more likely someone else will be able to replicate your experiment.

Methods: Again, be as precise as possible. Have you seen the peanut butter sandwich videos? If your instructions are not precise, then no one can reproduce your experiment and verify your results.

Data Collection: I included a couple of spreadsheets for you to use, but you can record data in other ways. Make sure you include units (if applicable)!

Results: This should be a summary of what you found out with your experiment. Sometimes a graph is a better way to display results, or you might want to include a graph with an explanation. However, it's just facts, no interpretation.

Conclusion: How does your whole experiment relate to the bigger world? Do your results support your hypothesis? This is where the analysis and interpretation goes.

Experiment Title: _____

Background Information: _____

_____

_____

_____

Question: _____

_____

Hypothesis: _____

_____

Materials (specifics): _____

_____

_____

_____

Methods (specifics): _____

_____

_____

_____

_____

_____

_____

Data Collection (print as many pages as you need so you can take notes for all your samples):

Results:

Conclusion:

Writing Assignments

Choose something related to the unit study to write about. This could be a factual piece about an aspect of history, geography, another culture, or science that you learned during the unit study. Or it could be creative writing.

Creative Writing Brainstorming

The next page is for brainstorming and developing elements of a story. Use it to help get your ideas organized and fleshed out before writing your story.

Writing an Outline

1. Pick a topic
2. Choose your three main points.
3. These three main points go under the Introduction a., b., and c. and under the Conclusion a., b., and c.
4. Also write these three main points at 2., 3., and 4.
5. Find three supporting points for each of your main points, and place them at a., b., and c. under 2., 3., and 4.

Using Your Outline

Each of your main number points (1., 2., 3., 4., and 5.) is a separate paragraph. Each of your subpoints (a., b., and c.) should be one sentence. When you are finished fleshing out your outline into your full essay, each paragraph will be 3-5 sentences long.

Creative Writing Brainstorming

Character Descriptions:

Setting Description:

Challenge or Problem:

Resolution:

Essay Topic: _____

1. Introduction
    a. _____
    b. _____
    c. _____
2. _____
    a. _____
    b. _____
    c. _____
3. _____
    a. _____
    b. _____
    c. _____
4. _____
    a. _____
    b. _____
    c. _____
5. Conclusion
    a. _____
    b. _____
    c. _____

Grading Rubric

What your child produces will depend on their capabilities. Use this as a rough guide, but don't be afraid to modify it to meet your child's needs.

Early elementary

- Very basic; write 1-2 sentences OR
- Dictate a more complicated story/essay to parents that you, the parent, writes down
- Correct mechanics with your child.

Mechanics: spelling, punctuation, and grammar

Late Elementary				
	Length	**Organization**	**Mechanics**	**Content**
4 points	3+ paragraphs; 4-5 sentences/ paragraph	There is an introduction, body, and conclusion	Up to 2 mechanical errors	The topic is clearly defined and there are 3 or more supporting points
3 points	3 paragraphs, 3 sentences/ paragraph	There is a clear beginning, middle, and end	3-5 mechanical errors	The topic is defined and there are 2-3 supporting points
2 points	2 paragraphs, 2-3 sentences/ paragraph	There is some organization of supporting points	6-10 mechanical errors	The topic is loosely defined and there are 1-2 supporting points
1 point	1 paragraph, 3 sentences/ paragraph	There is little organization	More than 10 mechanical errors	The topic is barely defined with little or no supporting points

Grading Rubric

What your child produces will depend on their capabilities. Use this as a rough guide, but don't be afraid to modify it to meet your child's needs.

Mechanics: spelling, punctuation, and grammar

Middle School					
	Length	**Organization**	**Mechanics**	**Content**	**Style**
4	5 paragraphs; 5 sentences/ paragraph	There is an introduction, 3 body paragraphs, and conclusion	Up to 2 mechanical errors	The topic is clearly defined and there are 3 or more supporting points	Clear voice and style, consistent throughout
3	4 paragraphs, 4 sentences/ paragraph	There is a clear beginning, middle, and end	3-5 mechanical errors	The topic is defined and there are 2-3 supporting points	Voice and style is mostly consistent
2	3 paragraphs, 3 sentences/ paragraph	There is some organization of supporting points	6-10 mechanical errors	The topic is loosely defined and there are 1-2 supporting points	Voice or style is somewhat present
1	2 paragraphs, 3 sentences/ paragraph	There is little organization	More than 10 mechanical errors	The topic is barely defined with little or no supporting points	Voice and style are not developed

Grading Rubric

What your child produces will depend on their capabilities. Use this as a rough guide, but don't be afraid to modify it to meet your child's needs.

Mechanics: spelling, punctuation, and grammar

High School					
	Length	**Organization**	**Mechanics**	**Content**	**Style**
4	1-3 pages, 7+ paragraphs	There is an introduction, 5+ body paragraphs, and conclusion	Up to 2 mechanical errors	The topic is clearly defined and there are 5 or more main supporting points	Clear voice and style, consistent throughout
3	5 paragraphs, 5 sentences/ paragraph	There is a clear beginning, middle, and end	3-5 mechanical errors	The topic is defined and there are 4 supporting points	Voice and style is mostly consistent
2	4 paragraphs, 4 sentences/ paragraph	Supporting points are mostly organized into paragraphs	6-10 mechanical errors	The topic is loosely defined and there are 3 supporting points	Voice or style is somewhat consistent
1	3 paragraphs, 3 sentences/ paragraph	There is some organization of supporting points	More than 10 mechanical errors	The topic is loosely defined and there are 1-2 supporting points	Voice or style is somewhat present

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