

How TO BECOME
Spelling Bee
Royalty

PROJECT # C6

Purpose and Hypothesis

Purpose: What's the best way to study?

Hypothesis: My hypothesis is that writing the words over and over again on paper will get the best results because previous studies have shown that repetition is one of the best ways to learn. I expect the study method of not studying at all to do the worst.

RESEARCH

I got some of the information that helped me from my teachers, who gave me and my class advice about some study methods that we could use for spelling tests at school. I figured that if the teachers suggested them, they would be good.

Some of the information that I already knew was that previous studies have proven that repetition is a great way to learn so that helped me form my hypothesis.

I listed some of the websites that I visited and wrote a brief sentence about the websites that helped me with my project.

MATERIALS



ONE COMPUTER



3 VOLUNTEERS



EXPERIMENT

I tested this by making 5 lists of words, and 5 different study methods. I also got 3 volunteers, all from fourth grade. I did my experiment over the course of 6 days.

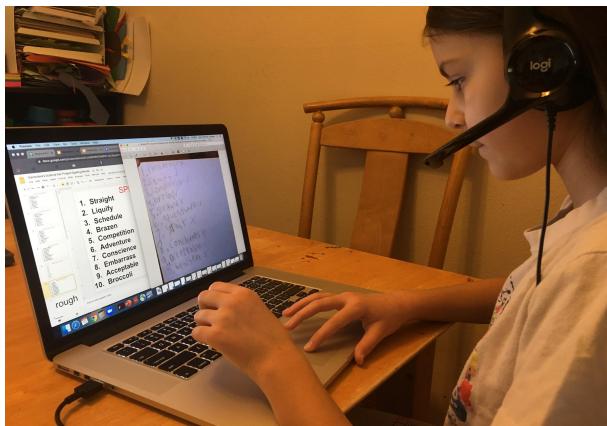
I had all of my volunteers log on to a Zoom video call and I first gave them a control test (to make sure that they didn't just do well because they already knew the words from previous events or something). After the base test, I had them use a study method for 10 minutes. Then, I let them go for the day.

The next day, I would have the test subjects take a test on the words from the previous day. I asked them to take a picture of all of their results and send them to my mom. Then, I gave them a new base test. After the new base test on the new words, I had them study the new words for 10 minutes. After that, I let them go for the day. I continued that process until I had given them all of the study methods.

I used a graph that I made (see slide 8) and the pictures that the test subjects had given my mom to find out the tested #1 best study method.



PHOTOS





PHOTOS





PHOTOS



Genevieve's Science Fair Project Spelling Words

SPELLING LIST #1

- 1. Proverb
- 2. Meteorological
- 3. Salutation
- 4. Lyric
- 5. Entertain
- 6. Symbolism
- 7. Mystery
- 8. Imperative
- 9. Overdue
- 10. Roommate

rough
oxygen

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Genevieve's Science Fair Project Spelling Words

SPELLING LIST #2

- 1. Grudge
- 2. Which
- 3. Payment
- 4. Sleigh
- 5. Daybreak
- 6. Limb
- 7. Communicate
- 8. Beautiful
- 9. Unusual
- 10. Fuel

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Genevieve's Science Fair Project Spelling Words

SPELLING LIST #3

- 1. Characterization
- 2. Chairperson
- 3. Conquer
- 4. Beacon
- 5. Astride
- 6. Ecology
- 7. Electromagnet
- 8. Resistor
- 9. Consumer
- 10. Specialization

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Genevieve's Science Fair Project Spelling Words

SPELLING LIST #4

- 1. Rough
- 2. Oxygen
- 3. Referee
- 4. Favorite
- 5. Freight
- 6. Haiku
- 7. Repetition
- 8. Candlestick
- 9. Dashboard
- 10. Thumb

rough
oxygen

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Genevieve's Science Fair Project Spelling Words

SPELLING LIST #5

- 1. Straight
- 2. Liquify
- 3. Schedule
- 4. Brazen
- 5. Competition
- 6. Adventure
- 7. Conscience
- 8. Embarrass
- 9. Acceptable
- 10. Broccoli

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oxygen

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ANALYSIS

Name of Subject	List #1: Base Test	List #1 - After Studying - Study Method: Saying each word out loud and then saying how it's spelled	List #2 - Base Test Score	List #2 - After Studying - Study Method: Writing the words in sentences	List #3 - Base Test	List #3 - After Studying - Study Method: Writing Each Word 3 times	List #4 - Base Test Score	List #4 - After Studying - Study Method: Flashcards	List #5 - Base Test Score	List #5 - After Studying - Study Method: Test them without letting them study
Subject #1	4	7	6	10	5	5	5	8	1	5
Subject #2	8	7	10	10	6	9	9	10	6	6
Subject #3	8	9	10	8	4	5	7	8	3	4
Average	7	8	9	9	5	6	7	9	3	5

I made a chart based on the results that I got from my test subjects.

I used a website called Google Sheets to make my graph. It helped me map out all of the results.

Once I had the average score, I was able to easily figure out which of the test results worked the best.

CONCLUSION

My hypothesis was incorrect. There was a tie between two spelling methods- and writing the words on paper repetitively wasn't even one of them! The 2 best spelling methods were writing the words in sentences and flashcards. Writing words in sentences is a form of mnemonics. Mnemonics are tools that help people remember things. You have probably used mnemonics many times, even if you didn't realize it. Mnemonics help you remember things using songs, poems, rhymes, acronyms, phrases, images, or sentences. Flashcards are helpful because when you use them, you are actually using something called active recalling. Practicing active recall creates stronger neural connections in the brain, which helps make it easier for you to remember things.

REAL WORLD CONNECTION

Some people have a lot of trouble spelling, and they get bad grades for forgetting how to spell words correctly. I decided to study this topic for people like that. If someone could find the best way to study, people that aren't the best spellers could just study with that one method a lot instead of searching for a best way themselves, or trying to do every study method that there is in the world, but not spending much time on each one. Also, these study methods help improve memory, so, even though I only tested spelling, these study methods would work if you needed to practice for things like a math test (for example, you could do math flashcards), history assignments, and other things like that.

WORKS CITED

<http://www.webclearinghouse.net/volume/9/HUMPHREY-Highlight1.php>

This website helped me find information about previous science fair projects that other people have done on the same topic as me.

<http://csefuscedu/History/2005/Projects/50305.pdf>

This website helped me find information about previous science fair projects that other people have done on the same topic as me.

<http://csefuscedu/History/2013/Projects/J0719.pdf>

This website helped me find information about previous science fair projects that other people have done on the same subject as me.

https://www.sciencebuddies.org/science-fair-projects/project-ideas/HumBeh_p018/human-behavior/visual-memory?from=Home#procedure

This website helped me find information on how to do experiments about memory.

<https://www.apa.org/science/about/psa/2016/06/learning-memory>

This website taught me some things about memory techniques.

<https://www.carsondellosa.com/blog/studying-101-why-flash-cards-work/#:~:text=Flash%20cards%20are%20strategically%20designed%20to%20enhance%20and%20encourage%20active%20recall&text=Practicing%20active%20recall%20creates%20stronger,effective%20method%20for%20improving%20memory>

This website taught me about flash cards and how they work

<https://examples.yourdictionary.com/examples-of-mnemonics.html>

This website taught me about why writing words in sentences works.