📚 Daily Village Assignment - Age 13

Friday, February 6, 2026

📖 Scripture of the Day

Doctrine & Covenants 88:118

"And as all have not faith, seek ye diligently and teach one another words of wisdom; yea, seek ye out of the best books words of wisdom; seek learning, even by study and also by faith."

💭 Faith Thought

Learning by Study AND Faith

This verse teaches us that true education combines intellectual effort with spiritual understanding. As you study today, remember that knowledge becomes wisdom when we seek the Lord's guidance. Take a moment before your studies to pray for understanding and insight.

Challenge: As you work through today's assignments, pause before each subject and ask yourself: "How can I see God's hand in this?" Whether it's the order in mathematics, the lessons of history, or the wonder of science—all truth testifies of our Creator.

📝 Word of the Day

Catalyst (noun): A substance that speeds up a chemical reaction without being consumed; a person or thing that precipitates change or action.

Example: "The discovery of electricity was a catalyst for the Industrial Revolution."

Your turn: Write a sentence using "catalyst" to describe something or someone who inspired positive change in your life or community.

🕰️ This Day in History

February 6, 1952: Queen Elizabeth II became Queen of the United Kingdom after the death of her father, King George VI. At age 25, she began a reign that would become the longest in British history, lasting over 70 years until her passing in 2022.

Reflection: Elizabeth II served with dedication and duty throughout her life. How can we show similar commitment to our responsibilities, whether in family, church, or community?

🔢 Mathematics

Algebraic Expressions & Polynomials

Today's Focus: Factoring Quadratic Expressions

Review: A quadratic expression in the form $ax^2 + bx + c$ can often be factored into two binomials.

Practice Problems:

1. Factor: $x^2 + 7x + 12$
2. Factor: $x^2 - 5x + 6$
3. Factor: $2x^2 + 7x + 3$
4. Factor: $x^2 - 9$ (difference of squares)
5. Challenge: Factor: $3x^2 - 11x - 4$

Real-world application: The trajectory of a basketball follows a parabolic path. If the height h (in feet) of a shot is modeled by $h = -16t^2 + 20t + 6$, where t is time in seconds, factor this expression and determine when the ball hits the ground (h = 0).

📜 History

The Cold War Era: Space Race

The Space Race (1955-1972) was a competition between the United States and Soviet Union for supremacy in spaceflight capability. It had its origins in the nuclear arms race between the two nations following World War II.

Key Events:

- **1957:** Soviet Union launches Sputnik 1, the first artificial satellite
- **1961:** Yuri Gagarin becomes the first human in space (Soviet)
- **1969:** Apollo 11 lands on the Moon (USA) - Neil Armstrong and Buzz Aldrin
- **1972:** End of Apollo program

Assignment: Research and write a 2-paragraph essay on one of these topics:

- Why was the Space Race significant beyond just reaching the Moon?
- What technologies developed for space exploration do we use in everyday life?

- How did the Space Race affect American education and science programs?

🔬 Science

Chemistry: Chemical Reactions & Catalysts

Building on today's Word of the Day, let's explore catalysts in chemistry!

What is a Catalyst?

A catalyst is a substance that increases the rate of a chemical reaction without being permanently changed itself. Catalysts work by lowering the activation energy needed for a reaction to occur.

Examples in Nature:

- **Enzymes** are biological catalysts. Amylase in your saliva breaks down starches into sugars.
- **Chlorophyll** catalyzes photosynthesis in plants.
- **Iron** in hemoglobin helps catalyze oxygen transport in your blood.

Assignment:

1. Draw a diagram showing how a catalyst lowers activation energy in a reaction.
2. Research one industrial process that uses a catalyst (ex: catalytic converters in cars, Haber process for ammonia).
3. Write 3-4 sentences explaining why catalysts are important for both living organisms and industrial processes.

🎉 BONUS: Friday Kitchen Science Experiment!

Optional fun activity - try this if you have time!

🧪 Experiment: DIY Catalyst - Hydrogen Peroxide Decomposition

Materials:

- Hydrogen peroxide (3% from medicine cabinet)
- Active dry yeast
- Warm water
- Clear glass or jar
- Dish soap (optional, for dramatic effect)
- Food coloring (optional)

Procedure:

1. Pour about 1/2 cup hydrogen peroxide into the glass.
2. (Optional) Add a squirt of dish soap and a few drops of food coloring.
3. Mix 1 tablespoon of yeast with 3 tablespoons of warm water. Stir for 30 seconds.
4. Pour the yeast mixture into the hydrogen peroxide.
5. Watch what happens!

What's Happening?

Hydrogen peroxide (H_2O_2) naturally decomposes into water (H_2O) and oxygen gas (O_2), but this process is usually very slow. The enzyme catalase in yeast acts as a catalyst, dramatically speeding up this decomposition. The oxygen gas produced creates bubbles and foam (especially if you added soap). The reaction also produces heat—feel the outside of the glass!

The Chemistry: $2H_2O_2 \rightarrow 2H_2O + O_2$

Challenge Questions:

- What evidence do you see that a gas is being produced?
- Why does the container feel warm?
- What would happen if you used more yeast? Less yeast?
- Try the experiment with cold vs. hot hydrogen peroxide. What difference do you notice?

Connection to Life: Your body produces hydrogen peroxide as a byproduct of cellular processes. The enzyme catalase in your cells breaks it down constantly to prevent damage. This same enzyme is what's making the bubbles in your experiment!

📖 Reading

Comprehension & Analysis

Reading Selection: Choose one of the following:

- One chapter from your current book
- A short story from an anthology
- Three articles from a reputable news source on current events

Analysis Assignment:

After reading, write a one-page response addressing:

1. **Summary:** What were the main ideas or plot points?
2. **Author's Purpose:** What was the author trying to communicate or accomplish?
3. **Literary Devices:** Identify at least two literary devices (metaphor, symbolism, foreshadowing, irony, etc.) and explain their effect.
4. **Personal Connection:** How does this reading relate to your life, other things you've learned, or current events?

✍️ Writing

Persuasive Essay Planning

Topic: "Should space exploration be a priority in the 21st century?"

Today's Task: Create a detailed outline for a persuasive essay. Your outline should include:

1. **Thesis Statement:** Your clear position on the topic
2. **Introduction:** Hook, background information, thesis
3. **Body Paragraph 1:** First main argument with supporting evidence
4. **Body Paragraph 2:** Second main argument with supporting evidence
5. **Body Paragraph 3:** Counterargument and your rebuttal
6. **Conclusion:** Restate thesis, summarize key points, call to action

Requirements:

- Include at least 3 specific pieces of evidence or examples for each main argument
- Address at least one opposing viewpoint fairly
- Use proper outline format (Roman numerals, capital letters, numbers)

Next assignment, you'll write the full essay from this outline.

Have a wonderful day of learning! Remember to take breaks and ask questions.

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