A few words regarding copyright...

Hi there!

We're glad you're using this resource. Continue to check our website (**realsciencechallenge.com**) to find more resources. And, sign up for our newsletter to receive updates on materials that will be available soon.

We spend countless hours writing, researching, editing and generating graphics/charts for each question. We want to continue creating useful content for you to use - however, we also want to ensure we are being fairly compensated for it.

Therefore, below are the terms and conditions for use of our materials.

What is allowed:

- photocopying our content for your students to use.
- posting a copy of our content (ie. questions, rubrics) on a password protected site for your students to access and/or complete.
- copying our questions into your tests or assignments. Please give credit in this case.

What is not allowed:

- Selling our content.
- Repackaging our content in your own materials and then selling it. NOTE: giving credit to us still does not make this okay.
- Distributing and/or posting our content online (for example, on social media or a blog.

Thank you for supporting us. And, we look forward to helping you with your teaching practice. Please feel free to reach out to us if you have any questions or suggestions.

Sincerely,

REAL Science Challenge

Grade 8 Science Study Circles

Topics: Kinetic Molecular Theory & Atomic Structure

Goals:

1. Work collaboratively to create a product.
2. Demonstrate your understanding **and your ability to think critically**.
    - **Going Deeper:** Analyze principles, limitations, and assumptions.
    - **Going Further:** Apply concepts to new or extreme scenarios; predict future developments.
    - **Making Connections:** Link concepts to real-world phenomena, technology, or other sciences.
3. Include making **personal connections** to the content.

Step 1: Choose Your Format

Select one of the following (or propose your own):

- Infographic or Poster
- Short Video or Animation
- Podcast Episode
- Interactive Quiz/Game
- Physical or Digital Model
- Print material (ie. Zine, report, etc.)

Step 2: Add a Critical Thinking Challenge

Choose **one challenge** from following:

- Choose a food your family cooks often. Explain how particle motion and energy transfer make it possible.
- Pick a device you use daily (phone, microwave). Explain how atomic structure makes it work.
- Create an analogy for atomic structure using something from your hobbies (sports, music, gaming).
- Connect particle theory or atomic theory to a cultural tradition or family activity.
- Think about a local environmental issue (air quality, water pollution). How do particle behavior or atomic interactions play a role?

Step 3: Collaborate Effectively

- Assign roles (researcher, designer, editor, presenter).
- Use shared tools (Google Docs, Canva, Flip, etc.).
- Document contributions for accountability.