

# Chemistry Principles are the Bomb!



Kim Christmas  
Physical Science FLEx Project

# Deep Hope



My deep hope is that.....

"We all know we're wonderfully  
DESIGNED with a PURPOSE."

As we discover the design, we  
discover the Designer.

# FLEx Long-Term/Essential Learning Targets:

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- ❖ We can bring glory to God as we provide a real and basic need to the community as servant workers.
- ❖ We can discover a purposeful value for human and earthly creation through active participation in chemical reactions.



# FLEx Curriculum Outcomes:

## What are we discovering?

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1. I can...recognize chemical formulas and classify chemical reactions.
2. I can...understand chemical reactions between acids, bases and binding agents.
3. I can...reflect the creativity of God through the thoughtful design of bath bombs.



# Habits of Learning



## Joy-filled Collaborating

Students successfully work in teams toward the common goal of creating scented bath bombs using basic principles of chemistry.



## Curious Thinking

The class wonders how to best customize their gift designs with color, shape and scents. They anticipate the way chemicals react when combined.



## Gracious Communicating

Students write a personal letter to the residents of the Tulare Lighthouse Rescue Mission, bringing encouragement and thoughtful messages with a gift.

# See God's Story



Our love for the Creator is most evident through our love and care of others. We are commissioned in John 13:34-35 to “love one another, even as I have loved you, that you also love one another. By this all men will know that you are My disciples, if you have love for one another.” We are servants towards those who are in need when we “honor others above ourselves” (Romans 12:10).

Students can learn how to care for others and show love and compassion by helping provide the most basic of needs.



# Storyline

Discover the Designer



# Storyline: How do students “see” God’s Story?

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Students are able to “See God’s Story” through this FLEx because as servant workers we are identifying the needs of the community and fulfilling a real need. We play an active role in using God’s created order and designs in chemistry to show God’s love to others. Through skill and knowledge learned, students can serve others and put their needs first.





# Formational Learning Experience:

- ★ Real work: Experiment with chemical reactions between acids and bases to create soothing scented bath bombs. Handwritten letters provide encouragement through God's Word to those receiving the bath bombs.
- ★ Real needs: We are called to be God's hands and feet to those around us and to love others as we love God and ourselves. When we look outside of our own needs and wants to view others, we can see some people in our community lack the most basic of needs for hygiene.
- ★ Real people: Tulare Lighthouse Rescue Mission residents from the community





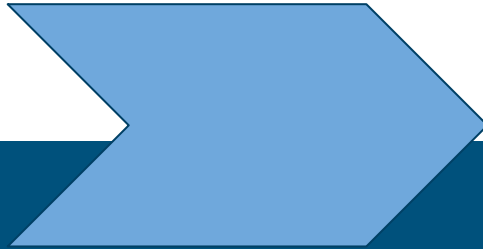
# Throughlines:



## Order Discovering

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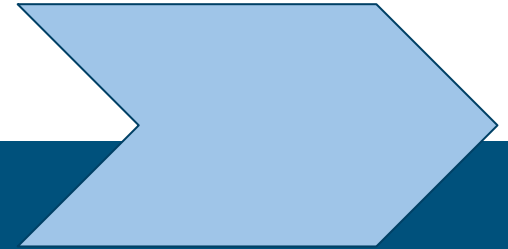
Students successfully work in teams toward the common goal of creating scented bath bombs using basic principles of chemistry.



## Image Reflecting

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Students write a personal letter to the residents of the Tulare Lighthouse Rescue Mission, bringing encouragement and thoughtful messages with a gift.



## Servant Working

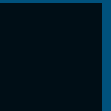
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The class wonders how to best customize their gift designs with color, shape and scent while keeping the best interest of others in mind.

# Througlines Through Photos

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For there will never cease to be poor in the land. Therefore I command you, 'You shall open wide your hand to your brother, to the needy and to the poor, in your land.'  
- Deuteronomy 15:11



# Througlines Through Photos

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# Invite, Nurture, & Empower



## Invite

Students listened to a guest speaker from the Tulare Lighthouse Rescue Mission tell how the unhoused populations are benefitted by donations from the community. They also learned about the impacts of homelessness on the community.



## Nurture

Students are invited to explore the intricate beauty of chemical reactions through a faith-integrated lens. By examining how acids and bases interact, students begin to see how scientific principles reflect the order and intentionality of God's creation. Through online simulations and hands-on laboratory experiments, students gain a deeper understanding of how chemistry not only helps explain the natural world, but also equips us to be thoughtful stewards of the environment.



## Empower

Students were invited to express their encouragement and care through written form. Handwritten letters convey to the readers how much their Creator loves and cares for them, no matter what their economic status or circumstances.





# Invite



Karen Beemus, the Executive Director of the Lighthouse Rescue Mission, came as a guest speaker to share how Lighthouse helps the community at large. She shared how small gestures shown to those in need make such a big, positive impact on those who feel forgotten or ignored.

- Serve meals to over 100 people a day
- Facilities include pocket homes for families, emergency shelter, women's facility, and men's facility.
- Open 365 days a year, 24 hrs. a day
- Provide a hand "up" not a hand out.



**TULARE**  
LIGHTHOUSE  
RESCUE MISSION



# Nurture



# Nurture

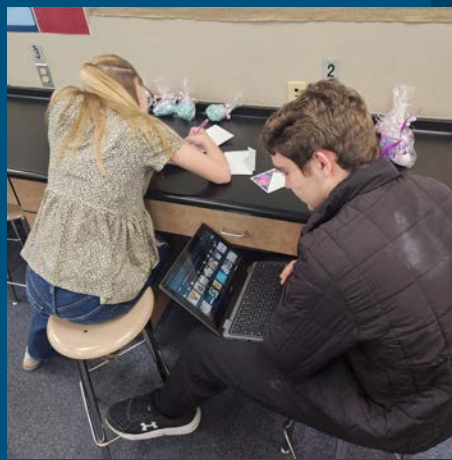
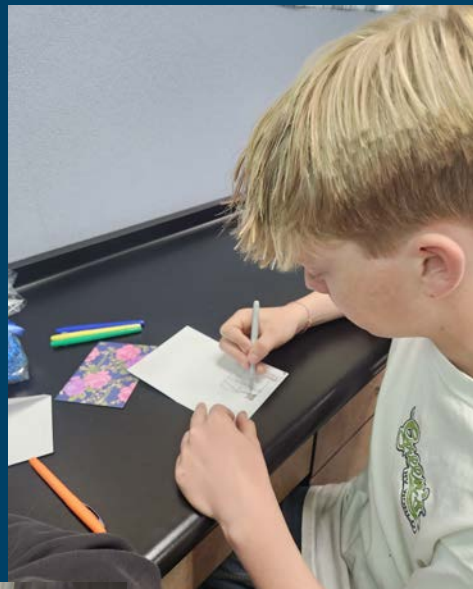


Students used the beauty and creativity of design to plan and build individualized bath bombs. Their designs included combining the right scent and color combinations that would be pleasing. Then, they weighed the options of which mold would work best to fit the overall plan design.





# Empower



# Empower



Students were empowered to really make their gift giving more impactful for the Kingdom of God. Each student hand-wrote notes of encouragement, love, support and Godly wisdom for each bath bomb gift bag. Through words, pictures, colors, and thoughtful scriptures, each student made sure that whomever received the gift would know the powerful love of their Creator.



# Student Reflections

Students reflected back on this project in three ways:

- Creativity & Purpose: God created us with the ability to be creative and purposeful. How did you reflect God's creativity in the way you designed your bath bomb?
- Faith Integration: How does studying chemistry help you better understand God's creation and how we care for it?
- Serving Others: This lab allowed you to create a product that can be a gift to someone else. How does this reflect the biblical value of serving and blessing others with your work?

"I acknowledged that God has given me the opportunity and ability to design these with wonderful colors and scents, and am extremely grateful for all he has created and gifted me with."

"I'm just in awe with the order God designed for His creation."

"We are sometimes more blessed than others and showing that we care about people means a lot to them."

"Learning about chemistry helps me understand how powerful God is and all he can do for us."

"As christians we are a family under God and should treat others the way we would want to be treated."

"I liked to witness God's creativity by is seeing the shapes turn out all differently, this reminded me of how God shapes us differently."

"God designed us to use our ideas to create something beautiful and purposeful especially for the sake of those around us."

"We can learn to care for his creation by considering more of what we see around us and learning how to take simple God-made things and put them into good use."

# Teacher Reflection

I am truly grateful for this project, as it was eye-opening for both my students and me. In the busyness of daily life, we often overlook the remarkable order of God's creation. It was important to me that students recognize how even the smallest chemical interactions reflect intentional design. Additionally, this project encouraged students to look beyond their own needs and extend kindness to others. While some students felt naturally comfortable serving strangers, others were challenged to step out of their comfort zones and engage with deeper purpose. I was deeply moved by their commitment—handwriting over 90 personalized cards and carefully assembling each gift bag with thought and care. This project reminded me not to underestimate my students; their work ethic, sincerity, and intentionality were truly inspiring. It was a blessing to witness their growth, both academically and spiritually.