



# Good Works Shine - Science Devotion - Influence

*"You are the light of the world. A town built on a hill cannot be hidden. Neither do people light a lamp and put it under a bowl. Instead they put it on its stand, and it gives light to everyone in the house. In the same way, let your light shine before others, that they may see your good deeds and glorify your Father in heaven."*

Matthew 5:14-16

## Main Spiritual Point:

Jesus wants us to shine in dark places.

## Science Concept:

Glow sticks are illuminated by a chemical reaction that gives off energy in the form of light. A common glow stick holds two liquids. One liquid is contained in a special glass compartment inside the glow stick and is typically clear and colorless. The other liquid surrounds the glass container and is typically colored. When a glow stick is bent or snapped, the glass container inside breaks releasing the clear liquid inside. The colored and clear liquids now are able to come into contact, causing a chemical reaction called "Chem-illuminesence". The result of the chemical reaction causes electrons to jump temporarily to an excited state, giving off their energy in the form of light. We see this reaction occur naturally in deep-sea underwater marine life and even in a simple lightning bug.

## Time Needed:

15 minutes for basic set up and 10 minutes to execute the devotion with kids.

## Difficulty:

Moderate. Requires separating the liquid contents of glow sticks into two separate containers. This requires time and tediously breaking the internal glass container inside a glow stick that holds a special liquid.

## You will need:

- Two transparent glass containers to hold the two liquids inside a common glow stick
- Several glow sticks of the same color
- Scissors
- Large bowl (to cover glass container)
- Ability to make the room as dark as possible. Consider placing black paper over any windows and under the gap of doors. The darker the room, the more vibrant the demonstration. Any exterior light will negatively affect the outcome.

## Tips for Success:

- Minimize outside light including windows, cracks under doors and as much light as possible.
- Use caution when cutting open a glow stick. Wear protective gloves.
- Cut through the soft plastic at the top of the glow stick, being careful not to cut into the thin glass tube. Dump the colored contents into clear cup #1.
- Remove the sealed, glass tube and wipe it clean with a paper towel.
- Over the top of clear cup #2, carefully break the glass tube, spilling the contents into the second cup.
- Repeat this process several times with several glow sticks to create a lot of liquids 1 and 2.
- Once the liquids come in contact with air, they will slowly lose their potency. Therefore, separate the contents of the glow sticks very close to when you will preform the actual demonstration.
- When ready, mix the two liquids together. Swirl and stir to ensure a complete reaction.
- If the liquid contents are warm, the reaction will be brighter. Simply create a warm water bath and place the uncut glow sticks in the warm water prior to cutting.

# Good Works Shine - What to Say to Kids

1. The Bible opens with these words, "In the beginning God created the heavens and the earth. Now the earth was formless and empty, darkness was over the surface of the deep, and the Spirit of God was hovering over the waters. And God said, "Let there be light," and there was light."
2. However, people sinned, doing what God said not to do. John 3:19 says, "This is the verdict: Light has come into the world, but people loved darkness instead of light because their deeds were evil."
3. God wanted to rescue people from the darkness, so He sent His Son Jesus into the world. Jesus told people, "I am the light of the world. Whoever follows me will never walk in darkness, but will have the light of life."
4. Today we have two very special liquids. Let's call the first liquid "Christians". Let's call the second liquid, "Good Deeds". This science experiment is very simple! We just need mix these two liquids, "Christians" and "Good Deeds" together. Trust me, something amazing will happen, but in order for it to work, these two liquids must be in the same place at the same time! We must have BOTH the first liquid "Christian" and the second liquid "Good Deeds" combined to make it work.
5. Question: How does someone become a "Christian"? It is through Jesus! The Bible is pretty clear in Acts 4:12, "Salvation is found in no one else, for there is no other name under heaven given to mankind by which we must be saved." The Bible also says in Romans 10:13, "Everyone who calls on the name of the Lord will be saved." We will call this first liquid a "Christian", someone who has been forgiven by Jesus.
6. Question: What are "Good Deeds"? (Helping someone, being kind, treating someone special even if they do not deserve it). Can a person do good deeds and not yet be a Christian? (Yes, plenty of people do good things but and not Christians, are not forgiven by God and do not love Jesus).
7. Jesus is the Light. Jesus also tells every Christian in Matthew 5:14-16, "You are the light of the world. A city on a hill cannot be hidden. Neither do people light a lamp and put it under a bowl. Instead they put it on its stand, and it gives light to everyone in the house. In the same way, let your light shine before others, that they may see your good deeds and glorify your Father in heaven." How can your life as a Christian cause others to glorify your Father in heaven? (See good deeds and understand source is God)
8. Once someone is forgiven and is a "Christian", God gives them a special mission of doing "Good Deeds". Something amazing happens when a "Christian" does "Good Deeds". The Bible says their light shines and other people can see in the darkness and can glorify God. Have you ever seen a Christian do a good deed? Name some! (Helping the weak, give to the poor, be kind even when someone is being mean)
9. Before we combine these liquids together, let's turn out all the lights to remind us how dark this world can really be. Now, let's have "Christians" do "Good Deeds" and see what happens. (Combine the liquids)
10. These two liquids are the ingredients found in a glow stick. How can glow sticks be useful? (A glow stick can be used to light up dark places. People often use glow sticks when trick-or-treating on dark nights).
11. This new liquid combination, "Christians Doing Good Deeds" is brightly shining in this dark room. Pretty cool, huh? Now, let's cover up this special glowing liquid with a big bowl. What happened? (The light is no longer shining in the dark room). Is the light still shining? (Yes.) Can we see the light? (No, it is hidden and covered up.) Is the light helping people see in the darkness? (No.) What does God want us to do with our light? (Shine before others, that they see good deeds and glorify your Father in Heaven.)
12. It is silly to take a bright glow stick and put it into your pocket. What a waste! It should be shown!
13. Jesus is the Light. He can shine through us as Christians as we do good deeds. Our good deeds shine in dark places and help other people find their way to God and forgiveness through Jesus.
14. Our main point today is "Jesus wants us to shine in dark places." How can we be a shining light to others around us in a dark world? (be nice and helpful so people will notice we are different, then we can share His message of forgiveness)
15. Before He can shine through us, however, we have to become a Christian through forgiveness of our sins. It starts with asking God for forgiveness and being saved from our sins. ONLY THEN can we begin to do good deeds through Him and shine before others.
16. 1st John 1:5 says, "This is the message we have heard from him and declare to you: God is light; in him there is no darkness at all." God wants us to be like Him and be the light.