

## LIGHTLAB WORKSHOP TOPICS AND DESCRIPTIONS

### Session I LET THERE BE LIGHT!

- Learn about sources of light and the importance of sunlight.
- Test for conductors and insulators with simple circuit, and create sparks.
- Discuss why Jesus is called the Light of the World (**Memory Verse** John 8:12).

### Session II WHAT IS THIS LIGHT?

- Meet scientists Faraday and Maxwell, both devout Christians, who discovered the mystery of light's nature.
- Test various items for their magnetic properties and discuss results. Explore the behavior of a compass needle near an electric wire.
- Discuss how Jesus was a mystery at first, until he fulfilled his mission as the Messiah (**Memory Verse** 2 Corinthians 4:6).

### Session III WHAT DO YOU SEE?

- Learn the history of mirrors and show how an image is formed
- Create and record a variety of reflections.
- Discuss how the Bible acts as the mirror in James 1:22-25, and share God's plan of salvation. (**Memory Verse** Romans 5:8)

### Session IV REFLECT HIS LIGHT!

- Look closely at the surface of mirrors and learn about the law of reflection
- Measure reflected angles! Learn how periscopes work. Reflect words twice.
- Discuss how those who put their faith in Christ can reflect his light to others. Visit the day of Pentecost (**Memory Verse** Acts 2:38).

### Session V ARE YOU IN HIS LIGHT?

- Explain Newton's discovery of how a prism splits light into rainbow colors
- Make a color wheel and spin them to observe how they recombine to white.
- Discuss how God gave people different gifts to serve Him in church. He is glorified through our unity. (**Mem Verse** 1<sup>st</sup> Corint 12:4)

### Session VII FOCUS ON THE LIGHT!

- Learn about vision and why some of us need glasses to see better.
- Shine light through different types of lenses and create images
- Discuss apostle Paul's conversion when God took away his sight and fully restored him. ( **Memory Verse** Philippians 3:14)

### Session VI WHAT IS THAT COLOR 1 session?

- Describe how our eyes perceive close to 17 million color shades
- Combine colors with spinning wheels and perform color addition
- Tell the Gospel message with the colors detected in eight Bible verses (**Memory Verse** John 11:25)

## Sessions VII + VIII WHAT IS THAT COLOR 2 sessions?

- We will explore color addition and subtraction, through activities with computer color palette, color wheels and filters.
- The workshop will also explain why primary colors of paint are RBY compared to light's primary colors RGB.
- Our highlighted scientist will be none other than James C. Maxwell who developed a mathematical method that produces the different hues by combining primary and secondary colors. Talk about his faith as a devout Christian.

*"I think men of science as well as other men need to learn from Christ, and I think Christians whose minds are scientific are bound to study science that their view of the glory of God may be as extensive as their being is capable."* James Maxwell