Color VR Plan

For a **getting started guide**, **click here.**
Please join the **Google+ D62 Cardboard Explorers Community** **here**.

LESSON BACKGROUND

Grade: 4th **# Students:** Small groups

If you wanted to adapt higher/lower, the Expedition is good for any level. The text set's lexile levels are adaptable for grades 2-12 from within Newsela and some are available in Spanish. Look at the RI 1 & 7 standards for that grade level and adjust the think sheet and questions to reflect how that standard is slightly more/less complex.

Curricular Focus / Unit of Study/ Standards/ Learning Targets

Reading - Informational - Central Message & Details

- **CCSS.ELA-LITERACY.RI.4.1** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- **CCSS.ELA-LITERACY.RI.4.7** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

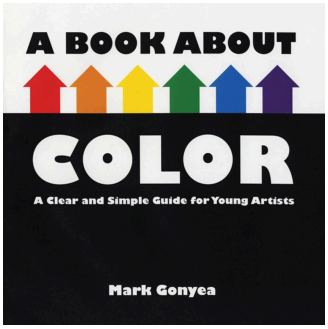
When in the unit will you use Virtual Reality?

Anytime. This is a flexible strategy.

What non-virtual reality activities have you ALREADY done / planned for this unit?

This lesson can stand alone or be a part of a bigger unit of study.

PRIOR to VR:



- **Read Aloud:**
  - Book: A Book about Color: A Clear and Simple Guide for Young Artists by Mark Gonyea (you can borrow a copy from the Dream Lab if you'd like)
  - Article from Nasa adapted by Newsela. In English & Spanish - Why is the sky blue? -- ¿Por qué el cielo es azul?
- **Model**: share a selection in the book/article. Model how some messages are explicit and others inferred. Connect the details to the messages. Point out when the author presents information with different visual techniques.
  - Ex: "*The author says complimentary colors work well together explicitly. Then there's an illustration of Christmas trees with red and green ornaments to show how they work well together. You can also find other complementary and analogous colors on the last page to see how they work well together there too.*"
  - Optional: spread the read aloud of the text(s) across multiple days or find ways other authors and artists confirm the author's messages.
- **Guided Practice:** Share Color - Message Study Think Sheet. Have students find two more messages in the text and the details that support the messages.
  - Kids will continue to fill it out for the virtual reality study.

STUDENT THINK SHEETS

iPads / Laptops - Color - Message Study
Google Docs

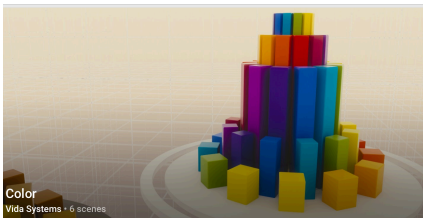
DAY OF

- Have students apply their Message Study skills to the virtual reality Google Expedition.
- Optional: Give students a choice in a magazine article at their reading level to apply the message study. (the more informational features it has, the better for standard RI 7). This is especially useful if students are rotating to the Virtual Reality area as a center.
    - **note:** articles can be about any topic. In fact, it might be wise to give students articles that don't have to do with color so they see the reading strategy as applicable to all informational text. Articles around color are listed in case you want to stick with the theme.
    - Articles around Color
        - EnChroma glasses help make colors pop for the colorblind -- Las gafas EnChroma ayudan a las personas con daltonismo a ver colores muy vivos
        - The Internet dress-color mystery
        - When sharks glow green, what does it mean? -- ¿Qué significa cuando los tiburones adquieren un color verde brillante?
- **note:** the graphic organizer can include just the first page, or as many of the second page is necessary for how many times you apply it throughout the texts.

VIRTUAL REALITY PLANNING

Where are you going? What tool(s) will you use?

- *Google Expeditions*: ***COLOR-*** could use all 6 spheres. These 3 especially:
    - **What is Color?** Features to draw out main messages including wavelength graphs and the arrows that indicate how color is perceived based on absorption.
    - **How Other Species See Color** Features dots above the same painting to show photoreceptor cones in different animals. Paintings show what it looks like to other animals to combine photoreceptor cones and other processed light.
    - **Color Terminology** Features the same color mountain with different color principles applied to the to show hue, shade, tint, and tone. The 360 sphere places the viewer in the center of the color wheel above them to show the proximity and placement of primary, secondary, and tertiary colors.



How will you get students connected to the location?

- Expeditions App on Guide Tablet and VR Devices

How will this / these 360 immersive experience(s) enhance / transform this activity?

- Since there are no words on the viewfinder, the students have to depend on the visual details to make meaning of the main messages. The Color Terminology sphere has the possibility of helping viewers orient their bodies differently to see complementary and analogous colors if the teacher draws that out. The viewer also gets some meaning behind looking left to right along the wavelength spectrum in What is Color versus seeing it all at once. They can orient their body at the beginning point. Then "ride" the wave up and down from long to short waves.

QUESTIONING

What questions will you ask **BEFORE** the experience?	• How do authors communicate information? How do details help with communication?
What questions will you ask **DURING** the experience?	• What messages are presented? Are the messages explicit or inferred? What details and examples support the message? Pause periodically to fill out **Color - Message Study Think Sheet**.
What questions will you ask **AFTER** the experience?	• How do authors communicate information? How do details help with communication? Which details are most convincing to you as a reader?

How will students actively REFLECT and/or APPLY their new knowledge / understanding after the experience?
Students can pair up with a partner to compare/contrast the messages found in each text and the details that supported them. Revision should be encouraged.
Students could also put a star by each text's central message to evaluate which of the messages has the best support and details. A class conversation could also follow about the likelihood that a central message is explicit or inferred by a collection of other messages.

POSSIBLE EXTENSIONS

Could your students:

- **CREATE their own panoramas?** Students could create graphs/charts/and other representations about color- or about any topic of study - inquiry investigation. Then they could place them in a circle, and use one of the 360 Theta S cameras to capture a picture of their informational charts. Then, using www.storyspheres.com, students can add hotspots and explain their research and findings.
- **CREATE narration to existing panoramas?**
- **CONNECT with classes / experts from the locations they explored?**

If so, how would this EXTEND / ENHANCE their learning?
By creating their own panoramas with articles, they choose which techniques to express their messages and details to support those messages. They see that informational text is not something that has always existed but a product of intentional human choice. It enhances their understanding as readers to be writers. The virtual component lets people enter into their world they create and elevates engagement & novelty.