

4th Grade Fade Away, Fade Away, Fade Away Power Point Script

Week 1:

Slide 2:

Have you ever noticed at your house that a carpet covered by a chair is brighter than the area not covered by a chair? Or that your artwork hanging on the walls has faded over time? This happens because of exposure to light! Over time, sunlight coming in from the window will fade textiles and artwork in this room. So the question is, how can we prevent this from happening. Well first, we need to understand why light affects some things and not others.

Slide 3:

Light is a form of energy that travels in waves.

Slide 4:

Because light is a source of energy, it can drive chemical reactions within the art materials themselves, often leading to damage. The most frequent result of exposure to light is fading. Because the damage caused by fading is irreversible, museums try to limit light exposure by using filters or coverings on lamps and windows. Museums also rotate objects off display to limit the amount of light exposure they accumulate.

Slide 5:

If light exposure is not controlled, objects can fade severely. The bright orange shirt on this model has faded, except where the fabric was protected by the belt. Dyes and organic materials like leather, feathers, and textiles/fabrics are especially vulnerable to light damage.

Slide 6:

Many artifacts of US history that are now in museums are vulnerable to damage from light exposure. You will recognize many of these items and the people associated with them from your Social Studies class, so you know the importance of these historical artifacts.

Slide 7:

At the Carlos Museum objects that are vulnerable to fading, such as textiles and works on paper, are rotated off display after a year to limit their light exposure. This keeps the colors of these objects brighter for longer. Which object from the Americas gallery at the Carlos Museum would be most vulnerable to light fading? Answer: Quipu/khipu! Quipus/khipus are textiles used by the ancient Incas to record information like amounts of food, people, or animals. Because some quipus/khipus are dyed textiles, they are very vulnerable to light fading. The other objects made of metal and ceramic are not vulnerable to light fading.

Slide 8:

Many objects in our homes can also be damaged by excessive light exposure. Many of these objects are family heirlooms or personal possessions – even your own artwork. Today we will look at different materials that we can use to protect our valuables from light exposure and fading.

Week 2:

Slide 10:

At the Carlos Museum, you may have noticed that there are no windows in the galleries. That means the objects are protected from sunlight but what about other sources of light?

Slide 11:

Visible Light is the region of the electromagnetic spectrum between infrared and ultraviolet radiation. Visible light is made up of the colors of the rainbow. Ultraviolet radiation has shorter wavelengths and higher energy than visible light.

Slide 12:

Different light sources use different amounts of energy to generate light. Incandescent bulbs use the most energy and become hot to touch when left on. The color of the light from different bulbs also varies – incandescent bulbs produce a warm yellow light, while fluorescent bulbs produce a cool blue light.

Slide 13:

Museums use a lot of lights in galleries and display cases. Look how many lamps are on the ceiling in the Egyptian galleries at the Carlos Museum. You can see in the right-hand image that lamps are also inside display cases. It takes a lot of energy to power all of these bulbs. Through today's activity, you will help the Carlos Museum decide which lightbulb they should use to light their gallery.

Slide 14:

If you selected the LED lightbulb, you are ready to work in a museum! To be energy efficient, the Carlos Museum uses LED bulbs. Because LED bulbs do not get hot, cases with internal lamps do not build up heat. This makes LED lights the safest and most efficient way to light galleries and cases at the Museum.

Week 3:

Slide 16:

Visible Light is the region of the electromagnetic spectrum between infrared and ultraviolet radiation. Visible light is made up of the colors of the rainbow. Ultraviolet radiation has shorter wavelengths and higher energy than visible light. What is a source of UV light? (Answer: the sun)

Slide 17:

Artists make cyanotypes by exposing specially coated papers to ultraviolet radiation. The energetic waves turn the salts on the paper blue, leaving protected areas white. Today we will create our own sun prints using the sun's rays!