



# Only some humans can see this type of light

Polarized Light · Art · Biology · Vision · French · Harry Potter

1. Physics Girl (Diana Cowern) is having her friends “decorate” clear plastic with  
 cheap  expensive  colored  clear  tape  glue.
2. When participants look directly through their finished pieces at the light, they see  
 A. “nothing”      B. “Whoa! There’s colors!!!”
3. What’s the trick to seeing colors? Viewing the “art” through two
4. Engineers use this technique to look for \_\_\_\_\_ in material samples.
5. Light is not a rope going up and down, it’s a/n \_\_\_\_\_  
 going up and down, with a perpendicular \_\_\_\_\_ also waving.
6. In addition to linearly polarized light, there’s also  polarized light. (Select all that are correct.)  
 circularly  conically  elliptically  rectangularly  sinusoidally  un-
7.  Some  No diagonally polarized light can get through a vertically polarized filter.
8. To block light reflecting off water, you should be blocking the \_\_\_\_\_  
 polarization: you use a polarizing filter that’s oriented \_\_\_\_\_.
9. Light from \_\_\_\_\_ monitors is polarized because they have a polarizing filter in front of them.
10. The natural world is filled with \_\_\_\_\_ surfaces that can linearly polarize light.
11. Scattering in the sky and underwater can  polarize light.  
 A. completely      B. partially      C. not
12. Birds, insects, and even some mammals use the polarization of light for orientation when they can’t see the \_\_\_\_\_ directly.

Pause the video at “tilt your head left and right slowly while looking at the LCD screen.” And look for yourself. If you paused to late, backtrack a few seconds: pause the white.

13. Some people can see "Haidinger's Brush". Could you?

14. The tape turns the \_\_\_\_\_ of light as it's passing through.

15. It twists it differently for different \_\_\_ of light.

A. brightnesses      B. colors      C. speeds

16. Only certain colors have been twisted the right amount to pass through the

17. If you turn the second polarizing filter more, then it's different \_\_\_\_\_ that get through.

**Post Video Question:**

Why were there different colors of light in various parts of the artistic tape patterns even before the second polarizer was turned?