

Test for **Liquid Crystals: LCD displays** Activity

Name _____

Teacher _____

Date _____

Class _____

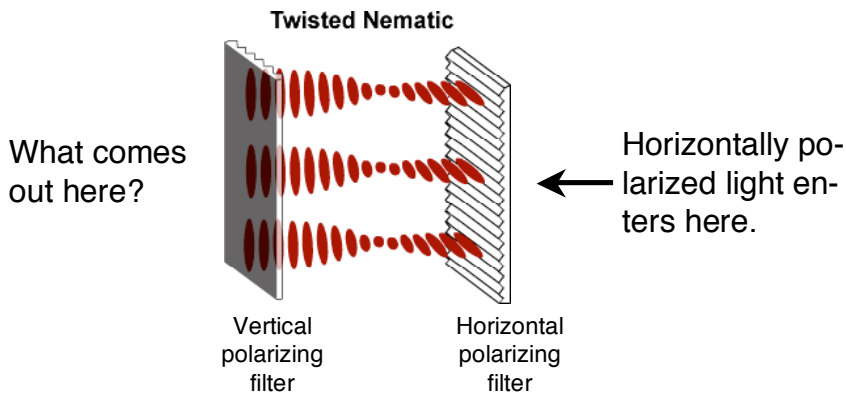
Check one:

Pretest

Posttest

1) Compare a liquid, a liquid crystal, and a solid to each other.

2) Layers of liquid crystals can form interesting patterns where the orientation of one layer is slightly twisted from the previous layer. These layers of liquid crystals can have an affect on polarized light. Suppose we place a third polarizer at 45 degrees to the two polarizers below. Do you expect to see any light transmitted? Explain.



3) When an electric field is applied to the liquid crystals in the diagram above, less light will make it through the vertical polarizing filter. Explain why.

4) An LCD TV or monitor creates images using points of light called pixels. A typical LCD monitor is 1024 pixels wide and 768 pixels tall. Someone brings in her TV screen and ex-

plains to a technician that all the people in her TV show appear green. What might be wrong with the TV monitor? Choose all that are correct.

- a. The voltage for red and blue pixels is too high.
- b. The voltage for red and blue pixels is too low.
- c. The voltage for green is too high.
- d. The voltage for green pixels is too low.
- e. There are more green pixels than red and blue.
- f. Only green pixels are being charged at all.