Light polarization: Lesson 1

Task 1.
Put some polarizer on the table and answer the following questions based on your experiments.

a) The table is a re-emitter because light scatter off it. Does the brightness of the light scattered from the table change as it passes through a polarizer? Make a drawing!

b) Does the brightness of light passing through the polarizer change when it is rotated on the table? Compare with the previous result. Make a drawing!

c) Place two polarizers on top of each other so that they are in the same position. What do we see? Let's make a drawing!

d) Rotate the two polarizers together, so the position of the two plates relative to each other does not change. What do we find? Make a drawing!

e) Constantly change the angle of the two polarizers (they are in the same plane). What do we find? Let's make a drawing!

f) Let's summarise our experiences!

Task 2. How do you put two polarizers if you want the brightness of the transmitted light to be minimum/maximum? Draw a diagram of the two cases.

Task 3. What do we experience when we rotate one polarizer around the other? How many degrees do you need to rotate one polarizer to get a minimum from maximum light transmission?

Task 4. Compare the polarizers with light filters. Let's try to create a model for the phenomenon of polarization.

Task 5. Do the light scattering from the table and the light passing through the polarizer have the same properties?