

Activity 3 – Familiarization with Light-Matter Interaction

1. Take pictures of objects demonstrating different light-matter interactions (even those not discussed in class). Explain each light-matter interaction phenomenon. PLEASE TAKE NOTE OF THE CAMERA AND CAPTURE SETTINGS YOU'VE USED (e.g. Canon D10 at EV 0 , Autowhite balance, F5.6, etc...)
2. Create a light box. <https://www.youtube.com/watch?v=OyxzC5kqbyw>.
3. Pick a light source and measure its emittance spectra. Place objects of known reflectance (eg. Leaf, a Macbeth color chart, commercial paints) in the light box and measure the REFLECTANCE of each object. Be careful to avoid specular reflection. Compare your measurement with online database values.
4. Take a picture of the objects you used in 3.