

The second claim that I recorded from the work other scientists did helped me the most in my thinking. If light can reflect, transmit, and be absorbed by the same object, I think that helps explain why the light meter readings didn't add up to 10 candles in my investigation. I only measured the light that was reflected or transmitted. I think the missing light was light that was absorbed by each object.

I used my measurements from Table 2 and my thinking about absorption to describe how light interacted with each of my objects. Here's how I described the light meter readings:

1 - 3 = a little      4 - 6 = some      7 - 9 = a lot.

I recorded these results in Table 3.

Table 3. Describing my objects by how much light they absorb, transmit, and reflect.

OBJECT	REFLECTS Light	TRANSMITS Light	ABSORBS Light
Clear Glass	Yes, a little	Yes, a lot	Yes, a little
Purple Glass	Yes, a little	Yes, some	Yes, a little
Silver Wrap	Yes, a lot	None	Yes, a little
Whitish Plastic	Yes, some	Yes, a little	Yes, a little
White Typing Paper	Yes, some	Yes, a little	Yes, a little
Black Felt	Yes, a little	None	Yes, a lot
Orange Cardboard	Yes, a little	Yes, a little	Yes, some

What I concluded:

¥ Light always interacts with a solid object in at least two ways.

These results tell me that light does not interact in the same way for each object. That made me wonder: why does light behave differently for different objects? I am also wondering how light can interact in different ways with the same object. What does that mean about what light is like? I will have to figure out how to investigate to answer these questions.