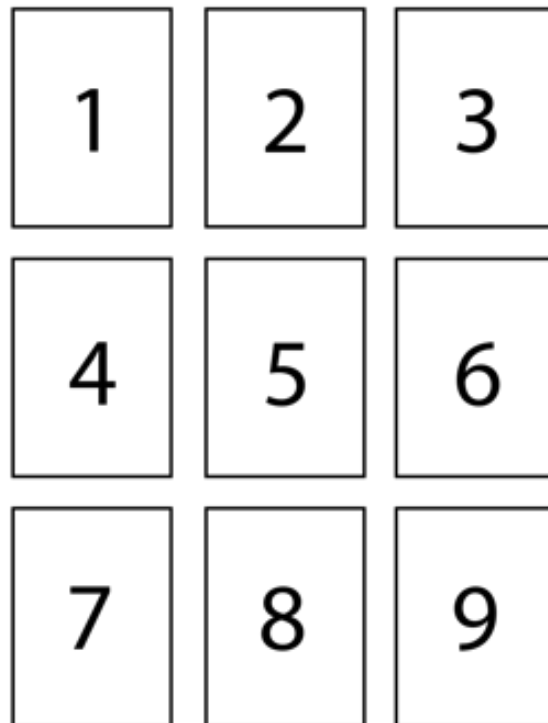


Intercalary Event
CHAZAN GALLERY

Katie Bullock Print Guide

“Places for Observations”

Series of drawings traced from the book *Light and Color in the Outdoors*, by Marcel Minnaert. Minnaert was a Dutch astronomer who wrote about optics of all scales, focusing on phenomena one might observe around themselves at any moment with any and all senses. He reminds the reader that no special apparatus for observation is needed.



Numbers correspond to hand-traced texts that were installed in Chazan Gallery. Each text is written out below.

1. Places for Observations

2. Light and Color in the Outdoors

Preface

Whether it's sunny or raining, warm or cold, you'll always find something of interest to observe. Wherever you are.

The phenomena described in this book are partly things you can observe in everyday life, and partly things as yet unfamiliar to you, though they may be seen at any moment.

3. Pillars of light on roadways

Columns of light similar to those seen on undulating water also appear on roads, most clearly when it has been raining and everything is wet and shining. They are splendid not only on modern roads, but also on old-fashioned cobbled and gravel roads. Even without rain, roads often reflect so well that paths of light can be seen almost always, if only you look at the obliquely enough. Fig. Raindrops draw fiery sparks around the reflection of a streetlight

4. Diffraction of light by small scratches.

If you look at the sun through the window of a train or car, you will see thousands of very fine scratches on the glass, all arranged concentrically round the sun. Through whatever part of the window you look, what you see is always the same, from which it may be concluded that the glass is covered all over with small scratches in all direction, although you notice only those that are at right angles to the plane of incidence of the rays of light.

5. The reason is that every scratch spreads the light in a plane at right angles to its own direction and is therefore only visible to the observer in this plane.

6. Where the intensity of the light entering your eyes is too great, dazzling occurs. By dazzling, two things are understood: (a) the appearance of a strong source of light in the field of view, resulting in the other parts of the field of view being no longer clearly observable, and (b) a feeling of giddiness or of pain.

7. Refraction of light rays by a raindrop on a spectacle lens

The aureole of light about our shadow on the water.

This lovely phenomenon can be seen best of all when looking from a bridge or deck of a ship at your shadow falling on the waves. Thousands of light and dark lines diverge in all directions from the shadow of your head. This aureole can be seen only around your own head.

Nothing of it can be seen on calm water or on water with even waves.

The explanation is that each unevenness in the water's surface casts a streak of light or shade behind it; all these streaks run parallel to the line from the sun to the eye so that you can see them meet perspectively at the antisolar point, that is, in the shadow image of your head.

8. Reflections

A row of houses throws a dark shadow on to the road, but in the middle of this you often see spots of light. How does that light get there? Hold your hand in front of one of the spots and from the direction of the shadow deduce where the light comes from: you will find that it is reflected by the windows of the houses on the other side of the road.

9. Light and Color in the Outdoors

M.G.J Minnaert