

infinitely rare, exceedingly elastic, and subtle medium known as ether, which fills all space and permeates every transparent substance. *How fast does light travel?* One hundred and eighty-six thousand miles per second. *What is a ray of light?* It is the smallest portion of light discernible. *What is a beam of light?* A collection of rays. *Of what is a ray of light composed?* It is composed of seven elementary parts, giving the colors violet, indigo, blue, green, yellow, orange and red. *Why are some substances white?* Because they reflect all the light that falls upon them without changing it. *Why are some substances black?* Be-



Snow Crystals.

*If a straight stick be partially submerged in water at an angle why does it appear to be bent?* Because the rays of light coming from the part of the stick which is under water are bent as they leave the water. For the same reason the apparent depth of the water is deceptive. *What causes the rainbow?* The refraction and reflection of light by the drops of falling water.

*What is a halo?* It is a luminous or colored circle seen around the sun or moon under certain conditions of the atmosphere.

*What is its cause?* The refraction of light by minute crystals of ice floating in the higher regions of the atmosphere. *Why do halos foretell wet weather?* Because they show a great amount of moisture in the atmosphere which will probably form