

# Trace Evidence: Glass & Paint

## Glass

an inorganic compound made of quartz sand and combined with other oxides

## Tempering

process used to increase the strength of glass which entails compressing the surface of the glass and expanding the inside layers of the glass

## Soda-lime Glass

most basic form of glass; commonly found in jars, windows and lamps

## Borosilicate

contains compounds to increase the strength of the glass and insure stability in high temperatures

## Density

used for comparison analysis; calculated by dividing mass by volume

## Amorphous Solid

atoms and molecules within glass which are organized in a random structure similar to the molecular structure of a liquid

## Radial Cracks

begin at the site of impact and radiate outward based on the amount of force used to break the glass

## Concentric Fractures

form perpendicular to radial fractures on the side of the force as the tension and compression ripples throughout the glass

## Refractive Index

measurement which determines how light will refract within an object compared to how light travels in a vacuum

## Anisotropic

more than one refractive index

## Isotropic

one refractive index as opposed to anisotropic

## Angle of Refraction

angle in which the light ray travels away from the boundary of an object

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## Snell's Law

established relationship between the path a ray of light takes in one medium and the path of which the same light ray takes in a new medium

## Paint Extenders

solid components of paints which can serve a variety of purposes such as making the application easier

## Hot Stage Method

precise method used for determining the exact refractive index of glass fragments

## Phase Contrast

clear particles will not be visible using traditional bright field light