



TOWER GROVE — PARK —

Tree as Pinhole Camera

During the solar eclipse, take time to look down at the ground, particularly at the shadows cast underneath trees. As light passes through the leaves of a tree, it acts closely to a pinhole camera – reducing the amount of light that can get through to the ground and creating crescent-shaped shadows. The shape you are seeing is the shape of the sun as it is blocked by the moon, and it will change throughout the eclipse.



This shape is remarkable, but did you know that you can see a projection of the sun's image on any sunny day?



- In the days or weeks leading up to the eclipse, step outside and look at the shapes of shadows under a tree. What shape are they? Did you notice that the sun is the same shape? Why does this shape seem imperfect or obscured?
 - *Tip: It can be easier to observe these shapes on a paved surface under a tree.*
 - *Tip: come to Tower Grove Park to explore our historic canopy of nearly 7000 trees, a Level II Arboretum right in the heart of St. Louis!*

During a solar eclipse, those shadows will appear more sharp or clear in their shape. Why is that?

- The sun produces a lot of light! And that light refracts off many surfaces to create ambient light. Ambient light will distort the shadows, causing them to appear fuzzy.
- While the solar eclipse is happening, ambient light is greatly reduced as sunlight is blocked by the moon, causing shadows to become sharper and more focused.