



COMPARATIVE STAR SIZES ACTIVITY

Here's a simple way to illustrate the size variations between different stars.

- **Materials needed:** 1 basketball, 1 pea, 1 ping-pong ball, 1 mustard seed, 1 grain of sand (pick the smallest one you find!).



Basketball

Peas



Ping Pong Ball



Mustard Seeds



Grains of Sand

Comparison #1: Earth to Sun. If the basketball represents the Sun, have your students guess which object would properly represent Earth. (*The mustard seed is correct. The ping-pong ball would be Jupiter.*)

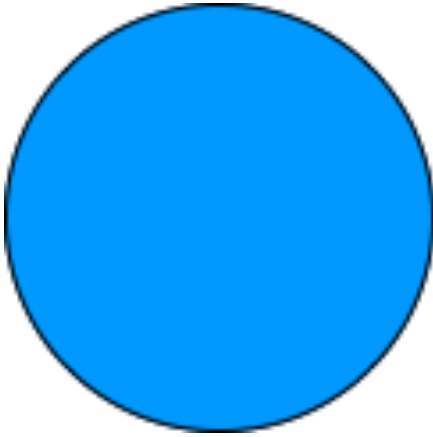
Comparison #2: Sun to other stars. Discuss the various sizes of stars listed on the on page 2.

- Sun = Pea.
- Hot Blue Star (like Sirius, Vega, or Spica) = Ping Pong Ball.
- Red Super-Giant (like Betelgeuse or Antares) = Basketball.
- White Dwarf (as found in the Ring or Dumbell Nebulae) = Grain of Sand.
- Neutron Stars and Black Holes would not be visible at this scale.



Red Supergiant

(Betelgeuse)



Hot Blue Star
(Vega or Sirius or Spica)



Yellow Star
(Sun)

◦ White Dwarf
(heart of the Ring Nebula)

◦ Neutron Star
(heart of the Crab Nebula)

◦ Black Hole
(Cygnus X-1)

