EARTH AS A PEPPERCORN

This is an exercise in visualizing the relative size of the sun and planets and their relative distances from the sun. It consists of a long walk while carrying a handful of various nuts, seeds and beans that represent the planets. Some of the nuts and beans have very irregular shapes but they, still, give the idea of the size of the planet/moon and they are easier to remember when you are thinking about the wonders of our solar system and the wider universe.

Many professional astronomers have been amazed by doing the Earth as a Peppercorn walk because it offered the first time they could 'feel' the distances and sizes.

ADDENDUM TO THE WALK:

THE CURRENT (2019) POSITION OF THE VOYAGER 1 SPACECRAFT:

The voyager spacecraft left the earth 41 years ago. Since then it has been accelerted several times by slingshot maneuvers near the outer planets on it way to deep space. It has been traveling at 38,000 miles per hour for approximately the past 29 years. Launched in 1977, it passed Pluto in 1990 after a 12 year trip from earth.

A NASA website provides constant real time data on it's position, speed and other data at: https://voyager.jpl.nasa.gov/mission/status/

Voyage 1 is, now, 13 and ½ Billion miles from earth.

On the earth as a peppercorn scale Voyage 1 is approximately 3 miles past the orbit of Pluto which is 1,000 yards from from the 8 inch diameter sun.

It is about 1/1,338 the distance to the nearest star 25 Trillion miles from us or in Hawaii on the peppercorn scale.

If the solar system is shrunk to the size of a yardstick (distance from the sun to Pluto) then the sun is the size of a grain of sand. The nearest star (another grain of sand) is about 16 miles away with nearly total vacuum and emptiness in between except for cosmic radiation. On this scale the Voyager 1 spacecraft is about 4 yards out from the sun.