SIZE IT UP

Materials in this kit:
• Paper plate
• Marble

Additional materials needed:
• Space to move around
• A partner

For the classroom:
You can explore this activity as a demonstration for the entire class, or provide students the opportunity to work in small groups to complete it.

What To Do:
1. Hold the plate and marble at arm’s length. What do you notice about the size of each item? How much larger is the plate than the marble?

2. Hold the marble at arm’s length, and have a partner take the plate and walk four steps away from you. When your partner stops, close one of your eyes and look at both the marble and the plate as though they are next to each other. How does the size of the plate compare to the marble now?

3. Make a prediction about how far away your partner will have to walk until the marble and plate appear to be the same size.

4. Have your partner walk backwards away from you until the marble and plate look the same size. How far away did your partner have to walk? Was your prediction correct? Switch roles and have your partner give it a try.

How does this work?
If you’ve ever seen a picture of a solar eclipse, you may have noticed that the Moon comes very close to covering the entire Sun. However, the Sun is 400 times larger than the Moon! So how can these objects appear to be the same size? Objects that are further away always look smaller, but a small object and a big object can look the same size if they are the right distance away from you. In fact, the Sun is about 400 times further away from Earth than the Moon!