

ACCRETION SIMULATION

Purpose

Taking a hands-on approach to learning about accretion will help you more fully understand this concept and its importance in the creation of our Solar System.

Process

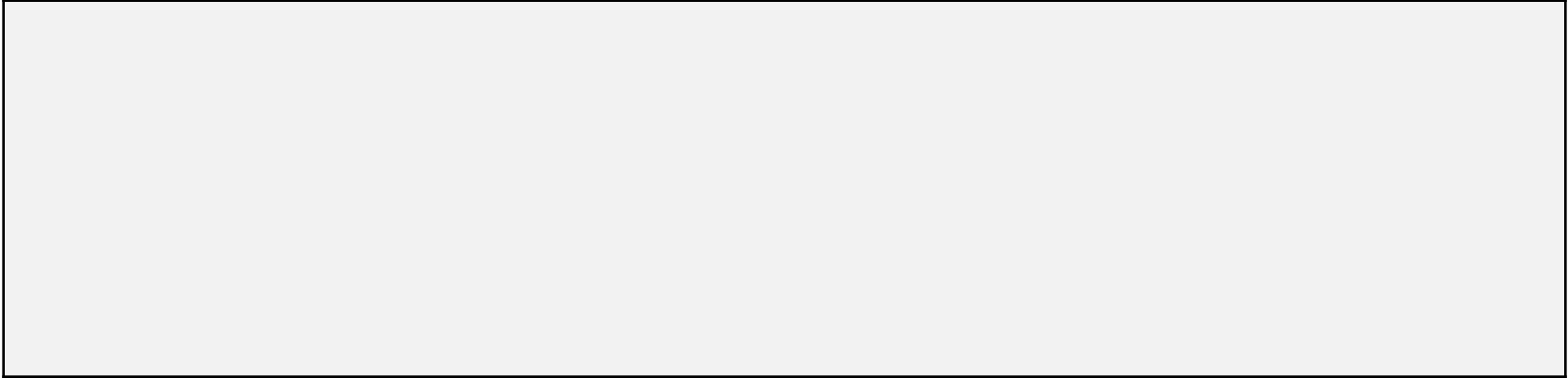
1. Your teacher will take you to a large open space and give you a sign that says “dust particle.”
2. Move to a spot somewhere near your teacher, who will be playing the role of the Sun.
3. When “the Sun” (your teacher) says “Go,” all the “dust particles” (you and your classmates) should start to move around the Sun. Walk at a brisk pace in the same direction as your classmates. As you move, you must follow a few rules:
 - You must move toward closer objects. (In this case, the word objects refers to you and your classmates.)
 - You must move toward larger objects.
 - You must always move around a center point (the Sun).
 - When you’re close enough to someone else that your hands can reach each other, you must link hands (or arms) and then move as a unit, following the same rules as before.
4. As you link up with other students and groups of students, your “object” size will grow. From time to time, the Sun will yell, “Stop!” Once you’ve stopped, one student from each group must run to the Sun to swap out your object sign for one that reflects your group’s new size (see table below).

Number of students in a group	Object
1	dust particle
2	chondrule
3–10	meteoroid
11–14	asteroid
15–17	planetesimal
18+	planet

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5. Continue the process until there is at least one group orbiting the Sun that is planet sized.

- Explain the process of accretion in your own words.



- How does this simulation help to explain the theory of how our Moon formed?

