

Build An Atom

Summary

Students use cereal, marshmallows, and frosting to help them understand the concept of the atom, ion, and isotope, as well as the locations of subatomic particles in the atom, the concept of strong nuclear force.

Time Frame

1 class periods of 90 minutes each

Group Size

Pairs

Materials

- [student worksheet](#)
(attached)
- small marshmallows
- Coco Puffs
- frosting (I recommend strawberry)
- Nerds candy
- paper towels

NOTE: For 6 classes of 30-40 students each, I used one large bag of generic Coco Puffs, a large bag of small marshmallows, two tubs of frosting, and three boxes of Nerds.

Background for Teachers

Time needed:

Most of a 90 minute class period. Have something for students to be working on while they are waiting to be checked off, or after they are done. Because the instructor check-off is dependent on just one person, that part takes a while.

Student Prior Knowledge

Atomic particles and their charges and locations, how ions differ from neutral atoms, what an isotope is, where strong nuclear force acts.

Instructional Procedures

Pass out the "Build An Atom" student page (attached) and explain the activity. Group students in pairs for this activity.

Once students have determined the number of each ingredient that they need, distribute ingredients and allow students to begin work. Point out that each pair needs to have their atom model signed off by another pair before they attempt an Instructor Check-off.

Point out that each person should quiz the other person in their pair, as neither person can be checked off by the instructor if any of the answers are wrong. The line to be checked off is typically long, and putting students back at the end of the line if they miss any in their check-off encourages them to make sure they are ready before they ask to be checked off, and also encourages them to be good about testing and helping each other.

As students wait to be checked off, or after they are checked off, they can work on the questions

on the back of their student sheet.

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)