

# Heavy Elements Game

## Summary

Students will play the "Heavy Element" game to learn about star cycle and the formation of heavy elements in the universe.

## Time Frame

1 class periods of 60 minutes each

## Group Size

Small Groups

## Materials

- [dice template](#)  
(attached)
  - [element cards](#)  
(attached)
  - [game board parts](#)  
(attached)
  - [student worksheet](#)  
(attached)
- game pieces (students can provide)

## Student Prior Knowledge

Students should know that atoms have a nucleus and that when two atomic nuclei are fused together tremendous amounts of energy are released and different elements are formed through this process. They should also be familiar with the star cycle and the expansion and contraction of stars due to gravity and nuclear fusion of atoms.

## Instructional Procedures

Prepare the game board by making copies (color is best) and taping them together. Laminating them and gluing to cardboard will make a permanent game. Students can help by cutting out the atom cards.

Read the directions to the game from the student sheet with the students. The directions probably will not cover every contingency so plan on being the arbitrator and establishing further rules. The numbers on the dice determine how many spaces the students move each turn.

Handout the game boards, dice and element cards.

Allow time to play and for students to finish the questions on the analysis sheet.

Have a small prize if you'd like for the winners at each table.

## Bibliography

Lesson Design by Jordan School District Teachers and Staff.

## Authors

[Utah LessonPlans](#)