Rainbow of Colors -- The Flame Test Lab

Summary

Students will conduct a lab and be able to explain the difference between a line spectrum and a continuous spectrum in terms of how they appear through a diffraction grating. They will also explain why different atoms emit different atomic line spectra and how this relates to the movement of electrons between energy levels in an atom.

Time Frame

1 class periods of 70 minutes each

Group Size

Pairs

Materials

- student sheet
  (attached)
  spectroscopes
  well plates
  pipettes
  cotton swabs
  Bunsen burners
  beakers
  water
  chemicals
    - H2O
    - LiNO3
    - Cu(NO3)2
    - K NO3
    - Na NO3
    - Sr(NO3) 2
    - Ba(NO3) 2

Instructional Procedures

Pass out student sheets attached.
Explain the objectives and lead students through the pre-lab questions.
Allow the pairs to work through the lab using the detailed instructions on their student sheet.

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

Utah LessonPlans