

Hot and Cold

Summary

Students study the energy associated with physical and chemical changes. The activity consists of observing nine phenomena.

Time Frame

1 class periods of 90 minutes each

Group Size

Pairs

Materials

- [student instructions/worksheet](#)
(attached)
per group:
acetone in dropper bottles
alcohol in dropper bottles
concentrated sulfuric acid in dropper bottles
6 M HCl in dropper bottles
6 M NaOH in dropper bottles spatula of NaOH
2 spatula of NH_4Cl
spatula of $\text{Ba}(\text{OH})_2$
spatula of CaCO_3
spatula of anhydrous CuSO_4

Instructional Procedures

Step-by-step instructions and procedures are found on the student instruction sheet attached.

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)