

# Heat Transfer Demonstrations

## Summary

Students will identify and discuss other examples of each type of heat transfer from their lives.

## Time Frame

1 class periods of 70 minutes each

## Group Size

Individual

## Materials

- lava lamp
- candle warmer
- heat lamp
- tinfoil
- candle in heatsafe glass container
- butter
- black marker
- [student worksheet](#)  
(attached)

## Background for Teachers

Teacher will demonstrate and describe the heat transfers that occur in lava lamps and candle warmers. The teacher may demonstrate or have students complete a lab experiment on radiation of heat from a heat lamp to a piece of butter on tinfoil. Students will identify and discuss other examples of each type of heat transfer from their lives.

You may explain conduction, convection, and radiation to your students beforehand or use these demonstrations to introduce and explain the concepts.

## Instructional Procedures

Use a lava lamp and overhead diagram to explain the three heat transfers that occur in lava lamps and where each one occurs.

Have students draw and label a lava lamp diagram on their papers and answer the related questions.

Use a candle warmer and overhead diagram to explain the two heat transfers that occur in lava lamps and where each one occurs.

Have students draw and label a candle warmer diagram on their papers and answer the related questions.

Have students come up with other examples of each type of heat transfer, discuss, and list them on their papers.

## Assessment Plan

### Answer key

:

### Lava Lamp:

1.

2. convection

Candle Warmer:

1.

2. conduction

Radiation of a heat lamp:

Question: Answers will vary, give one point for answering.

Observations: Most likely answer: the one on black foil

Conclusion: Black absorbs more heat than silver, or silver reflects light and black absorbs it.

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)