

Water Cycle in a Flask

Summary

Students set up a distilling apparatus to observe water as it changes state (water cycle) and cleans itself in the process.

Time Frame

1 class periods of 70 minutes each

Group Size

Pairs

Materials

- ring stand
- clamp
- Erlenmeyer flask that the stopper fits in
- 1 test tube
- 1 one hole stopper
- glass and vinyl tubing
- bucket,
- alcohol
- bunsen burner or hot plate
- goggles
- large beaker
- [student sheet](#)
(attached)
- dirty water (add dirt to water until it looks dirty)

Student Prior Knowledge

Students should be familiar with the processes (evaporation, condensation, runoff) that water undergoes as it travels through the water cycle. The process of evaporation is too slow to be observed in a class period so it is speeded up by boiling the water in the flask. Students should have had safety training for the type of heating instrument you are using (alcohol burner, bunsen burner or hot plate).

Instructional Procedures

- Read student sheet with students and show them where materials are located.
- Have students make a prediction.
- Allow time for students to set up lab and collect data.
- Discuss outcome of lab before students begin analysis questions.

Assessment Plan

Scoring Guide:

1. Students make prediction, perform lab and collect data.....4
2. Student correctly answer analysis questions.....4

Answers:

The water evaporates
It goes into the air.
The heated tube represents the sun evaporating water.
The water condenses.
The cool tube represents rainfall and runoff into a body of water.
The water became very clean.
There was water vapor in the large tube and part of the vinyl tube.
Water vapor turns liquid when it cools.

3. Student writes thoughtful conclusion.....4

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)