

Discovery Lab Description:

Students will be asked in this lab to construct an argument using evidence that some changes caused by heating or cooling can be reversed and some cannot. They will experience four different hands on reactions during a station's experience and close by working as a whole class to sort reactions based on what they now know about reversible and irreversible changes.

During the Discovery Lab students will be expected to:

- Sit 4 students per table.
- Work cooperatively with one another at the table.
- Follow the hands-on procedures just as the Lab teacher or assistant explains them.
- Handle materials and equipment carefully.
- Wear safety glasses at all times when tools are in use.
- Rotate from one station to the next when given the signal. We will go over this carefully during the class but we find it can be a challenge for some students and it is very helpful to have adults in the room guide students during these transitions.

It is important that teachers and chaperones:

- Help focus the students' attention.
- Assist students with lab activities through questioning allowing the student to do the actual data collection and decision making. For example a parent might ask, "What do you see happening to the popcorn when we add heat?"
- Engage students at a higher level by asking open-ended questions throughout the class. For example: "Why did you choose _____?"
- Turn off cell phones and other electronic devices during the activity.

Literary connection:

To get students excited about the upcoming Discovery lesson we suggest reading the following story with your students: *Chemical Changes* by Lynette Brent. Chemical changes are more common than you might think, from rust forming on steel to a cake baking in the oven. Through exciting, familiar examples and engaging illustrations, readers will discover how chemicals react and change.

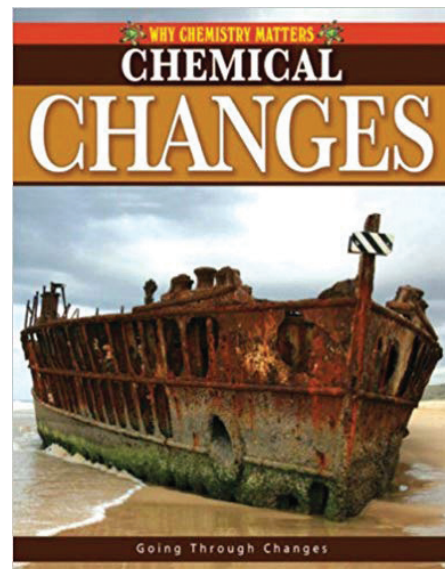
Nevada Academic Content Standards in Science (NGSS):

2-PS1-4. Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.

Common Core:

W.2.8 Recall information from experiences or gather information from provided sources to answer a question.

(2-PS1-1)MP.2 Reason abstractly and quantitatively. (2-PS1-2)



This book available through the Washoe County Library System.