

Lesson 4 Chemical Properties and Changes

Predict three facts that will be discussed in Lesson 4 after reading the headings. Record your predictions in your Science Journal.

Main Idea

Chemical Properties

I found this on page _____.

Comparing Properties

I found this on page _____.

Chemical Changes

I found this on page _____.

Signs of Chemical Change

I found this on page _____.

Details

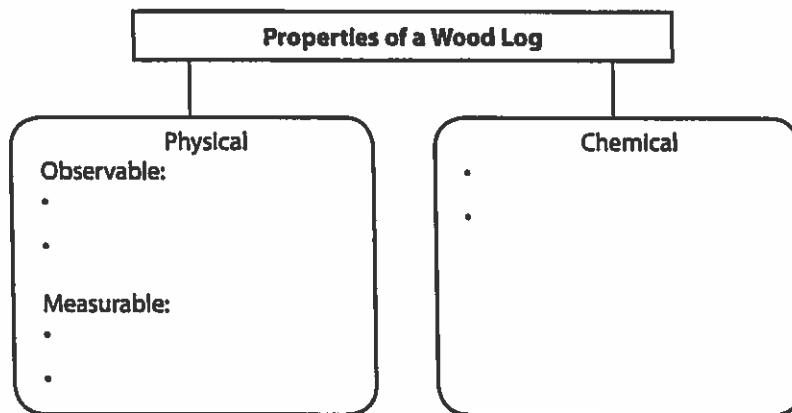
Define chemical property, and give two examples.

Definition: _____

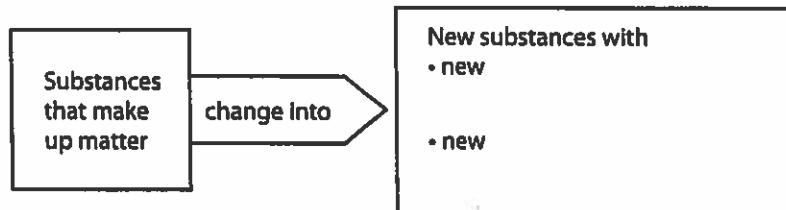
1. _____

2. _____

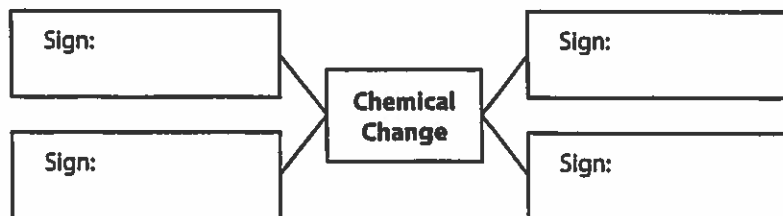
Contrast physical and chemical properties using the example of a wood log.



Characterize chemical change.



Identify some signs of a chemical change.



Lesson 4 | Chemical Properties and Changes (continued)

Main Idea

I found this on page _____.

Explaining Chemical Reactions

I found this on page _____.

I found this on page _____.

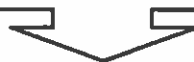
I found this on page _____.

Details

Describe what constitutes proof of a chemical change.

Order the events that occur in a chemical reaction.

Atoms are _____ together
and form particles of substances.




As particles collide, bonds break and atoms separate



Atoms _____



_____ form.

 **Describe** the parts of a chemical equation, and then tell why these equations are useful.

Reactants:

yield 

Products:

Chemical equations are useful because _____

Express how a balanced chemical equation illustrates conservation of mass.

Lesson 4 | Chemical Properties and Changes (continued)

Main Idea

I found this on page _____.

The Rate of Chemical Reactions

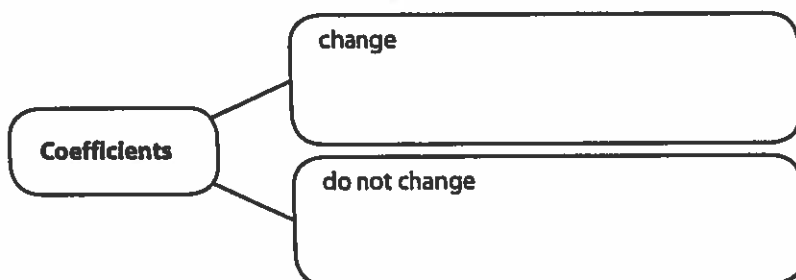
I found this on page _____.

Chemistry

I found this on page _____.

Details

Assess the role of coefficients in chemical equations.




 **Explain** how factors affect the rate of chemical reactions.

| Factor | Effect on Reaction Speed |
|---------------|--------------------------|
| Temperature | |
| Concentration | |
| Surface area | |

Paraphrase two things you need to know about matter in order to understand chemistry.

1. _____

2. _____

 **Synthesize It** Describe two chemical changes that have happened in your home this week.

Review Foundations of Chemistry

Chapter Wrap-Up

Now that you have read the chapter, think about what you have learned. Complete the final column in the chart on the first page of the chapter.

Use this checklist to help you study.

- ☐ Complete your Foldables® Chapter Project.
- ☐ Study your *Science Notebook* on this chapter.
- ☐ Study the definitions of vocabulary words.
- ☐ Reread the chapter, and review the charts, graphs, and illustrations.
- ☐ Review the Understanding Key Concepts at the end of each lesson.
- ☐ Look over the Chapter Review at the end of the chapter.



Summarize It Reread the chapter Big Idea and the lesson Key Concepts. Summarize why it is necessary to have these ways of classifying and describing matter and its changes.

[illegible]

Challenge Find evidence of a chemical reaction that has occurred at your home. Do research to learn about the matter involved—the reactants and the products. Write a balanced chemical equation for the reaction, and explain the equation to your class.