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What Is Science? • Guided Reading and Study

Thinking Like a Scientist

This section describes the skills scientists use to learn about the world. The section also explains the attitudes that are important in science.

Use Target Reading Skills

Before you read, preview the red headings in your text. For each heading, write a what, how, or why question in the left-hand column below. As you read, write answers to your questions in the right-hand column.

Scientific Skills

Scientific Skills					
Question	Answer				
What does observing involve?	Observing involves				

a	me	Date	Class
۷ŀ	nat Is Science? • Guided Re	eading and Study	
۲h	inking Like a Scientis	t (continued)	
nt	troduction		
1.	What are five skills scientists	use to learn more abou	at the world?
			_
Ol	oserving		
2.	What is observing?		
_			
3.	The senses a scientist uses in taste, and	observing include sigh	nt, hearing, touch,
4.	In the spaces below, explain t	he differences betweer	n quantitative and
	qualitative observations.		
	Ob	oservations	
Q	uanititative Observations	Qualitative Obse	ervations
Inf	ferring		
	Mhat is informing?		
5.	What is inferring?		

Wh	at Is Science? • Guided Reading and Study
6.	Circle the letter of each item that is true about inferences. a. Inferences are based on reasoning from what you already know. b. Making an inference involves guessing. c. An inference is an interpretation of observations. d. People make inferences all the time.
Pre	edicting
7.	Making a forecast of what will happen in the future based on past experience or evidence is called
8.	How are inferring and predicting related?
Cla 9.	what is classifying?
10.	Is the following sentence true or false? A drawback of classifying things is that objects and information stay disorganized.
	king Models
11.	What does making models involve?
12.	Circle the letter of each item that could be a model. a. map b. movie set c. computer-generated illustration d. notebook notes

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Naı	me Date Class	
Wh	at Is Science? • Guided Reading and Study	
Th	inking Like a Scientist (continued)	
13.	Is the following sentence true or false? Models help people study things that cabe observed directly.	ınnot
14.	Is the following sentence true or false? Some information about an object or pr may be missing from a model.	ocess
Sci	ientific Attitudes	
15.	What is science?	
16.	What are five important attitudes that successful scientists possess?	
17.	Circle the letter of the definition of skepticism.	
	a. having an attitude of doubt	
	b. being open-mindedc. coming up with inventive ways to solve problemsd. an eagerness to learn more about a topic	
18.	Is the following sentence true or false? Honesty is important when a scientist's results go against previous ideas.	