



Type your name below and select Start Game to begin.

Critical Thinker

Clear

START GAME



# SCIENCE DETECTIVE®

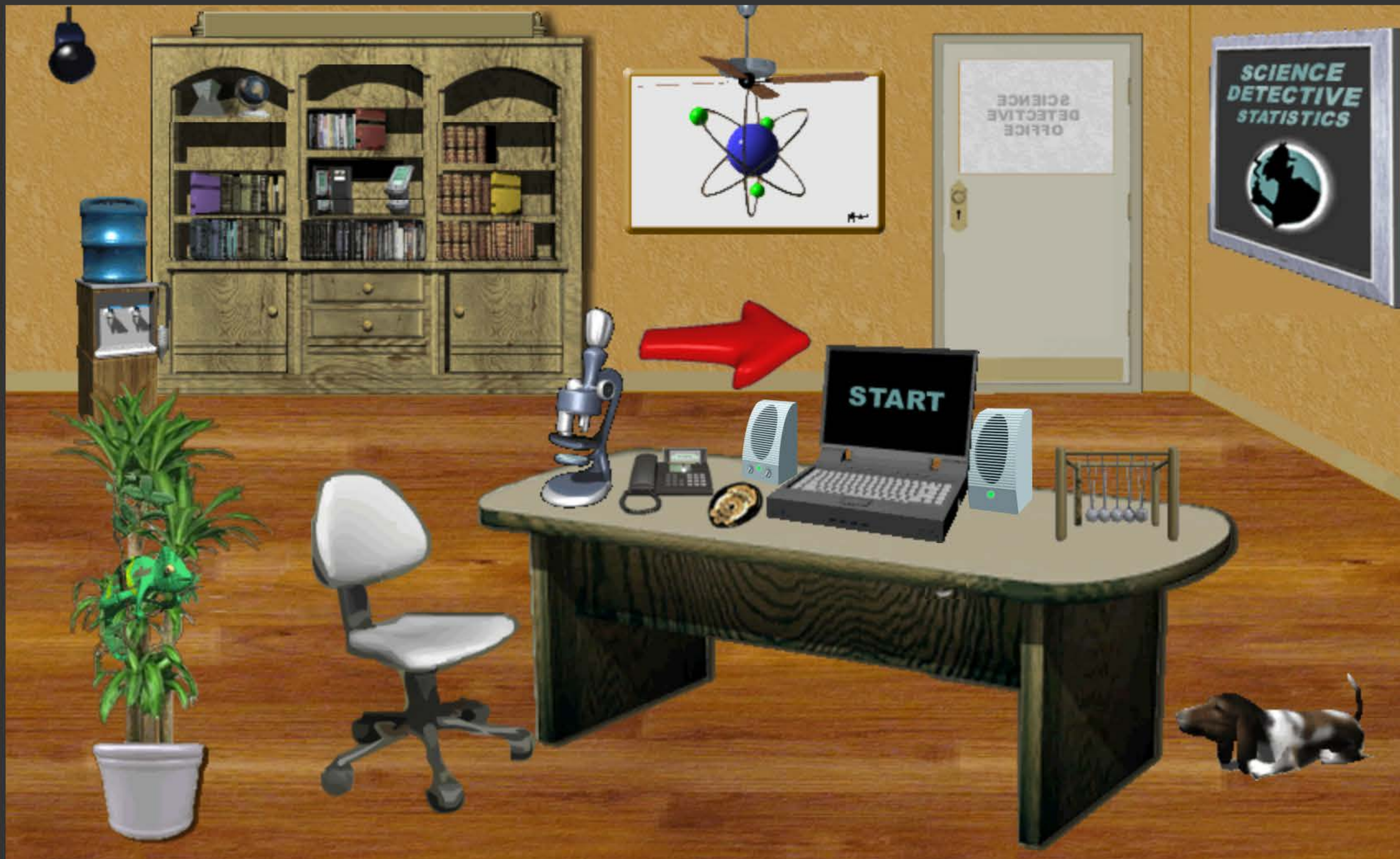
INTRO

CASES

STATS

HELP

NEW USER





## Welcome, Detective Critical Thinker!

### QUICK INSTRUCTIONS:

Select a Case File button from the list below to investigate a case.  
Select the Status button to restart a case.  
Try to earn all 85,900 points!



## Level 2

### Progress Meter



### Total Points

1700

### Rank:

## Official 1-Star Junior Detective

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#	CASE FILE	STATUS	TOPIC	TRIES	BADGE PTS	SCORE (%)
1.	<a href="#">Measuring Matter: Mass, Volume, and Density</a>	<a href="#">Complete</a>	Physical Science	1	1700	100
2.	<a href="#">Physical and Chemical Properties of Matter</a>	<a href="#">Incomplete</a>	Physical Science	1		
3.	<a href="#">Physical and Chemical Changes in Matter</a>		Physical Science			
4.	<a href="#">Atoms, Elements, and Compounds</a>		Physical Science			
5.	<a href="#">Chemicals: Helpful and Harmful</a>		Physical Science			
			Physical			



## 1. Measuring Matter: Mass, Volume, and Density

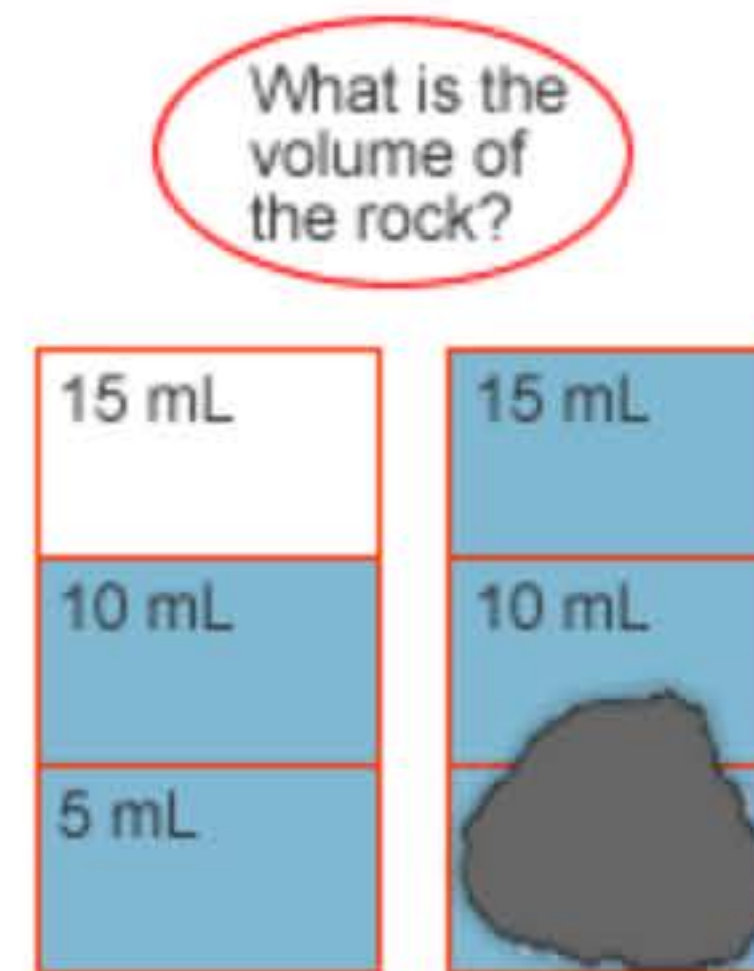
Everything in our world is made up of matter. Your pencil, a snowball, orange juice, and the air around you are examples of matter. Matter is anything that has mass and takes up space. The mass, weight, volume, and density of any type of matter can be measured.

The amount of matter that makes up an object is its mass. Even though the amount of mass affects the weight of an object, mass and weight are not the same.

**Weight** is a measure of the pull of gravity on an object. Weight changes as the pull of gravity changes. If you took a book to the moon, the weight of the book would be less because on the moon the pull of gravity is less. However, the mass of a book on the moon would not change, because the amount of matter would stay the same. Scientists measure mass in units of grams (g). A textbook has a mass of approximately 1 kilogram, which is equal to 1,000 grams.

The amount of space occupied by an object is its volume. You can fit more dimes in your pocket than nickels, because the dimes take up less space. Therefore, a nickel's volume is greater than a dime's volume. Volume is measured in cubic centimeters or milliliters. To measure the volume of a three-dimensional object such as a box, you first need to measure the length, width, and height of the box. Use the formula in the Box Volume table to review the volume of Box A and then find the volume of Box B.

Text Size Image ▲ ▼



1 2 3 4 5 6 7 8 9 10 11

**1a.** A brick, milk, and ice cubes are all examples of matter.

A.  This is a true statement.

B.  This is a false statement.

**1b.** Select the two sentences in the lesson that give the best evidence for the answer.

Check Answer

Hint

<< Next >>

Status

### Correct Answer

Great Job, Detective!

### Explanation

Matter has mass, takes up space, and can be measured. Milk, for example, is a liquid that takes up space and can be measured in ounces or cups. Everything that



## Scoring Statistics

All Activity-based scoring data comes from your last attempt.

### Critical Thinker

#### Overall Scoring Summary

AVERAGE SCORE	HIGH SCORE	LOW SCORE	ACTIVITIES COMPLETED	UNFINISHED ACTIVITIES	UNATTEMPTED ACTIVITIES
100%	100%	100%	1	1	43

#### Overall Scoring Details (click Activity name for more specific details)

#	TOPIC	ACTIVITY	STATUS	ATTEMPTS	TOTAL QUESTIONS	CORRECT	PARTIALLY CORRECT	INCORRECT	HINTS	POINTS	SCORE
<u>1</u>	Physical Science	<a href="#">Measuring Matter: Mass, Volume, and Density</a>	Complete	1	11	11	0	0	0 of 11	1700/1700	100%
<u>2</u>	Physical Science	<a href="#">Physical and Chemical Properties of Matter</a>	Incomplete	1	11				0 of 11		

**Monday, December 7, 2015**

Congratulations, Detective!

This certifies that **Critical Thinker** successfully demonstrated  
higher-order thinking skills.

**THE SCIENCE DETECTIVE®**



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**Science Detective A1**

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