366803

Simulating Urinalysis Lab Activity

Aligned With All Published National Standards

ward's science

IMGN 250 8004

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* The Dimension I practices listed below are called out as **bold** words throughout the activity.

DIMENSION 1 Science and Engineering Practices

X	Asking questions (for science) and defining problems (for engineering)		Use mathematics and computational thinking
X	Developing and using models	X	Constructing explanations (for science) and designing solutions (for engineering)
X	Planning and carrying out investigations	X	Engaging in argument from evidence
X	Analyzing and interpreting data	X	Obtaining, evaluating, and communicating information

DIMENSION 2 Cross Cutting Concepts

X	Patterns		Energy and matter: Flows, cycles, and conservation
X	Cause and effect: Mechanism and explanation	X	Structure and function
	Scale, proportion, and quantity	X	Stability and change
X	Systems and system models		

DIMENSION 3 Core Concepts

Discipline	Core Idea Focus
Life Science	LS1: From Molecules to Organisms: Structures and Processes

X Indicates standards covered in activity

next generation science standards © 2013

Middle School Standards Covered	High School Standards Covered
MS.LS1-3: Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.	HS.LS1-3: Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.

(continued on next page)

standards/learning objectives

national science education standards © 1996

Content Standards (K-12)			
X	Systems, order, and organization		Evolution and equilibrium
X	Evidence, models, and explanation	X	Form and Function
X	Constancy, change, and measurement		

Life Science Standards Middle School		Life Science Standards High School	
X	Structure and Function in Living System	X	The Cell
X	Regulation and Behavior		

X Indicates standards covered in activity

benchmarks for science literacy (AAAS, © 1993)

1. The Nature of Science	1A: The Scientific World View
5. The Living Environment	5C: Cells
6. The Human Organism	6C: Basic Functions
11. Common Themes	11A. Systems
	11C. Constancy and Change

activity objectives:

- Learn about urinalysis and its application to the diagnosis of medical disorders.
- Perform urinalysis on four simulated urine samples.
- Examine the information obtained from observation, chemical testing, and microscopic examination.
- Apply principles of urinalysis to the diagnosis of various medical disorders.

time requirement:

45 minutes