

366809

Simulated ABO Blood Typing Lab Activity

Aligned With All Published National Standards



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standards alignment

framework for K-12 science education © 2012

* 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
		Cause and effect: Mechanism and explanation	X	Structure and function
		Scale, proportion, and quantity		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
				LS3: Heredity: Inheritance and Variations of Traits

x Indicates standards covered in activity

next generation science standards © 2013

Middle School Standards Covered	High School Standards Covered
MS.LS1-2: Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function.	HS.LS1-2: Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.
	HS.LS3-1: Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.

(continued on next page)

standards/learning objectives

national science education standards © 1996

Content Standards (K-12)			
X	Systems, order, and organization	X	Evolution and equilibrium
X	Evidence, models, and explanation	X	Form and Function
	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	Reproduction and Heredity	X	Molecular Basis of Heredity

x Indicates standards covered in activity

benchmarks for science literacy (AAAS, © 1993)

1. The Nature of Science	1B: Scientific Inquiry
5. The Living Environment	5A: Diversity of Life
	5B: Heredity
	5C: Cells
6. The Human Organism	6C: Basic Functions
11. Common Themes	11A. Systems

activity objectives:

- Define agglutinin and agglutinin.
- Perform an actual blood typing procedure.
- Observe the antigen/antibody reaction in blood.
- Determine the ABO blood type of simulated blood samples.
- Prepare a wet mount of simulated blood
- Estimate the number of erythrocytes and leukocytes in normal blood.

time requirement:

- Part A: 30 minutes
- Part B: 20 minutes