

Infection: Modeling and Simulation Key Terms

Please note the following Key Terms are provided as a reference. Vocabulary terms are embedded within the curriculum and are addressed within that context. Students are not expected to commit the list of terms to memory.

Term	Definition
Agent	A model consists of a system of agents and a set of rules specifying how the agents interact with each other. An agent is one entity in such a system.
Algorithm	A sequence of instructions that accomplishes a task.
Animation	A story told with moving illustrations or drawings.
Bacteria	Tiny, one-celled organisms that get nutrients from their environment in order to live.
Bug	A name used for something in a computer program that is not working correctly.
Code	The instructions used in a computer program.
Collaboration	Working with others to reach a goal.
Communicable Disease	An infectious disease that can be spread from one living organism to another. The spread can occur by direct or indirect contact with an affected individual.
Computer Model	A computer model is a digital approximation created on a computer to help scientists understand how a system works and to predict its performance in the real world.
Contagious	When a person can spread their infection to someone else. Also called <i>infectious</i> .
Debug	To find and fix bugs in a computer program.
Design	To write down or draw the detailed plan for creating a solution to a problem.
Design Process	A step-by-step way to solve problems.
Driver	The person who writes the code in Pair Programming.

Event	An action that triggers a program to react. It can be input from a user (like a tap, a tilt, or a shake) or a change in the program state (like a variable changing its value in the program).
Experiment	A scientific test in which you perform a series of actions in order to learn information about the world around you.
Function	A named block of code that can be used in a program to accomplish a task. A program can be made up of multiple functions.
Germ	A microorganism that can make a person sick. The four major types of germs are bacteria, viruses, fungi, and protozoa.
Infected	A person who has, or is infected with, a communicable disease.
Model	A model is a representation of a system of agents. Systems can be modeled through drawings, human reenactments, or computer programs.
Navigator	The person who reviews the code in Pair Programming.
Pair Programming	When two people work together to create a computer program. One person, called the driver, writes the code, while the other person, called the navigator, reviews it.
Parameter	A parameter is a value that helps to define how a model works in a simulation. Parameters can be changed from one simulation to another to aid in understanding how the parameter affects the model.
Program	A set of instructions given to a computer in a language that it can understand.
Recovered	A person who was previously infected with a communicable disease and is temporarily immune to that disease.
Sequence	The order in which things happen.
Simulation	A simulation is performed by running tests on a model of a system. Simulations allow scientists to test a system multiple times with different parameters to get information about how the system behaves in different circumstances without actually testing it in real life.
Solution	How a problem is solved.
Susceptible	A person who is able to become infected by a communicable disease.

Test	To check if a computer program is working properly.
Variable	A name that contains a value to be used in your program.
Virus	A microorganism that can make a person sick.
X-Y Grid	A grid made up of vertical and horizontal lines and points that can be identified by their x-coordinate (the distance from the y-axis) and their y-coordinate (the distance from the x-axis).