

LS-HHMI Outreach Summer Curriculum Project Classroom Resource Information Form

Title	Physiology of Flagella in Bacterial Movement		
Resource Type	Powerpoint presentation		
Description	Presentation on the structure and function of flagella in the movement of bacteria. Shows forms, movement activity, and mechanism of movement as cell responds to it's external environment.		
Author(s)	Daniel Smith		
Author Institution(s)	Sanborn Regional High School Kingston, NH		
Objective	Student will be able to: Understand and explain the mechanism of cell movement by flagella Understand and explain how flagella helps cell to interact with it's external environment Know and understand how behavior response to a given stimulus occurs Learn vocabulary necessary for cell locomotion		
Key Concepts	Structure and function of cell movement Structure and function of flagella organelle Interaction of cell systems		
Student Prep	Understanding of: Prokaryotic cell structure Positive and negative feedback loops		
Materials	Computer, overhead projector, Optional: bacterial cell cultures		
Grade Level(s)	Grades 10-12		
Teacher Prep Time	30 minutes for review	Class Time	15-30 minutes
National Standards	CONTENT STANDARD C:		
State Standards	2. LIVING THINGS AND ORGANIZATION S:LS1:11:2.1 Identify the structures of different types of cell parts/organelles and explain the functions they perform. S:LS1:11:2.2 Recognize how cell functions are regulated S:LS1:11:2.3 Recognize how an organism's organization and complexity accommodate its need for obtaining, transforming, transporting, releasing, and eliminating the matter and energy used to sustain it. 2. EVIDENCE OF EVOLUTION S:LS3:11:2.1 S:LS3:11:2.2 Recognize that the abilities and behaviors an organism has, and likelihood of its survival strongly depend on its heritable characteristics, which can be biochemical and anatomical		
Sources	http://en.wikipedia.org/wiki/Flagellum http://en.wikipedia.org/wiki/Bacterium http://en.wikipedia.org/wiki/Microorganism http://en.wikipedia.org/wiki/Bacterial_cell_structure		
References	http://www.indstate.edu/thcme/micro/flagella.html http://www.indstate.edu/thcme/micro/physiol/ Microbiology: Tortolla P 83-85		
Assessment	Build model of flagella mechanism using straws, clay, macaroni, pipe cleaners Make group poster of flagella structure and label all parts listing function Paper pen test		