

		<h1>Biotechnology Research and Development</h1>									
Cluster Overview: Focuses on careers in planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.		Career Goal (O*NET Code): Biological Technician (19-4021), Medical Scientist (19-1042), Biostatistician (15-2041), Biochemist (19-1021).				Student Name: _____ Grade: _____ School: _____					
SUGGESTED COURSEWORK								EXTENDED LEARNING EXPERIENCES			
<div>Middle School</div> <div>High School</div>	8th	HS Courses:						Curricular Experiences: Health Occupations Students of America NASA Research Program Career Learning Experiences: Career Preparation Internship Job Shadowing		Extracurricular Experiences: Language Immersion Programs School Newspaper Science Club STARS Research Program Student Government UIL Academic Competitions Service Learning Experiences: Boy Scouts of America Campus Service Organizations Community Service Volunteer Girl Scouts of the USA Peer Mentoring / Peer Tutoring Science Camps	
	9th	Core Courses:		English I Algebra I Biology	World Geography Physical Education Languages other than English I	Professional Communications					
		Career-Related Electives:		Principles of Health Science							
	10th	Core Courses:		English II Geometry Chemistry	World History Languages other than English II						
		Career-Related Electives:		Medical Terminology							
	11th	Core Courses:		English III Algebra II Physics	United States History						
		Career-Related Electives:		Health Science Technology I or Anatomy and Physiology or Precalculus or Languages other than English III							
	12th	Core Courses:		English IV AP Statistics AP Biology or AP Chemistry	Government/Economics Fine Arts						
		Career-Related Electives:		Health Science Technolog II or Pathophysiology or Medical Microbiology or Languages other than English IV or Advanced Biotechnology							
		On-the-Job Training	Assay Analyst NOTE: These experiences may be started and/or completed as part of the high school experience.						Professional Associations: American Academy of Forensic Science American Chemical Society American Society for Microbiology American Statistical Association Association for Professionals in Infection Control and Epidemiology Biotechnology Industry Organization National Academy of Sciences National Environmental Health Association Texas Environmental Health Association		
Certificates		OSHA CareerSafe NOTE: Students may earn all or part of these certificates as part of the high school experience.				Career Options:					
Postsecondary	Associate Degrees	Applied Science Biotechnology				Career Options: Biological Science Technician Chemical Technician		Forensic Science Technician Environmental Technician Research Assistant			
	Bachelor Degrees	Biology Biomedical Engineering		Biotechnology Chemistry		Forensic Science Statistics		Career Options: Biomedical Engineer Biotechnologist Forensic Scientist Clinical Trials Coordinator Environmental Technologist			
	Graduate Degrees	Epidemiology Biological Science		Forensic Science		Independent Research		Career Options: Epidemiologist Biostatistician Bioinformatics Scientist Forensic Scientist Research Scientist			
Students may select other elective courses for personal enrichment purposes.						This plan of study serves as a guide, along with other career planning materials, for pursuing a career path and is based on the most recent information as of 2009. All plans meet high school graduation requirements as well as college entrance requirements.					