

JROTC DAI Workshop March 11, 2019

MCPSS JROTC & STEMWorks, LLC

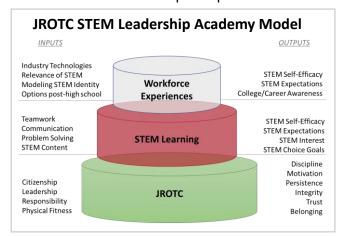
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Through the combined efforts of the Mobile County Public School System leadership, business and industry partners, and a dedicated team of JROTC instructors and STEM professionals, over 700 cadets in Mobile County have had the opportunity to participate in an alternative JCLC that incorporates STEM and workforce development activities- the JROTC STEM Leadership Academy. Since 2015, cadets have had the unique opportunity to expand their knowledge through an immersive summer program that challenges them to consider a career in a STEM related field. The purpose of the six-day residential Academy is to engage a unique population of high school students, 9th and 10th grade JROTC cadets, in STEM content, skills, and fields of study needed by business and industry today. The Academy is designed to increase awareness of good-paying STEM career opportunities in our area for Mobile's youth and what it takes to secure these jobs.

The STEM Academy was conceived as three distinct, interconnected layers to represent the hierarchical structure of the key components: (1) JROTC, (2) STEM Learning, and (3) Workforce Experiences. The foundation of the model lies in the JROTC character education curriculum and culture. Students who participate in the STEM

Academy come with differing levels of the character traits, but all have been exposed to the JROTC culture and curriculum for at least one school year prior to the summer experience. The inputs and outcomes of this component are equivalent to the traditional JCLC camp. The STEM Learning component consists of a series of STEM experiences woven through the traditional summer JROTC activities. These STEM lessons extend mathematics and science content knowledge and provide first-hand experience with STEM technology and challenges in order to build interest and efficacy around STEM. Workforce Experiences, such as site visits to



local colleges, area industries, and evening motivational guest speakers, reinforce the JROTC character traits and STEM learning. These workforce experiences are designed to engage students in vicarious STEM learning, meaning students learn about STEM and build a STEM identity by observing expert-level STEM professionals at work.

JROTC STEM Leadership Academy Logic Model

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	JCLC	STEM	Workforce		
Inputs	JROTC Instructors Media Volunteers	University Faculty & Staff STEM Museum Staff	Industry Personnel Guest Speakers	Human	
	Military Guest Speakers	Math & Science Instructors		Resources	
		STEM Engineering Design Challenge			
	Winning Colors	Curricula	Site visit agendas	Curriculum &	
	JCLC Guidelines		Company summaries	Materials	
	Military Sites	Postsecondary Labs & Museums	Industry Sites	Facilities & Equipment	
	Academy Funding Sponsors, Buses, Computers & Internet, Host Site (Spring Hill College), Student Volunteers (SHC Student Leaders)				
	Site visits to Military facilities	Presentations and guided explorations in postsecondary STEM Labs	Site visits to Industry sites		
Activities	Individual and Team Strengths Analysis (Winning Colors)	Presentations and guided explorations in STEM-related Museums	Presentations from human resource staff about employment opportunities and requirements		
	JCLC Required Leadership & Fitness Activities (e.g. drownproofing, land navigation, etc.)	Team-based STEM Engineering Design Challenges	SpecialgGuests participate in STEM Research Poster Presentations		
	Residential experience with cadets from other schools	Tours of post-secondary institutions			
	Awards Ceremony	STEM research poster presentations			
	Guest Speakers share their motivational life stories; Teambuilding, Communication, Problem Solving				
	Experience living and interacting with peers from other units in a military setting.	Gain hands-on experience with the Academy's science, mathematics, and engineering content.	See a range of good paying jobs available in in Mobile area industries.		
Outputs	Practice leadership, physical fitness, academic enrichment, and citizenship in an unfamiliar environment.	Observe STEM research being conducted in the university laboratories.	Listen to industry, business, and government speakers discuss the academic and workforce skills		
	Engage in adventure training, recreation and other activities not normally available to cadets.	Experience the problem-solving cycle that includes learning from failure and the need for continuous improvement.			
	Practice 21st century workforce skills (teambuilding, communication, problem solving) to accomplish STEM and military challenges; Demonstrate the ability to lead and collaborate with peers; Have Fun!				
	Demonstrate personal responsibility, healthy lifestyles, leadership development, positive self-motivation, and enhanced awareness of the global economy.	Interest in pursuing a career involving STEM	Interest in attending post-secondary education at two- or four-year academic or technical institutions.		
Short-Term Outcomes	Remain drug free	Recognize the importance of integrating different content domains to solve complex and real-world problems.	Increase awareness of and interest in pursuing STEM-related jobs available in our region with an understanding of the academic and skill requirements for those jobs.		
	Improve physical fitness	Increase understanding and value for target content areas: science, technology, engineering, mathematics			
	Think critically and creatively; Communicate effectively; Ability to work effectively in teams				
Long	Become good citizens				
Term	-				
Outcomes	Graduate from high school college or career ready				

Pursue meaningful careers especially in the areas of STEM

Outcomes

Logic Model

JCLC	STEM	Workforce	
JROTC Instructors Media Volunteers			
Military Guest Speakers			
Winning Colors			Inputs
JCLC Guidelines			<u>u</u>
Military Sites			
Site visits to Military facilities			
Residential experience with cadets from other schools			
JCLC Required Leadership & Fitness Activities (e.g. drownproofing, land			ies
navigation, etc.)			Activities
Awards Ceremony			Aci
Experience living and interacting with			
peers from other units in a military setting.			
Practice leadership, physical fitness,			
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development, positive self-motivation,			
and enhanced awareness of the global economy.			
			C 10
Remain drug free			Tern mes
			Short-Term Outcomes
			S O
Improve physical fitness			
			Long
			Term Outcomes

JROTC + STEM Camp Action Plan and Timeline

Phase	1 – Get Ready (From	to)
S	ecure partners – business, ST	EM professionals, comn	nunity
F	orm Advisory Team		
lo	dentify resources – human, m	aterial, facilities, etc.	
Phase	2 – Plan the JCLC + STEM	Camp (From	to)
F	lesh out Logic Model		
	Determine your objective	es, outcomes	
	Develop activities to sup	pport	
	Identify, adapt and/or d	esign STEM curriculum	
S	ecure funding (this never end	ls!)	
Phase	3 – Launch your JCLC + S1	T EM Camp (From	to)
R	ecruit cadets and staff		
Ir	nplement JCLC + STEM exper	ience	
Е	valuate results using objectiv	es and planned outcom	es
S	hare results – widely		

Phase 4 – Make Continuous Improvement (Ongoing)

LTC Barrow's Essentials to Remember Think Big & Be Ambitious 1. Network, Network, Network 2. Link everything to career opportunities 3. If you do not ask, you shall not receive 4. It's a team effort 5. Be willing to take risks 6. If your purpose is to help students become college and career ready, you can never be wrong Never, ever, ever give up 8.

