

Planned Course: Anatomy & Physiology	Course Number: S406	Department: Science	
Unit: Covering, Support and Movements	Grade Level: 11-12		
Estimated Time: 8 weeks	Level/Track: Honors	Date Approved: 2/12/2018	
PA Academic Standards or PA Assessment Anchors	Core Concepts (in question format) • Skills/Knowledge	Activities/Strategies/Study Skills (identify some activities as remedial or enrichment activities)	Assessments (include types and topics)

<p>S11.B Biological Sciences</p> <p>S11.B.1 Structure and function of Organisms</p> <p>S11.B.1.1 Explain structure and function at multiple levels of organization.</p>	<p>S11.B.1.1.2 Compare and contrast the structural and functional similarities and differences among living things (e.g., classify organisms into classification groups, compare systems).</p> <ul style="list-style-type: none"> ▶ What are structures and functions of the skins layers? ▶ How does the skin function as a protective covering? ▶ What is the skin composed of? ▶ What are the accessory organs of the skin and their functions? ▶ How do the accessory organs prepare our body for daily activities? ▶ What relationships do accessory organs have to each other? 	<ul style="list-style-type: none"> – Lecture – Text Reading – Diagrams-Barron’s Detailed – Questions – Vocabulary – Lab – Spiny Dogfish Shark, one specimen per student – Lab – The Human Skeleton – Lecture – Diagrams – Barron’s Detailed – Questions – Lab - Diffusion – Lab – Intercellular organization – Lab – Spiny Dogfish Shark -individual dissection 	<ul style="list-style-type: none"> • Homework questions • Individual Dissection technique • Written quiz- subjective • Individual Dissection Required • Individual Lab Reports- Level 1,2,3 analysis questions • Individual Plate drawing • Homework • Individual Lab report • Written quiz- subjective • Individual Dissection technique • Individual, Detailed Plate drawings
---	--	--	--

Planned Course: Anatomy & Physiology	Course Number: S406	Department: Science
Unit: Covering, Support and Movements	Grade Level: 11-12	
Estimated Time: 8 weeks	Level/Track: Honors	Date Approved: 2/12/2018

PA Academic Standards or PA Assessment Anchors	<ul style="list-style-type: none"> ▶ Core Concepts (in question format) <ul style="list-style-type: none"> • Skills/Knowledge 	Activities/Strategies/Study Skills (identify some activities as remedial or enrichment activities)	Assessments (include types and topics)
--	---	--	--

	<p>S11.B.1.1.1 Explain how structure determines function at multiple levels of organization (e.g., chemical, cellular, anatomical).</p> <ul style="list-style-type: none"> ▶ What are the differences between the axial and appendicular skeletons? ▶ What is the function of the axial skeleton? ▶ What makes up the appendicular skeleton? <p>S11.B.1.1.2 Compare and contrast the structural and functional similarities and differences among living things (e.g., classify organisms into classification groups, compare systems).</p> <ul style="list-style-type: none"> ▶ What are the names and locations of the 206 bones of the body? ▶ What are the functions of the skeletal structure? ▶ How does the skeletal and muscular systems function together? ▶ What are the tissues in the bones? 	<ul style="list-style-type: none"> – Lecture – Text reading – Lab – Spiny Dogfish Shark <ul style="list-style-type: none"> – individual dissection – Lab- Testing for Calcium – Lab – The Internal Anatomy of the Bone <ul style="list-style-type: none"> – Labeled diagrams – Barron’s detailed – Lecture – Skeleton – Barron’s detailed – Microscope slides – Text Readings – Lab – Osteoporosis – Lab – Investigating Bone Using a Microscope <p><u>Enrichment</u></p> <ul style="list-style-type: none"> – Medical Journal Articles 	<ul style="list-style-type: none"> • Label diagrams • Written quiz- subjective • Individual Dissection technique • Individual Lab Reports – Level 1,2,3 analysis questions <ul style="list-style-type: none"> • Color-coded diagrams • Written quiz - subjective • Questions • Individual Lab reports – Level 1,2,3 Analysis Questions
--	---	---	---

Planned Course: Anatomy & Physiology	Course Number: S406	Department: Science	
Unit: Covering, Support and Movements	Grade Level: 11-12		
Estimated Time: 8 weeks	Level/Track: Honors	Date Approved: 2/12/2018	
PA Academic Standards or PA Assessment Anchors	Core Concepts (in question format) • Skills/Knowledge	Activities/Strategies/Study Skills (identify some activities as remedial or enrichment activities)	Assessments (include types and topics)

	<ul style="list-style-type: none"> ▶ What are the organs of the muscular system? ▶ How do muscle cells make up organs? ▶ How does chemical energy create muscle movement? 	<ul style="list-style-type: none"> – Lecture – Read text – Vocabulary – Diagrams – Barron’s detailed – Lab – Muscle Tissues – Lab – Spiny Dogfish Shark – Lab – Observing Skeletal Muscles through the Microscope – Lab – Naming Muscle Movements – Lab - Tendons 	<ul style="list-style-type: none"> • Detailed Plate Drawings • Individual Lab report – Level 1,2,3 analysis questions • Written quiz - subjective • Homework
	<p>S11.B.1.1.3 Compare and contrast cellular processes (e.g., photosynthesis and respiration, meiosis and mitosis, protein syntheses and DNA replication).</p> <ul style="list-style-type: none"> ▶ How is movement brought about by the muscular system? ▶ What happens when muscle cells contract? ▶ How does resistance work with muscles? 	<ul style="list-style-type: none"> – Lecture – Read text – Vocabulary – Skeleton – Barron’s Detailed – Chapter questions – Diagrams – Barron’s Detailed – Lab – Skeletal Muscles – Lab – Complete Spiny Dogfish Shark – individual dissections 	<ul style="list-style-type: none"> • Individual Lab report – subjective questions, microscope drawings • Homework • Diagrams – Barron’s detailed • Written test – subjective questions, definitions, short answer

Planned Course: Anatomy & Physiology	Course Number: S406	Department: Science
Unit: Covering, Support and Movements	Grade Level: 11-12	
Estimated Time: 8 weeks	Level/Track: Honors	Date Approved: 2/12/2018

PA Academic Standards or PA Assessment Anchors	▶ Core Concepts (in question format) <ul style="list-style-type: none"> Skills/Knowledge 	Activities/Strategies/Study Skills (identify some activities as remedial or enrichment activities)	Assessments (include types and topics)
---	---	---	---

	▶ How do body fluids work with muscles?		<p>and open ended essays</p> <ul style="list-style-type: none"> One-on-One Shark ID test-students will identify organ/structure by pointing using a forceps. This is done one on one with the instructor
--	---	--	---