

LITCHFIELD PUBLIC SCHOOLS
Core Curriculum Scope and Sequence
Embryology

	CT Frameworks/ Standards	Content and Skill Objectives Students will be able to:	Assessments	Resources
gametogenesis 2 weeks		<p>Students will explain the difference between spermatogenesis and spermiogenesis.</p> <p>Students will diagram the process of oogenesis .</p> <p>Students will describe the anatomy of the ovary and testes</p>	<p>Lab on the histology of the ovary and the testes .</p> <p>Test on the processes of gametogenesis</p>	Chapter 1 in the textbook
Fertilization 2 weeks		<p>Students will explain the process of fertilization from insemination to formation of the zygote .</p> <p>Students will describe the three aspects of fertilization .</p> <p>Students will predict how the process of parthenogenesis takes place .</p>	<p>Lab on normal and abnormal sperm.</p> <p>Test on process of fertilization</p>	Chapters 1 &2 in the textbook
Early Embryonic Forms [cleavage , morula, Blastocyst 2 weeks		<p>Students will diagram the three important forms-cleavage stage ;morula, blastocyst[4-day and 7-day]</p>	<p>Lab on cleavage stages</p> <p>Lab on the mitotic cells of a blastocyst</p> <p>Test on early embryonic forms</p>	Chapter 2 &3 in the textbook
Gastrulation And Formation of Germ		<p>Students will describe the process of gastrulation ,including invagination , epiboly , and involution .</p>	<p>Lab on germ layer formation using the embryos of chicks.</p>	Chapters 3 &4 in the textbook

<p>Layers 3 weeks</p>		<p>Students will explain primitive streak formation in humans</p> <p>Students will diagram the 4 stages of implantation into the uterus.</p> <p>Students will describe the “fate of the germ layers “ in the formation of organs in the embryo and fetus .</p>	<p>Test on the implantation of the blastocyst[7 1/2-day, 9-day, 11- day , and 13- day]</p>	
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	CT Frameworks/ Standards	Content and Skill Objectives Students will be able to:	Assessments	Resources
<p>Fetal membranes and placenta 3 weeks</p>		<p>Students will describe the importance of the four fetal membranes in humans.</p> <ol style="list-style-type: none"> 1- Yolk sac 2- Amnion 3- Allantois 4- Chorion <p>Students will diagram the procedure of amniocentesis .</p> <p>Students will diagram and explain the anatomy and physiology of the placenta.</p> <p>Students will explain the three stages of birth.</p> <p>Students will explain the various ectopic implantation location in the human body</p>	<p>Lab on fetal membranes from chick embryos.</p> <p>Lab on human “Birth Models”</p> <p>Lab on “stone-baby”.</p> <p>Lab on the dissection of a pregnant pig uterus</p> <p>Test on the four fetal membranes and the anatomy of the placenta.</p>	<p>Chapters 9& 10 in the textbook .</p>

		<p>Students will explain a “stone-baby”.</p> <p>Students will diagram the anatomy of the uterus .</p>		
<p>Twinning [Normal and Abnormal] 2 weeks</p>		<p>Students will describe the major kinds of Twins .</p> <p>1-Monovular [monozygotic] twins 2-Dioivular [dizygotic] twins 3-Conjoined twins A-equal conjoined twins B- unequal conjoined twins</p> <p>Students will describe and diagram a “fetus in fetu “.</p>	<p>Lab on Conjoined twins</p> <p>Lab on “fetus in fetu “ .</p> <p>Test on normal and abnormal twinning</p>	<p>Chapter 11 in the textbook</p>
<p>Ontogeny of an Organ 2 weeks</p>		<p>Students will describe and diagram the stages of an organ ‘s development of their choice .</p> <p>Students will prepare a powerpoint presentation about their organ for classroom presentation .</p> <p>Students will prepare a “fact-sheet” about their organ and its ontogeny .</p>	<p>Presentation of the project</p>	<p>Chapters 5, 6, 7, and 8 in the textbook .</p>
<p>Weeks Of Pregnancy 2 weeks</p>		<p>SDtudents will work as a “team” and prepare a complete ,week-by-week set of papers [one week per paper] on the 40 weeks of pregnancy .</p>	<p>Paper[s] on a certain week of pregnancy</p>	<p>Chapters 12 &13 in the textbook .</p>
<p>ART</p>		<p>Students will explain the various</p>	<p>Presentations on projects of</p>	<p>Internet location by</p>

[Assisted reproductive Technology] 2 weeks		methods of ART in “teams” .	ART	searching for “ART” .
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