

# **Unit 6 - Human Reproduction (Life Science) Copied from: Anatomy & Physiology (Life Science) , Copied on: 02/21/22**

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## **Title Section**

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## **Department of Curriculum and Instruction**



**Belleville Public Schools**

**Curriculum Guide**

# **ANATOMY AND PHYSIOLOGY, GRADE 11-12**

## **UNIT 6 - HUMAN REPRODUCTION**

**Belleville Board of Education**

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Board Approved: September 23, 2019

## **Unit Overview**

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This unit will be divided into three sections. The first section will have students investigate the male reproductive system; the second section will have students investigate the female reproductive system; and the third section will have students investigate pregnancy and fetal development. In the first section, students will investigate the structure and function of each of the male sex organs: the testes, epididymis, vas deferens, urethra, seminal vesicles, prostate gland, penis, and scrotum. Next, an investigation into sperm production and the main male sex hormones and their functions will be conducted. Students will also look at age and disease related changes that can occur in the male reproductive system. In the second section, students will investigate the structure and function of each of the female sex organs: ovaries, fallopian tubes, uterus, cervix, endometrium, vagina, external genitalia, and mammary glands. An investigation into oogenesis, ovulation, and menstruation will follow as will diseases and changes related to age. In the third section, students will learn about the stages of fetal development starting from the point of fertilization and continuing to birth. Lastly, students will learn about the stages of labor and changes that the female's reproductive system experiences during pregnancy.

## **Enduring Understanding**

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After completing this unit, students will be able to understand the following:

- The structure of the male and female reproductive systems are similar yet unique all are designed to create viable off spring.
- Secondary sex characteristics play a role in reproduction.
- The ovarian and uterine cycles are critical to reproduction and are regulated by specific stimuli.
- STDs are transmitted through different modes and infectious agents.
- Implantation and placenta formation are critical steps in human reproduction.
- The fetal period has a specific duration marked by certain major developmental events.
- The process of labor is initiated by a specific cause and has certain stages.

## **Essential Questions**

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What are the functions of the male and female reproductive systems?

How do the ovarian and uterine cycles work together to make it possible for reproduction?

What diseases are associated with the reproductive system?

What are the stages of fetal development?

## **Exit Skills**

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Upon completion of this unit, students should have achieved the following exit skills:

- Investigate the reproductive system by:
  - Listing the essential and accessory organs of the male and female reproductive systems and giving the generalized function of each.
  - Describing the gross microscopic structure of the gonads in both sexes and explaining the developmental steps in spermatogenesis and oogenesis.
  - Discussing the primary functions of the sex hormones and identifying the cell type or structure responsible for their secretion.
  - Identifying and describing the structures that constitute the external genitals of both sexes.
  - Identifying and discussing the phases of the endometrial or menstrual cycle and correlating each phase with its occurrence in a typical 28-day cycle.
- Summarize Growth and Development by:
  - Discussing the concept of development as a biological process characterized by continuous modification and change.
  - Discussing the major developmental changes characteristic of the prenatal stage of life

from fertilization to birth.

- Discussing the three stages of labor that characterize a normal, vaginal birth.
- Identifying the three primary germ layers and several derivatives in the adult body that develop from each layer.
- Listing and discussing the major developmental changes characteristic of the four postnatal periods of life.
- Discussing the effects of aging on the major body organ systems.

## **New Jersey Student Learning Standards (NJSL-S)**

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### [NextGen Science Standards](#)

|                   |   |
|-------------------|---|
| 9-12.HS-LS1-1     | Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins, which carry out the essential functions of life through systems of specialized cells.   |
| 9-12.HS-LS1-2     | Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.  |
| 9-12.HS-LS1-3     | Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.  |
| 9-12.HS-LS1-2.2.1 | Develop and use a model based on evidence to illustrate the relationships between systems or between components of a system.  |
| 9-12.HS-LS1-3.3.1 | Plan and conduct an investigation individually and collaboratively to produce data to serve as the basis for evidence, and in the design: decide on types, how much, and accuracy of data needed to produce reliable measurements and consider limitations on the precision of the data (e.g., number of trials, cost, risk, time), and refine the design accordingly.  |
| 9-12.HS-LS1-1.6.1 | students investigate systems by examining the properties of different materials, the structures of different components, and their interconnections to reveal the system's function and/or solve a problem. They infer the functions and properties of natural and designed objects and systems from their overall structure, the way their components are shaped and used, and the molecular substructures of their various materials. |
| 9-12.HS-LS1-1.6.1 | Construct an explanation based on valid and reliable evidence obtained from a variety of sources (including students' own investigations, models, theories, simulations, peer review) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future.   |
| 9-12.HS-LS1-3.7.1 | Feedback (negative or positive) can stabilize or destabilize a system.  |

|                       |   |
|-----------------------|---|
| 9-12.HS-LS1-3.LS1.A.1 | Feedback mechanisms maintain a living system’s internal conditions within certain limits and mediate behaviors, allowing it to remain alive and functional even as external conditions change within some range. Feedback mechanisms can encourage (through positive feedback) or discourage (negative feedback) what is going on inside the living system. |
| 9-12.HS-LS1-2.LS1.A.1 | Multicellular organisms have a hierarchical structural organization, in which any one system is made up of numerous parts and is itself a component of the next level.  |
| 9-12.HS-LS1-1.LS1.A.1 | Systems of specialized cells within organisms help them perform the essential functions of life.  |
| 9-12.HS-LS1-1.LS1.A.2 | All cells contain genetic information in the form of DNA molecules. Genes are regions in the DNA that contain the instructions that code for the formation of proteins, which carry out most of the work of cells.  |

## Interdisciplinary Connections

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|                 |  |
|-----------------|--|
| LA.RST.11-12.1  | Accurately cite strong and thorough evidence from the text to support analysis of science and technical texts, attending to precise details for explanations or descriptions.  |
| LA.RST.11-12.2  | Determine the central ideas, themes, or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.   |
| LA.RST.11-12.3  | Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.  |
| LA.RST.11-12.4  | Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.   |
| LA.RST.11-12.5  | Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.  |
| LA.RST.11-12.7  | Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.  |
| LA.WHST.11-12.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.   |
| LA.WHST.11-12.5 | Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.   |
| LA.WHST.11-12.7 | Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. |
| MA.S-IC.A       | Understand and evaluate random processes underlying statistical experiments  |
| MA.S-IC.B       | Make inferences and justify conclusions from sample surveys, experiments, and observational studies  |
| MA.S-ID.A       | Summarize, represent, and interpret data on a single count or measurement variable   |
| MA.S-ID.B       | Summarize, represent, and interpret data on two categorical and quantitative variables   |
| SOC.9-12.1.4.2  | Demonstrate effective presentation skills by presenting information in a clear, concise, and well-organized manner taking into consider appropriate use of language for task and audience.   |

## Learning Objectives

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Discuss the common purpose of the reproductive system organs.

Identify and describe the function of the organs of the male reproductive system.

Name the endocrine and exocrine products of the testes.

Discuss the composition of semen and name the glands that produce it.

Define meiosis and spermatogenesis.

Define meiosis and oogenesis.

Describe the function and structure of a sperm.

Describe the effect of FSH and LH on testis functioning and ovary functioning.

Identify and describe the function of the organs of the female reproductive system.

Describe the functions of the vesicular follicle and corpus luteum of the ovary and the cervix, fundus, and body of the uterus.

Explain the processes of ovulation and menstruation.

Describe the function and structure of the mammary glands.

Define and describe the following stages of human development: fertilization, zygote, embryo, and fetus.

Explain the major functions of the placenta during pregnancy.

Explain how the female body changes during pregnancy and explain the factors that initiate labor.

Describe the stages of labor.

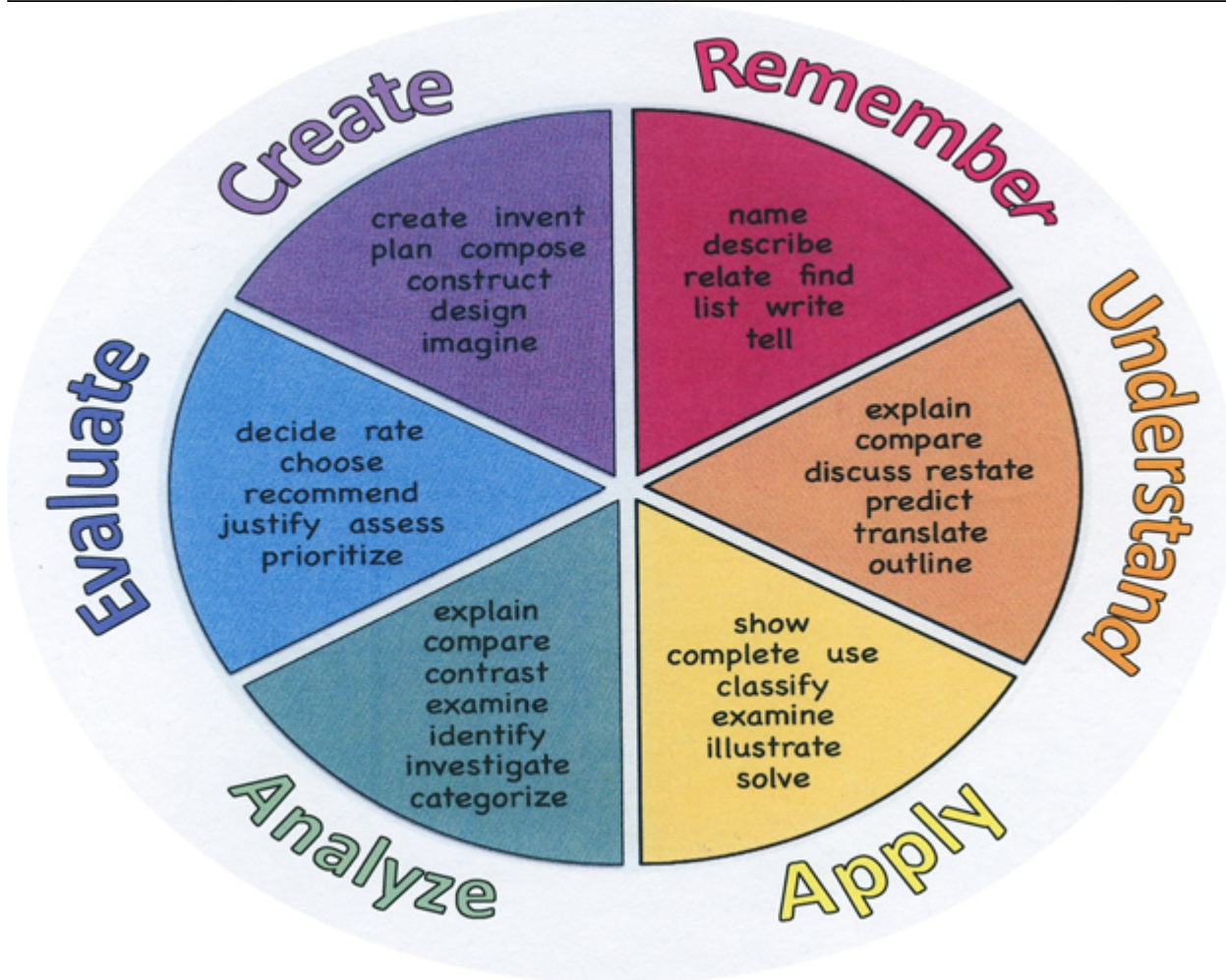
Identify different factors that can interfere with normal fetal development.

Explain how the presence or absence of testosterone during embryonic development can affect the development of the reproductive organs.

Describe the changes that the male and female reproductive systems go through with aging.

| <b>Remember</b> | <b>Understand</b> | <b>Apply</b> | <b>Analyze</b> | <b>Evaluate</b> | <b>Create</b> |
|-----------------|-------------------|--------------|----------------|-----------------|---------------|
| Choose          | Classify          | Choose       | Categorize     | Appraise        | Combine       |
| Describe        | Defend            | Dramatize    | Classify       | Judge           | Compose       |
| Define          | Demonstrate       | Explain      | Compare        | Criticize       | Construct     |
| Label           | Distinguish       | Generalize   | Differentiate  | Defend          | Design        |
| List            | Explain           | Judge        | Distinguish    | Compare         | Develop       |

|           |               |             |              |           |             |
|-----------|---------------|-------------|--------------|-----------|-------------|
| Locate    | Express       | Organize    | Identify     | Assess    | Formulate   |
| Match     | Extend        | Paint       | Infer        | Conclude  | Hypothesize |
| Memorize  | Give Examples | Prepare     | Point out    | Contrast  | Invent      |
| Name      | Illustrate    | Produce     | Select       | Critique  | Make        |
| Omit      | Indicate      | Select      | Subdivide    | Determine | Originate   |
| Recite    | Interrelate   | Show        | Survey       | Grade     | Organize    |
| Select    | Interpret     | Sketch      | Arrange      | Justify   | Plan        |
| State     | Infer         | Solve       | Breakdown    | Measure   | Produce     |
| Count     | Match         | Use         | Combine      | Rank      | Role Play   |
| Draw      | Paraphrase    | Add         | Detect       | Rate      | Drive       |
| Outline   | Represent     | Calculate   | Diagram      | Support   | Devise      |
| Point     | Restate       | Change      | Discriminate | Test      | Generate    |
| Quote     | Rewrite       | Classify    | Illustrate   |           | Integrate   |
| Recall    | Select        | Complete    | Outline      |           | Prescribe   |
| Recognize | Show          | Compute     | Point out    |           | Propose     |
| Repeat    | Summarize     | Discover    | Separate     |           | Reconstruct |
| Reproduce | Tell          | Divide      |              |           | Revise      |
|           | Translate     | Examine     |              |           | Rewrite     |
|           | Associate     | Graph       |              |           | Transform   |
|           | Compute       | Interpolate |              |           |             |
|           | Convert       | Manipulate  |              |           |             |
|           | Discuss       | Modify      |              |           |             |
|           | Estimate      | Operate     |              |           |             |
|           | Extrapolate   | Subtract    |              |           |             |
|           | Generalize    |             |              |           |             |
|           | Predict       |             |              |           |             |



## **Suggested Activities & Best Practices**

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Male reproductive system structure and function worksheet packet

Female reproductive system structure and function worksheet packet

Fetal development structure and development worksheet packet

Crash Course videos on the reproductive systems with questions

Webquest/virtual identification of the organs

Fetal development and diseases webquest

Article on fetal development and thalidomide

Diseases of the reproductive organs activity-students presented with case studies to identify

Observation of live and CEsarian birth via video presentation with questions

Unit test

## **Assessment Evidence - Checking for Understanding (CFU)**

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Google Classroom Assignment (Formative)

QUIA Quiz (Summative)

Pear Deck (Alternate)

Lab Reports (Alternate)

Common, Department Quarterly Benchmarks (Benchmark)



Oncourse Assessment Tools (Formative)

Unit Test/Quiz (Summative)

"Do Now/Exit Ticket" Activity (Formative)

- Admit Tickets
- Blank diagrams
- Compare & Contrast
- Crash Course Video Questions
- Create a Multimedia Poster
- Define
- Describe
- Diagram Quizzes
- Evaluate
- Evaluation rubrics
- Exit Tickets
- Explaining
- Illustration
- Journals
- KWL Chart
- Lab - Modeling Gestation
- Multimedia Reports
- Outline
- Quarterly Benchmarks
- Self- assessments
- Study Guide
- Surveys
- Teacher Observation Checklist
- Think, Pair, Share
- Unit review/Test prep
- Unit tests
- Web-Based Assessments
- WebQuests
- Written Reports

## **Primary Resources & Materials**

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Textbook: *Biology*, Miller and Levine

Chromebook: Online access to textbook and digital resources from *Biology*, Miller and Levine

## **Ancillary Resources**

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YouTube videos - Crash Course/Anatomy and Physiology series with associated question worksheets

Human torso models

Diagram packages

Compound light microscopes

Selection of prepared slides showing properties of tissue types

Full-scale skeleton model

## **Technology Infusion**

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Student-issued Chromebooks

Interactive digital content available through Pearson EasyBridge

YouTube videos for lesson enhancement and differentiation

Google Classroom

Google Suite

Prezi

Subscription to Defined STEM website

Use MS Word, Excel, PowerPoint, OneNote

Smart TV

Wireless HDMI

Multimedia projector

# Win 8.1 Apps/Tools Pedagogy Wheel

Podcasts  
 Photostory 3  
 Kid Story Builder  
 Music Maker Jam  
 Paint A Story  
 Office 365  
 MS PowerPoint  
 Stack 'Em Up  
 NqSquared Numbers  
 Physamajig  
 Xylophone 8

Wikipedia  
 Skydrive  
 Lync  
 SkyMap  
 Skype  
 Office 365  
 Puzzle Touch  
 Easy QR  
 Memorylage  
 Life Moments  
 Word Cloud Maker

Where's Waldo?  
 MS Excel  
 Flipboard  
 Office 365  
 Nova Mindmapping

Ted Talks  
 Record Voice Pen



Originally taken from <http://www.coetail.com/vzimmer/files/2013/02/1Padagogy-Wheel.001.jpg>  
 And adapted for Windows 8.1 devices by Charlotte Beckhurst @CharBeckhurst

## Alignment to 21st Century Skills & Technology

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|                 |  |
|-----------------|--|
| CRP.K-12.CRP1   | Act as a responsible and contributing citizen and employee.  |
| CRP.K-12.CRP1.1 | Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.                    |
| CRP.K-12.CRP2   | Apply appropriate academic and technical skills.   |
| CRP.K-12.CRP2.1 | Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.  |
| CRP.K-12.CRP3   | Attend to personal health and financial well-being.  |
| CRP.K-12.CRP3.1 | Career-ready individuals understand the relationship between personal health, workplace performance and personal well-being; they act on that understanding to regularly practice healthy diet, exercise and mental health activities. Career-ready individuals also take regular action to contribute to their personal financial well-being, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.  |
| CRP.K-12.CRP4   | Communicate clearly and effectively and with reason.   |
| CRP.K-12.CRP4.1 | Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome. |
| CRP.K-12.CRP7   | Employ valid and reliable research strategies.   |
| CRP.K-12.CRP7.1 | Career-ready individuals are discerning in accepting and using new information to make decisions, change practices or inform strategies. They use reliable research process to search for new information. They evaluate the validity of sources when considering the use and adoption of external information or practices in their workplace situation.  |
| CRP.K-12.CRP8   | Utilize critical thinking to make sense of problems and persevere in solving them.   |
| CRP.K-12.CRP8.1 | Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.   |
| CRP.K-12.CRP9   | Model integrity, ethical leadership and effective management.  |
| CRP.K-12.CRP9.1 | Career-ready individuals consistently act in ways that align personal and community-held ideals and principles while employing strategies to positively influence others in the  |

workplace. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the directions and actions of a team or organization, and they apply insights into human behavior to change others' action, attitudes and/or beliefs. They recognize the near-term and long-term effects that management's actions and attitudes can have on productivity, morals and organizational culture.

CRP.K-12.CRP10

Plan education and career paths aligned to personal goals.

CRP.K-12.CRP10.1

Career-ready individuals take personal ownership of their own education and career goals, and they regularly act on a plan to attain these goals. They understand their own career interests, preferences, goals, and requirements. They have perspective regarding the pathways available to them and the time, effort, experience and other requirements to pursue each, including a path of entrepreneurship. They recognize the value of each step in the education and experiential process, and they recognize that nearly all career paths require ongoing education and experience. They seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals.

CRP.K-12.CRP11

Use technology to enhance productivity.

CRP.K-12.CRP11.1

Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.

CRP.K-12.CRP12

Work productively in teams while using cultural global competence.

CRP.K-12.CRP12.1

Career-ready individuals positively contribute to every team, whether formal or informal. They apply an awareness of cultural difference to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.

CAEP.9.2.12.C.1

Review career goals and determine steps necessary for attainment.

CAEP.9.2.12.C.2

Modify Personalized Student Learning Plans to support declared career goals.

CAEP.9.2.12.C.3

Identify transferable career skills and design alternate career plans.

CAEP.9.2.12.C.7

Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace.

## **21st Century Skills/Interdisciplinary Themes**

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- Communication and Collaboration
- Creativity and Innovation
- Critical thinking and Problem Solving
- ICT (Information, Communications and Technology) Literacy
- Information Literacy
- Life and Career Skills
- Media Literacy

## **21st Century Skills**

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- Financial, Economic, Business and Entrepreneurial Literacy
- Global Awareness
- Health Literacy

## **Differentiation**

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### Unit-specific exemplars:

- 1) Manipulatives will be used to help understand stages of fetal development.
- 2) Problem-based learning is exemplified by employing case studies in reproductive pathologies.
- 3) Flexible grouping will be made available for students to choose with whom they would like to complete research presentations.

### **Differentiations:**

- Small group instruction
- Small group assignments
- Extra time to complete assignments
- Pairing oral instruction with visuals
- Repeat directions
- Use manipulatives
- Center-based instruction
- Token economy
- Study guides
- Teacher reads assessments allowed
- Scheduled breaks
- Rephrase written directions
- Multisensory approaches
- Additional time
- Preview vocabulary
- Preview content & concepts
- Story guides
- Behavior management plan
- Highlight text
- Student(s) work with assigned partner
- Visual presentation
- Assistive technology
- Auditory presentations
- Large print edition
- Dictation to scribe
- Small group setting

### **Hi-Prep Differentiations:**

- Alternative formative and summative assessments
- Choice boards
- Games and tournaments
- Group investigations
- Guided Reading
- Independent research and projects
- Interest groups
- Learning contracts
- Leveled rubrics
- Literature circles
- Multiple intelligence options
- Multiple texts
- Personal agendas
- Project-based learning
- Problem-based learning
- Stations/centers
- Think-Tac-Toes
- Tiered activities/assignments
- Tiered products
- Varying organizers for instructions

#### **Lo-Prep Differentiations**

- Choice of books or activities
- Cubing activities
- Exploration by interest
- Flexible grouping
- Goal setting with students
- Jigsaw
- Mini workshops to re-teach or extend skills
- Open-ended activities
- Think-Pair-Share
- Reading buddies
- Varied journal prompts
- Varied supplemental materials

## **Special Education Learning (IEP's & 504's)**

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Unit-specific exemplars:

- 1) Preview of content, concepts and vocabulary will be used by assigning online modules from Miller/Levine Biology Online.
- 2) Work will be checked frequently for understanding with performing research project.
- 3) Unit test will be shortened and with fewer choices of answers.

- printed copy of board work/notes provided
- additional time for skill mastery
- assistive technology
- behavior management plan
- Center-Based Instruction
- check work frequently for understanding
- computer or electronic device utilizes
- extended time on tests/ quizzes
- have student repeat directions to check for understanding
- highlighted text visual presentation
- modified assignment format
- modified test content
- modified test format
- modified test length
- multiple test sessions
- multi-sensory presentation
- preferential seating
- preview of content, concepts, and vocabulary
- Provide modifications as dictated in the student's IEP/504 plan
- reduced/shortened reading assignments
- Reduced/shortened written assignments
- secure attention before giving instruction/directions
- shortened assignments
- student working with an assigned partner
- teacher initiated weekly assignment sheet
- Use open book, study guides, test prototypes

## **English Language Learning (ELL)**

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Unit-specific exemplars:

- 1) Key aspects of reproductive physiology will be presented to limit the non-essential information presented.
  - 2) ELL students will be paired with fluent bilingual students to provide tutoring and assistance during class.
  - 3) Unit tests will be worded in simple terms, will be offered as open-book, and may be completed with assistance from ELL faculty.
- teaching key aspects of a topic. Eliminate nonessential information
  - using videos, illustrations, pictures, and drawings to explain or clarify



- allowing products (projects, timelines, demonstrations, models, drawings, dioramas, poster boards, charts, graphs, slide shows, videos, etc.) to demonstrate student's learning;
- allowing students to correct errors (looking for understanding)
- allowing the use of note cards or open-book during testing
- decreasing the amount of work presented or required
- having peers take notes or providing a copy of the teacher's notes
- modifying tests to reflect selected objectives
- providing study guides
- reducing or omitting lengthy outside reading assignments
- reducing the number of answer choices on a multiple choice test
- tutoring by peers
- using computer word processing spell check and grammar check features
- using true/false, matching, or fill in the blank tests in lieu of essay tests

## **At Risk**

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Unit-specific exemplars:

- 1) Alternative videos (Crash Course) may be assigned to support student understanding of topics with visual assistance.
- 2) Students may demonstrate knowledge of unit (summative assessment) by creating a visual presentation in the form of a model, poster, or other appropriate form.
- 3) Written tests may be performed open-book or with notes to assist in success.
  - allowing students to correct errors (looking for understanding)
  - teaching key aspects of a topic. Eliminate nonessential information
  - allowing products (projects, timelines, demonstrations, models, drawings, dioramas, poster boards, charts, graphs, slide shows, videos, etc.) to demonstrate student's learning
  - allowing students to select from given choices
  - allowing the use of note cards or open-book during testing
  - collaborating (general education teacher and specialist) to modify vocabulary, omit or modify items to reflect objectives for the student, eliminate sections of the test, and determine how the grade will be determined prior to giving the test.
  - decreasing the amount of work presented or required
  - having peers take notes or providing a copy of the teacher's notes
  - marking students' correct and acceptable work, not the mistakes
  - modifying tests to reflect selected objectives
  - providing study guides
  - reducing or omitting lengthy outside reading assignments
  - reducing the number of answer choices on a multiple choice test
  - tutoring by peers
  - using authentic assessments with real-life problem-solving
  - using true/false, matching, or fill in the blank tests in lieu of essay tests

- using videos, illustrations, pictures, and drawings to explain or clarify

## **Talented and Gifted Learning (T&G)**

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Unit-specific exemplars:

- 1) Advanced case studies including pathologies of associated body systems may be provided to additionally challenge students.
- 2) Additional research may be performed to link historical events or other multi-disciplinary information to increase the depth of knowledge.
- 3) Students will be urged to utilize college-level reading materials to increase the depth of knowledge.

- Above grade level placement option for qualified students
- Advanced problem-solving
- Allow students to work at a faster pace
- Cluster grouping
- Complete activities aligned with above grade level text using Benchmark results
- Create a blog or social media page about their unit
- Create a plan to solve an issue presented in the class or in a text
- Debate issues with research to support arguments
- Flexible skill grouping within a class or across grade level for rigor
- Higher order, critical & creative thinking skills, and discovery
- Multi-disciplinary unit and/or project
- Teacher-selected instructional strategies that are focused to provide challenge, engagement, and growth opportunities
- Utilize exploratory connections to higher-grade concepts
- Utilize project-based learning for greater depth of knowledge

## **Sample Lesson**

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