EGG HARBOR TOWNSHIP PUBLIC SCHOOLS CURRICULUM

**MEDICAL SCIENCE ACADEMY: Clinical Research and Observation
High School**

Length of Course: <u>Full Year</u>

Elective / Required: <u>Refer to Program of Studies</u>

Schools: <u>High School</u>

Student Eligibility: <u>Grade 12</u>

Credit Value: <u>5 credits</u>

Date Submitted: <u>September 2013</u>

Date Approved: _____

TABLE OF CONTENTS

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DISTRICT MISSION STATEMENT

Our mission in the Egg Harbor Township School District is to partner with the student, family, school, and community to provide a safe learning environment that addresses rigorous and relevant 21st Century standards and best practices which will develop academic scholarship, integrity, leadership, citizenship, and the unique learning style of students, while encouraging them to develop a strong work ethic and to act responsibly in their school community and every day society.

SCIENCE – PHILOSOPHY

We believe that ALL students regardless of race, ethnicity, socio-economic status, religious background, and/or any other classification are deserving of a holistic science education. This holistic approach would include an education that will allow them to fully discover themselves, their strengths and weaknesses, and benefit from science instruction.

> Scientific literacy assumes an increasingly important role in the context of globalization. The rapid pace of technological advances, access to an unprecedented wealth of information, and the pervasive impact of science and technology on day-to-day living require a depth of understanding that can be enhanced through quality science education. In the 21st century, science education focuses on the practices of science that lead to a greater understanding of the growing body of scientific knowledge that is required of citizens in an ever-changing world (NJCCCS-Science).

Science curricula are designed to reinforce 21st Century Learning, to maximize rigor, relevance, and relationships, and to engage students individually through differentiated instruction.

SCIENCE - STATEMENT OF PURPOSE

Education exists for the purpose of enabling each individual to realize and maintain her/his full potential. Scientifically literate students possess the knowledge and understanding of scientific concepts and processes required for personal decision-making, participation in civic and cultural affairs, and economic productivity.

> Science, engineering, and technology influence and permeate every aspect of modern life. Some knowledge of science and engineering is required to engage with the major public policy issues of today as well as to make informed everyday decisions, such as selecting among alternative medical treatments or determining how to invest public funds for water supply options. In addition, understanding science and the extraordinary insights it has produced can be meaningful and relevant on a personal level, opening new worlds to explore and offering lifelong opportunities for enriching people's lives. In these contexts, learning science is

important for everyone, even those who eventually choose careers in fields other than science or engineering (NJSLS-Science)

All students engage in science experiences that promote the ability to ask, find, or determine answers to questions derived from natural curiosity about everyday things and occurrences. The underpinning of the revised standards lies in the premise that science is experienced as an active process in which inquiry is central to learning and in which students engage in observation, inference, and experimentation on an ongoing basis, rather than as an isolated a process. When engaging in inquiry, students describe objects and events, ask questions, construct explanations, test those explanations against current scientific knowledge, and communicate their ideas to others in their community and around the world. They actively develop their understanding of science by identifying their assumptions, using critical and logical thinking, and considering alternative explanations (NJCCCS-Science).

Our school district provides an extensive science program, which will enable students to succeed and compete in the global marketplace using the New Jersey Student Learning Standards in Science as well as the Next Generation Science Standards.

INTRODUCTION

The most precious resource teachers have is time. Regardless of how much time a course is scheduled for, it is never enough to accomplish all that one would like. Therefore, it is imperative that teachers utilize the time they have wisely in order to maximize the potential for all students to achieve the desired learning.

High quality educational programs are characterized by clearly stated goals for student learning, teachers who are well-informed and skilled in enabling students to reach those goals, program designs that allow for continuous growth over the span of years of instruction, and ways of measuring whether students are achieving program goals.

THE EGG HARBOR TOWNSHIP SCHOOL DISTRICT CURRICULUM TEMPLATE

The Egg Harbor Township School District has embraced the backward-design model as the foundation for all curriculum development for the educational program. When reviewing curriculum documents and the Egg Harbor Township curriculum template, aspects of the backward-design model will be found in the stated enduring *understandings/essential questions, unit assessments,* and *instructional activities*. Familiarization with backward-design is critical to working effectively with Egg Harbor Township's curriculum guides.

GUIDING PRINCIPLES: WHAT IS BACKWARD DESIGN?
WHAT IS UNDERSTANDING BY DESIGN?

"Backward design" is an increasingly common approach to planning curriculum and instruction. As its name implies, "backward design" is based on defining clear goals, providing acceptable evidence of having achieved those goals, and then working 'backward' to identify what actions need to be taken that will ensure that the gap between the current status and the desired status is closed.

Building on the concept of backward design, Grant Wiggins and Jay McTighe (2005) have developed a structured approach to planning programs, curriculum, and instructional units. Their model asks educators to state goals; identify deep understandings, pose essential questions, and specify clear evidence that goals, understandings, and core learning have been achieved.

Programs based on backward design use desired results to drive decisions. With this design, there are questions to consider, such as: What should students understand, know, and be able to do? What does it look like to meet those goals? What kind of program will result in the outcomes stated? How will we know students have achieved that result? What other kinds of evidence will tell us that we have a quality program? These questions apply regardless of whether they are goals in program planning or classroom instruction.

The backward design process involves three interrelated stages for developing an entire curriculum or a single unit of instruction. The relationship from planning to curriculum design, development, and implementation hinges upon the integration of the following three stages.

Stage I: Identifying Desired Results: Enduring understandings, essential questions, knowledge and skills need to be woven into curriculum publications, documents, standards, and scope and sequence materials. Enduring understandings identify the "big ideas" that students will grapple with during the course of the unit. Essential questions provide a unifying focus for the unit and students should be able to answer more deeply and fully these questions as they proceed through the unit. Knowledge and skills are the *"stuff"* upon which the understandings are built.

Stage II: Determining Acceptable Evidence: Varied types of evidence are specified to ensure that students demonstrate attainment of desired results. While discrete knowledge assessments (e.g.: multiple choice, fill-in-the-blank, short answer, etc…) will be utilized during an instructional unit, the overall unit assessment is performance-based and asks students to demonstrate that they have mastered the desired understandings. These culminating (summative) assessments are authentic tasks that students would likely encounter in the real-world after they leave school. They allow students to demonstrate all that they have learned and can do. To demonstrate their understandings students can explain, interpret, apply, provide critical and insightful points of view, show empathy and/or evidence self-knowledge. Models of student performance and clearly

defined criteria (i.e.: rubrics) are provided to all students in advance of starting work on the unit task.

Stage III: Designing Learning Activities: Instructional tasks, activities, and experiences are aligned with stages one and two so that the desired results are obtained based on the identified evidence or assessment tasks. Instructional activities and strategies are considered only once stages one and two have been clearly explicated. Therefore, congruence among all three stages can be ensured and teachers can make wise instructional choices.

At the curricular level, these three stages are best realized as a fusion of research, best practices, shared and sustained inquiry, consensus building, and initiative that involves all stakeholders. In this design, administrators are instructional leaders who enable the alignment between the curriculum and other key initiatives in their district or schools. These leaders demonstrate a clear purpose and direction for the curriculum within their school or district by providing support for implementation, opportunities for revision through sustained and consistent professional development, initiating action research activities, and collecting and evaluating materials to ensure alignment with the desired results. Intrinsic to the success of curriculum is to show how it aligns with the overarching goals of the district, how the document relates to district, state, or national standards, what a high quality educational program looks like, and what excellent teaching and learning looks like. Within education, success of the educational program is realized through this blend of commitment and organizational direction.

INTENT OF THE GUIDE

This guide is intended to provide teachers with course objectives and possible activities, as well as assist the teacher in planning and delivering instruction in accordance with the New Jersey Core Curriculum Content Standards. The guide is not intended to restrict or limit the teacher's resources or individual instruction techniques. It is expected that the teacher will reflectively adjust and modify instruction and units during the course of normal lessons depending on the varying needs of the class, provided such modified instruction attends to the objectives and essential questions outlined below.

N.J.A.C. 6A:8-3.1 Required Curriculum Components

Code Language	Evident in Curriculum YES/NO	Comments
Interdisciplinary Connections	**Yes**	**Via lab activities. STEM units in development 1 per marking period**
A pacing guide	**Yes**	**By Unit approximately 2-4 units per marking period**
A list of core instructional materials, including various levels of text at each grade level	**Yes**	**Suggested Activities Labs**
Benchmark assessments	**Yes**	**Teacher-developed and common via pre/post and benchmark assessments**
Modifications for special education students, for ELLs in accordance with N.J.A.C. 6A:15, and for gifted students. (As appropriate) – See Appendix A	**Yes**	**As directed by student's Individual Education Plan**

Course Name: Clinical Research and Observation
Unit Name: 1- Introduction to Clinical Research
Time Frame: *2 weeks*
Author: Egg Harbor Township High School Science Department

<div style="background-color:#C9A22E; color:white; padding:4px; font-weight:bold;">UNIT</div>

Subject: Clinical Research and Observation   Country: **USA**
Course/Grade: 12th   State/Group: **NJ**
School: **Egg Harbor Township High School**
UNIT SUMMARY
Students will get an overview of the importance of authentic primary research and be able to properly/efficiently search using the available resource options given by the librarian. Students will also learn to properly engage themselves in the professional fieldwork settings, understanding HIPPA rules and regulations.
UNIT RESOURCES
Librarian, Edmodo, Google Scholar, Ebsco Host, Facts on File (science), Pro-quest Science and EasyBib, TurnItIn.com
Internet Resource Links:
 See above

<div style="background-color:#C9A22E; color:white; padding:4px; font-weight:bold;">STAGE ONE</div>

GOALS AND STANDARDS

COMMON CORE STANDARDS:

ELA/Literacy –
RST.11-12.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. (HS-LS1-1),(HS-LS1-6)
WHST.9-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. (HS-LS1-1),(HS-LS1-6)
WHST.9-12.5 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. (HS-LS1-6)
WHST.9-12.7 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. (HS-LS1-3)
WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. (HS-LS1-3)
WHST.9-12.9 Draw evidence from informational texts to support analysis, reflection, and research. (HS-LS-1-1), (HS-LS1-6)
SL.11-12.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. (HS-LS1-2),(HS-LS1-4),(HS-LS1-5),(HS-LS1-7)

21st Century Life and Careers Common Core Standards–

34x	**CAEP.9.2.12.C.1** - [*Standard*] - Review career goals and determine steps necessary for attainment.	
17x	**CAEP.9.2.12.C.2** - [*Standard*] - Modify Personalized Student Learning Plans to support declared career goals.	
34x	**CAEP.9.2.12.C.3** - [*Standard*] - Identify transferable career skills and design alternate career plans.	
0x	**CAEP.9.2.12.C.4** - [*Standard*] - Analyze how economic conditions and societal changes influence employment trends and future education.	
17x	**CAEP.9.2.12.C.5** - [*Standard*] - Research career opportunities in the United States and abroad that require knowledge of world languages and diverse cultures.	
0x	**CAEP.9.2.12.C.6** - [*Standard*] - Investigate entrepreneurship opportunities as options for career planning and identify the knowledge, skills, abilities, and resources required for owning and managing a business.	
34x	**CAEP.9.2.12.C.7** - [*Standard*] - Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace.	
17x	**CAEP.9.2.12.C.8** - [*Standard*] - Assess the impact of litigation and court decisions on employment laws and practices.	
17x	**CAEP.9.2.12.C.9** - [*Standard*] - Analyze the correlation between personal and financial behavior and employability.	

ENDURING UNDERSTANDINGS
Students will understand that…

- Clinical research and real-life working conditions in fieldwork placements are necessary for preparing to become successful practitioners in the medical field.

ESSENTIAL QUESTIONS

- What is Clinical Research?
- What is HIPPA and why is it important?
- How do I most efficiently search/query my desired topics for research?
- What is EasyBib and how do I register?

KNOWLEDGE AND SKILLS

- o Vocabulary:

Clinical Research, Query, HIPPA

- o Skills:

- Identify and use research tools for authentic professional research
- Construct and refine explanations, arguments or models of the natural world through the use of quantitative and qualitative evidence and data
- Ask a question and decide what to measure in order to answer the question
- Develop strategies for obtaining measurements, then systematically collecting data
- Gather, interpret, and evaluate data
- Set up and use EasyBib.com
- Use the empirical results to determine causal/correlational relationships

- Recognize that predictions and explanations can be revised on the basis of seeing new data and evidence
- Use data and evidence to modify and extend investigations
- Interpret scientific investigations and convert to laymen's terms

PERFORMANCE TASKS
- Establish proper professionalism and adherence to Privacy rules/guidelines
- Design and set proper observation portfolio format
- Use Edmodo as class discussion board on specific fieldwork instances
- Meet with librarian to learn/acknowledge resources available for research
- Compare research articles in groups, highlighting common and differentiated formats/defining important parts of authentic research articles, presenting findings to class.

OTHER EVIDENCE
- Exemplary research articles and fieldwork placement institutions

STAGE THREE

LEARNING PLAN
- Get introduced to fieldwork placement institutions
- Be Familiarized with HIPPA rules/guidelines
- In class group discussion of placement roles, identification of misunderstandings, understand proper/efficient research methods

Misunderstandings/Teaching Tips
- Research is not just about Google search
- Healthcare privacy is law, not just something to sign-off on.

Unit Name: 2 - Group Collaboration/Evaluation of Clinical Research Media
Time Frame: *2 weeks*
Author: Egg Harbor Township High School Science Department

Subject: Clinical Research and Observation   Country: **USA**
Course/Grade: 12th   State/Group: **NJ**
School: **Egg Harbor Township High School**
UNIT SUMMARY
Students will find and review authentic primary research with partners, properly/efficiently searching using the available resource options given by the librarian. Students will compare 2 articles with partners, summarizing what each covers, highlighting common and differentiated format methods. Defining different sections of articles and their purpose will be emphasized. Students will present their group findings to the class. Students will also properly engage themselves in the professional fieldwork settings, understanding HIPPA rules and regulations.
UNIT RESOURCES
Librarian, Edmodo, Google Scholar, Ebsco Host, Facts on File (science), Pro-quest Science and EasyBib, TurnItIn.com
Internet Resource Links:
 See above

STAGE ONE

GOALS AND STANDARDS

COMMON CORE STANDARDS:

ELA/Literacy –
RST.11-12.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. (HS-LS1-1),(HS-LS1-6)
WHST.9-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. (HS-LS1-1),(HS-LS1-6)
WHST.9-12.5 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. (HS-LS1-6)
WHST.9-12.7 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. (HS-LS1-3)
WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. (HS-LS1-3)
WHST.9-12.9 Draw evidence from informational texts to support analysis, reflection, and research. (HS-LS-1-1), (HS-LS1-6)
SL.11-12.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. (HS-LS1-2),(HS-LS1-4),(HS-LS1-5),(HS-LS1-7)

21ˢᵗ Century Life and Careers Common Core Standards–

34x	**CAEP.9.2.12.C.1** - [*Standard*] - Review career goals and determine steps necessary for attainment.

17x	**CAEP.9.2.12.C.2** - [*Standard*] - Modify Personalized Student Learning Plans to support declared career goals.
34x	**CAEP.9.2.12.C.3** - [*Standard*] - Identify transferable career skills and design alternate career plans.
0x	**CAEP.9.2.12.C.4** - [*Standard*] - Analyze how economic conditions and societal changes influence employment trends and future education.
17x	**CAEP.9.2.12.C.5** - [*Standard*] - Research career opportunities in the United States and abroad that require knowledge of world languages and diverse cultures.
0x	**CAEP.9.2.12.C.6** - [*Standard*] - Investigate entrepreneurship opportunities as options for career planning and identify the knowledge, skills, abilities, and resources required for owning and managing a business.
34x	**CAEP.9.2.12.C.7** - [*Standard*] - Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace.
17x	**CAEP.9.2.12.C.8** - [*Standard*] - Assess the impact of litigation and court decisions on employment laws and practices.
17x	**CAEP.9.2.12.C.9** - [*Standard*] - Analyze the correlation between personal and financial behavior and employability.

ENDURING UNDERSTANDINGS

Students will understand that…

- Clinical research and real-life working conditions in fieldwork placements are necessary for preparing to become successful practitioners in the medical field.
- Exploring opportunities in the health care field is important for high school students and making the best of networking with real practitioners will set apart themselves from others who are interested in applying for these jobs in the future.
- Authentic science research can be challenging to understand for someone not specializing in the topic covered.
- Different research articles have common format methods for all researchers to use for clinical research.
- Various tools for research should be all utilized for best results.
- Different parts of research articles serve importance roles for presentation.

ESSENTIAL QUESTIONS

- What is Clinical Research?
- What is HIPPA and why is it important?
- How do I most efficiently search/query my desired topics for research?
- How do I use EasyBib and various Internet search engines to best find information about their chosen topics?
- What are the major parts/roles/format of research articles

KNOWLEDGE AND SKILLS

- o Vocabulary:

Clinical Research, Query, HIPPA, Job descriptions

- o Skills:

- Identify and use research tools for authentic professional research
- Construct and refine explanations, arguments or models of the natural world through the use of quantitative and qualitative evidence and data
- Ask a question and decide what to measure in order to answer the question
- Develop strategies for obtaining measurements, then systematically collecting data
- Gather, interpret, and evaluate data
- Use the empirical results to determine causal/correlational relationships
- Recognize that predictions and explanations can be revised on the basis of seeing new data and evidence
- Use data and evidence to modify and extend investigations
- Interpret scientific investigations and convert to laymen's terms
- Begin designing clinical observation portfolio based on fieldwork
- Perform tasks at institutions and continue to monitor/observe privacy rules.

STAGE TWO

PERFORMANCE TASKS
- Continue proper professionalism and adherence to Privacy rules/guidelines
- Begin designing observation portfolio
- Continue to use Edmodo as class discussion board on specific fieldwork instances
- Meet with librarian to learn/acknowledge resources available for research
- Compare research articles in groups, highlighting common and differentiated formats/defining important parts of authentic research articles, presenting findings to class.

OTHER EVIDENCE
- Exemplary research articles and fieldwork placement institutions
- Guest speakers and/or interviews with professionals discussing proper behavior, most effective research methods and its importance for their fields.

STAGE THREE

LEARNING PLAN
- Begin activities at fieldwork placement institutions; such as:
    - Restocking supplies
    - Preparing rooms for patients
    - Calling patients from waiting areas
    - Filing records
    - Preparing educational and informational materials for patients
    - Transporting files/records/supplies to various locations
    - Other duties relevant to specific site
- Continue to obey and be familiarized with HIPPA rules/guidelines
- Continue In-class group discussion of placement roles, identification of misunderstandings, understand proper/efficient research methods

Misunderstandings/Teaching Tips
- Research is not just about Google search and viewing the first few results; it takes time and patience to find the information needed that will help in your investigation.
- Healthcare privacy is law, not just something to put aside after looking at only once.

Unit Name: 3 - Initial Clinical Research Assignment and Evaluation
Time Frame: 5 *weeks*
Author: Egg Harbor Township High School Science Department

Subject: Clinical Research and Observation   Country: **USA**
Course/Grade: 12th   State/Group: **NJ**
School: **Egg Harbor Township High School**
UNIT SUMMARY
Students will perform authentic primary research with partners and be able to properly/efficiently search using the available resource options given by the librarian. The research will be summarized and presented to the class. Students will continue to properly engage themselves in the professional fieldwork settings, adhering to HIPPA rules and regulations.
UNIT RESOURCES
Librarian, Edmodo, Google Scholar, Ebsco Host, Facts on File (science), Pro-quest Science and EasyBib, TurnItIn.com
Internet Resource Links:
See above

STAGE ONE

GOALS AND STANDARDS

COMMON CORE STANDARDS:

ELA/Literacy –
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WHST.9-12.7 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
WHST.11-purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. (HS-LS1-3)
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21st Century Life and Careers Common Core Standards–

| 34x | **CAEP.9.2.12.C.1** - [*Standard*] - Review career goals and determine steps necessary for attainment. |

| 17x | **CAEP.9.2.12.C.2** - [*Standard*] - Modify Personalized Student Learning Plans to support declared career goals. |

34x	**CAEP.9.2.12.C.3** - [*Standard*] - Identify transferable career skills and design alternate career plans.	
0x	**CAEP.9.2.12.C.4** - [*Standard*] - Analyze how economic conditions and societal changes influence employment trends and future education.	
17x	**CAEP.9.2.12.C.5** - [*Standard*] - Research career opportunities in the United States and abroad that require knowledge of world languages and diverse cultures.	
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34x	**CAEP.9.2.12.C.7** - [*Standard*] - Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace.	
17x	**CAEP.9.2.12.C.8** - [*Standard*] - Assess the impact of litigation and court decisions on employment laws and practices.	
17x	**CAEP.9.2.12.C.9** - [*Standard*] - Analyze the correlation between personal and financial behavior and employability.	

ENDURING UNDERSTANDINGS
Students will understand that…

- Clinical research and real-life working conditions in fieldwork placements are necessary for preparing to become successful practitioners in the medical field.
- Exploring opportunities in the health care field is important for high school students and making the best of networking with real practitioners will set apart themselves from others who are interested in applying for these jobs in the future.
- Authentic science research can be challenging to understand for someone not specializing in the topic covered.
- Different research articles have common format methods for all researchers to use for clinical research.
- Various tools for research should be all utilized for best results.
- Different parts of research articles serve importance roles for presentation.
- Choosing the right topic, cooperating with another student, and effectively finding useful data/information relative to topic that can be summarized and presented.

ESSENTIAL QUESTIONS

- How do I most efficiently search/query my desired topics for research?
- How do I use EasyBib and various Internet search engines to best find information about their chosen topics?
- How do I interpret research and make it understandable/presentable for others who are not engaged in the specific field of study?

KNOWLEDGE AND SKILLS

- o Vocabulary:

Clinical Research, Query, HIPPA, Job descriptions

- o Skills:

    - Continue to identify and use research tools for authentic professional research
    - Construct and refine explanations, arguments or models of the natural world through the use of quantitative and qualitative evidence and data

- Ask a question and decide what to measure in order to answer the question
- Develop strategies for obtaining measurements, then systematically collecting data
- Gather, interpret, and evaluate data
- Use the empirical results to determine causal/correlational relationships
- Recognize that predictions and explanations can be revised on the basis of seeing new data and evidence
- Use data and evidence to modify and extend investigations
- Interpret scientific investigations and convert to laymen's terms
- Begin designing clinical observation portfolio based on fieldwork
- Perform tasks at institutions and continue to monitor/observe privacy rules.

STAGE TWO

PERFORMANCE TASKS
- Continue proper professionalism and adherence to Privacy rules/guidelines
- Continue designing observation portfolio
- Continue to use Edmodo as class discussion board on specific fieldwork instances
- Utilize previously reviewed/ resources that are available for research
- Complete initial research assignment, working with a partner(s) with similar a desired field: The goal is to research a chosen medical procedure/diagnostic tool/or treatment option. Students will weigh the risks/benefits/when it was started/its effectiveness/and interview a doctor who currently practices with it as well as a patient who is using it. Make a summary of these findings and present them to the class.

OTHER EVIDENCE
- Exemplary research articles and fieldwork placement institutions
- Guest speakers and/or interviews with professionals discussing proper behavior, most effective research methods and its importance for their fields; motivating students to pursue higher education leading to careers in health care
- Take notes and discuss findings from initial research assignments.

STAGE THREE

LEARNING PLAN
- Continue activities at fieldwork placement institutions; such as:
  - Observing patient/doctor consultation (with prior consent)
  - Observe patient/nurse and patient/doctor procedures (with prior consent) including diagnosis of conditions, routine tests, general surgery, labor and delivery, respiratory therapy, physical therapy, etc.
  - Observe doctor/intern conferences on patient care
  - Assist nurses with care of patients (lifting, moving, adjusting, etc.)
  - Practice/mock procedures (not on patients), or verbal walk-through of procedures including vital signs, running tests, preparing casts, X-ray technology, mammograms, wound care, autopsies, etc.
  - Other duties relevant to specific site
- Continue to obey and be familiarized with HIPPA rules/guidelines
- Continue In-class group discussion of placement roles, identification of misunderstandings, understand proper/efficient research methods

Misunderstandings/Teaching Tips
- Research is not just about Google search and viewing the first few results; it takes time and patience to find the information needed that will help in your investigation.
- Healthcare privacy is law, not just something to put aside after looking at only once
- It is important to develop a positive rapport with doctors/staff/patients to have a good sense of the best interaction practices in the profession.

<u>Unit Name: 4 - Final Research Assignment and Judged Presentation</u>
Time Frame: *11 weeks*
Author: Egg Harbor Township High School Science Department

Subject: Clinical Research and Observation   Country: **USA**
Course/Grade: 12th   State/Group: **NJ**
School: **Egg Harbor Township High School**
UNIT SUMMARY
Students will complete authentic primary research independently and be able to properly/efficiently search using the available resource options understood during this course. Students will attach the research to their chosen field and find a way to make it useful to that field. Students will also reflect on importance of properly engaging themselves in the professional fieldwork settings, understanding HIPPA rules and regulations. Final research will be summarized and presented, as well as their fieldwork portfolio finalized.

UNIT RESOURCES
Librarian, Edmodo, Google Scholar, Ebsco Host, Facts on File (science), Pro-quest Science and EasyBib, TurnItIn.com
Internet Resource Links:
See above

STAGE ONE

GOALS AND STANDARDS

COMMON CORE STANDARDS:

ELA/Literacy –
RST.11-12.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. (HS-LS1-1),(HS-LS1-6)
WHST.9-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. (HS-LS1-1),(HS-LS1-6)
WHST.9-12.5 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. (HS-LS1-6)
WHST.9-12.7 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. (HS-LS1-3)
WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. (HS-LS1-3)
WHST.9-12.9 Draw evidence from informational texts to support analysis, reflection, and research. (HS-LS-1-1), (HS-LS1-6)
SL.11-12.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. (HS-LS1-2),(HS-LS1-4),(HS-LS1-5),(HS-LS1-7)

34x **CAEP.9.2.12.C.1** - [*Standard*] - Review career goals and determine steps necessary for attainment.

17x **CAEP.9.2.12.C.2** - [*Standard*] - Modify Personalized Student Learning Plans to support declared career goals.

34x **CAEP.9.2.12.C.3** - [*Standard*] - Identify transferable career skills and design alternate career plans.

0x **CAEP.9.2.12.C.4** - [*Standard*] - Analyze how economic conditions and societal changes influence employment trends and future education.

17x **CAEP.9.2.12.C.5** - [*Standard*] - Research career opportunities in the United States and abroad that require knowledge of world languages and diverse cultures.

0x **CAEP.9.2.12.C.6** - [*Standard*] - Investigate entrepreneurship opportunities as options for career planning and identify the knowledge, skills, abilities, and resources required for owning and managing a business.

34x **CAEP.9.2.12.C.7** - [*Standard*] - Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace.

17x **CAEP.9.2.12.C.8** - [*Standard*] - Assess the impact of litigation and court decisions on employment laws and practices.

17x **CAEP.9.2.12.C.9** - [*Standard*] - Analyze the correlation between personal and financial behavior and employability.

ENDURING UNDERSTANDINGS

Students will understand that…

- Clinical research and real-life working conditions in fieldwork placements are necessary for preparing to become successful practitioners in the medical field.
- Exploring opportunities in the health care field is important for high school students and making the best of networking with real practitioners will set apart themselves from others who are interested in applying for these jobs in the future.
- Authentic science research can be challenging to understand for someone not specializing in the topic covered.
- Different research articles have common format methods for all researchers to use for clinical research.
- Various tools for research should be all utilized for best results.
- Choosing the right topic and effectively finding useful data/information relative to topic that can be summarized and presented.

ESSENTIAL QUESTIONS

- How do I most efficiently search/query my desired topics for research?
- How do I use EasyBib and various Internet search engines to best find information about their chosen topics?
- What research can I complete that makes a difference in my interested field/career choice?
- How do I use my research findings in the career field that will make me the best practitioner?

KNOWLEDGE AND SKILLS

- o Vocabulary:

Clinical Research, Query, HIPPA, Job descriptions

- o Skills:

  - Continue to identify and use research tools for authentic professional research
  - Construct and refine explanations, arguments or models of the natural world through the use of quantitative and qualitative evidence and data
  - Ask a question and decide what to measure in order to answer the question
  - Develop strategies for obtaining measurements, then systematically collecting data
  - Gather, interpret, and evaluate data
  - Use the empirical results to determine causal/correlational relationships
  - Recognize that predictions and explanations can be revised on the basis of seeing new data and evidence
  - Use data and evidence to modify and extend investigations
  - Interpret scientific investigations and convert to laymen's terms
  - Finalize clinical observation portfolio based on fieldwork
  - Continue to perform tasks at institutions and continue to monitor/observe privacy rules.
  - Finalize independent research assignment, summarize findings, and present to class

STAGE TWO

PERFORMANCE TASKS
- Continue proper professionalism and adherence to Privacy rules/guidelines
- Continue to use Edmodo as class discussion board on specific fieldwork instances
- Finalize observation portfolio
- Utilize previously reviewed/ resources that are available for research
- Complete final independent research assignment: 8-10 pages required length, related to a specific thing encountered during clinical observations. Students must use at least 5 different primary research sources, 2 must be copyrighted within the past 5 years. Students will present their question, why they chose their topic, any findings (conclusion) and personal reflection. They must make a summary of these findings and present them to the class.
- Final assignment presentation will be judged by other teachers in the MSA and the top 3 students will be indentified.

OTHER EVIDENCE
- Exemplary research articles and fieldwork placement institutions
- Guest speakers and/or interviews with professionals discussing proper behavior, most effective research methods and its importance for their fields; motivating students to pursue higher education leading to careers in health care
- Take notes and discuss findings from initial research assignments.

STAGE THREE

LEARNING PLAN
- Participate in real the mentoring process of fieldwork experiences:
  - o Doctors, nurses, and technicians engage students in conversations related to their specific field.

- - Topics include: education, advantages and disadvantages of specific career, specific training, and interpretation if test results, etc.
- Continue to obey and be familiarized with HIPPA rules/guidelines
- Final reflection of group discussions regarding placement roles, misunderstandings, and proper/efficient research methods

Misunderstandings/Teaching Tips
- Research is not just about Google search and viewing the first few results; it takes time and patience to find the information needed that will help in your investigation.
- Healthcare privacy is law, not just something to put aside after looking at only once
- It is important to develop a positive rapport with doctors/staff/patients to have a good sense the best interaction practices in the profession
- Reflection and continual improvement is what will make practitioners successful in their career

Curriculum Resources - Differentiated Instruction

<u>Special Education Interventions in General Education</u>

Visual Supports
Extended time to complete tests and assignments
Graphic Organizers
Mnemonic tricks to improve memory
Study guides
Use agenda book for assignments
Provide a posted daily schedule
Use of classroom behavior management system
Use prompts and model directions
Use task analysis to break down activities and lessons into each individual step needed to complete the task
Use concrete examples to teach concepts
Have student repeat/rephrase written directions
Heterogeneous grouping

Resources:

Do to Learn:
http://www.do2learn.com/

Sen Teacher:
http://www.senteacher.org/

Intervention Central:
http://www.interventioncentral.org/

Learning Ally:
https://www.learningally.org/

<u>English Language Learners Interventions in Regular Education</u>
Resources:

FABRIC - Learning Paradigm for ELLs (NJDOE)
www.nj.gov/education/bilingual/pd/**fabric**/**fabric**.pdf

Guide to Teaching ELL Students
http://www.colorincolorado.org/new-teaching-ells

Edutopia - Supporting English Language Learners
https://www.edutopia.org/blog/strategies-and-resources-supporting-ell-todd-finley

Reading Rockets
http://www.readingrockets.org/reading-topics/english-language-learners

Gifted and Talented Interventions in Regular Education
Resources:

Who are Gifted and Talented Students
http://www.npr.org/sections/ed/2015/09/28/443193523/who-are-the-gifted-and-talented-and-what-do-they-need

Hoagies Gifted Education Page
http://www.hoagiesgifted.org/programs.htm

21st Century Learning
Resources:

Partnership for 21st Century Learning
http://www.p21.org/

Career Ready Practices (NJDOE)
http://www.nj.gov/education/cte/hl/CRP.pdf