Westbury High School

Lesson Plans

Principles of Health Science

Teacher: Debra Hurt Weeks of: Jan. 13, 2015-Jan. 14, 2015

**Lesson Topic**-Infection Control (**May change due to advocacy schedule-TBA per Administration**)

**Objectives:** 1. Student will be able to identify the five classes of microorganisms.

2. Student will be able to list the six components of the chain of infection

3. Student will be differentiate the difference between antisepsis, disinfection, and

Sterilization

4. Opening sterile gloves and change a sterile dressing without contaminating the material.

5. Student will define, write and pronounce all key terms.

6. Student will be able to practice Standard Precautions

**Key Terms:** Aerobic Bacteria Communicable disease

Anaerobic Microorganism Sterile Field

Antisepsis Chain of Infection Sterilization

Asepsis  Contaminated Endogenous

Endogenous Exogenous Fomites

Fungi Mode of transmission Nosocomial

Pathogens Portal of entry Portal of exit

Reservoir Susceptible Host Viruses

Autoclave Hepatitis B & C STD’s

**Lesson** **Activities**:

**1/13/15-1/14/15**

Agenda:

1. District Survey

2. Define and discuss Key Terms.

2. Draw and label chain of infection per Case Study below.

4. Classroom discussions.

Page 185 Gonorrhea

Marcus is a 21 year old Asian male treated at Harris County Health Department for gonorrhea. He has had three sexual partners in the last 2 months (Mary, Jane and Maria). Marcus case manager called his contacts in the clinic to be interviewed and to receive treatment. Mary explained she have had two partners within the last year. Jane believed she and Marcus was in a monogamous relationship and Maria has been in a relationship with one female and two males the last three months.

**1. Turn on pages 302-303 and complete the chain of infection in the above case study.**

**2. List several ways the chain can be broken.**

**Objectives: 1/13/15-1/14/15**

1. Student will be able to define, pronounce and spell key terms.

2. Students will learn the components of the chain of infection.

**Classroom Assignment #1**

1. Powerpoint “Infection control” (Resource-Diversified Occupational Health PP) **(45 mins.)-Intro. To** **new learning. 1/12/15 thru 1/13/15 even & add days.**

2. Student will review and correct pretest definition on key terms while teacher and students discuss Powerpoint. (Student will practice putting on sterile gloves and changing a sterile dressing). **1/12/15 thru 1/13/15 even and odd days**

**Classroom Assignment # 2**

NOVA**- “**Which Wash Wins?" students test the efficacy of different types of hand hygiene. Grades 9-12. **(1/14/15 and 1/15/15)**

**1. Introduction & lead practice (15 mins.)**

**2. Independent practice-Group activity test hand washing techniques (30 minutes)**

**3. Group activity-google images of different pathogens**

**Objective**  
1. Student will learn the efficacy of different types of hand hygiene.

2. Student will be able to differentiate the different pathogens observed on Petri dishes (over 4 days)

Materials for teacher

* 2 14.5 oz. cans of sliced beets (10-12 slices per can)
* can opener
* 1 pair new plastic gloves
* plastic forceps or tongs
* isopropyl alcohol (for disinfecting)

Materials for each team

* copy of the "Which Wash Wins?" student handout ([PDF](http://www.pbs.org/wgbh/nova/teachers/activities/pdf/3115_typhoid_01.pdf) or [HTML](http://www.pbs.org/wgbh/nova/teachers/activities/3115_typhoid_01.html))
* copy of the "Hand-Washing Methods" student handout ([PDF](http://www.pbs.org/wgbh/nova/teachers/activities/pdf/3115_typhoid_02.pdf) or [HTML](http://www.pbs.org/wgbh/nova/teachers/activities/3115_typhoid_02.html))
* 3 100 mm x 15 mm sterile plastic Petri dishes
* cotton swabs
* tape
* permanent marker
* access to sink with water (Teams 1, 2, and 3 only)
* regular soap (Team 2 only)
* antibacterial soap (with antiseptic like triclosan) (Team 3 only)
* hand sanitizer (with ethyl or isopropyl alcohol) (Team 4 only)
* paper towels (Teams 1, 2, and 3 only)

**Assignment #3 Dates TBA**

1. Independent & Group Practice-Student will complete the chain of infection after problem solving case studies related to bacterial, fungal, viral infections and STD’s

2. Presentation-Vaccine to prevent diseases and to break the chain of infections

Objectives: Students will learn the components in the chain of infection and the ways in which the chain can be broken.

**Do Now/Bell-Ringer:** Pretest on above key terms **(20 mins.) to assess prior knowledge.–Assign. #1**

Individual groups record information on bacteria or fungus growth- **Assign. #2**

Instructional Method:  Lecture with class discussion  Individual

Written work  Team

Demonstration  Audio/Visual

Work based  Independent Study

**Materials Needed:** Textbooks: Diversified Health Occupations Sixth Edition - Louise Simmers

Health Care Science Technology-Kathryn Booth

Powerpoint-Health Care Technology

Video -

Worksheet & Home work

Other-School Library

Assessment:  Teacher evaluation  Peer/self -evaluation

Employer evaluation  Skills performance

Presentation  Tests

**Home work:** Infection control Lab work sheet.

TEKS: 130

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| Knowledge & Skills | Student Expectations |
| 1. The student applies math, science, English language arts, & social sciences in health science. | a. interpret data from various sources to make conclusions  b. compile information from a variety of sources to create a technical report  c. research, write, & present a technical report  d. plan, prepare, & deliver a presentation  e. identify the environmental factors that affect homeostasis  f. observe & relate anatomical structure to physiological functions  g. identify atypical anatomy & physiology  h. use the scientific method to prepare clinical case studies  i. compare & contrast community health issues of the U.S. with other countries  j. compare & contrast various health care reform plans |
| 2. The student used verbal & non-verbal communication skill. | a. accurately describe observations & procedures related to client care  b. demonstrate advanced communication skills to provide quality client care  c. identify barriers to communication & take measures to minimize their effects |
| 3. The student knows the knowledge & skills necessary to maintain employment. | a. monitor & evaluate his/her own performance to ensure continuous improvement  b. adjust career goals based on personal interests & clinical experience    c. describe the steps necessary for entrepreneurship in a free enterprise system  d. identify & follow procedures for advancement, resignation, or relocation  e. transfer knowledge & skills to new situations & apply problem-solving strategies.  f. demonstrate proficiency in medical terminology  g. update skills to enhance employability |
| 4. The student knows ethical behavior standards & legal responsibilities. | a. practice ethical behavior standards  b. comply with industry standards of confidentiality  c. comply with protocol & legal requirements & perform within the designated scope of practice  d. review court cases related to professional liability & ethics |
| 5. The student knows the importance of functioning as a health care team member. | a. participate in team teaching  b. refine consensus-building techniques  c. manage conflicts using peer mediation, problem-solving, & negotiation skills  d. identif6y leadership opportunities in the community |
| 6. The student maintains a safe environment to prevent hazardous situations. | a. comply with standard precautions  b. teach principles of body mechanics to others  c. develop a fire prevention plan  d. respond to emergency situations consistent with level of training  e. participate in a disaster drill  f. comply with regulatory standards & guidelines |
| 7. The student demonstrates multi-competent health care worker knowledge & skills. | a. identify knowledge & skills that are transferable among occupations  b. predict client’s needs for follow-up or alternative care  c. update skills to enhance employability  d. identify emerging technologies in the health care industry |