

HOSA STRATEGIES FOR EMERGENCY PREPAREDNESS: COMPETITIVE EVENTS

INTRODUCTION

PURPOSE

For most of its history, the focus of Health Science Education has been preparing students for health careers in a variety of healthcare settings. As healthcare and world events change, the need for preparation beyond the traditional healthcare delivery system is apparent. HOSA provides a unique program of leadership development, motivation, and recognition for health science students, through the National Competitive Events program. HOSA recognizes the importance of providing students with training far beyond the basic technical skills needed for the rapidly changing healthcare system. As a result, one of the event categories is Emergency Preparedness. HOSA advisors are most likely familiar with CPR/First Aid, Emergency Medical Technician, and First Aid/Rescue Breathing. In 2007, a new event, Community Emergency Response Team (CERT) was introduced. Two additional events were added in 2008 - Public Health Emergency Preparedness and Epidemiology.

The purpose of HOSA 106 is to help the local HOSA advisor become more knowledgeable with the Emergency Preparedness Events, specifically, the newest three (3) competitive events. Becoming more comfortable with the components and information required in these events, the advisor will have the confidence and skill to facilitate the learning and preparation of students choosing to participate in these exciting opportunities. HOSA 106 is a resource tool for teachers to help them learn more about the events, identify and obtain official resources, integrate the content and skills into the classroom curricula, locate resources for updated related content information, and guide students in their search for career-related information.

COURSE OBJECTIVES

The course is divided into four modules, each with a specific set of learning objectives. The course is designed to be a self-paced, web-based course for health science teachers and HOSA advisors. The flexible design of the course allows it to be used for a variety of purposes.

Module 1: Epidemiology

1. Explain the purpose of the Epidemiology Competitive Event.
2. Identify official references that support the knowledge and skills needed to help HOSA chapter members prepare for this event.
3. Describe the components of the Epidemiology Competitive Event.
4. Analyze opportunities for integrating epidemiology event knowledge and skills into the health science classroom.
5. Explore career opportunities in the field of public health epidemiology.

Module 2: Public Health Emergency Preparedness

6. Explain the purpose of the Public Health Emergency Preparedness Competitive Event.
7. Identify official references that support the knowledge and skills needed to assist HOSA chapter members prepare for the event.
8. Describe components of the Public Health Emergency Preparedness Competitive Event.
9. Analyze opportunities for integrating the Public Health Emergency Preparedness Competitive Event knowledge and skills into the health science classroom.
10. Explore career opportunities in the field of Public Health Emergency Preparedness.

Module 3: Community Emergency Response Team (CERT)

11. Explain the purpose of the Community Emergency Response Team (CERT) Competitive Event.
12. Identify official references that support the knowledge and skills needed to help HOSA chapter members prepare for the event.
13. Describe the Community Emergency Response Team Competitive Event process.
14. Analyze opportunities for integrating the CERT Event knowledge and skills into the health science classroom.

Module 4: CPR/First Aid, Emergency Medical Technician, and First Aid/Rescue Breathing

15. Identify resources for obtaining updated information for CPR/First Aid, Emergency Medical Technician, and First Aid/Rescue Breathing events.
16. Identify official references that support the knowledge and skills needed to help HOSA chapter members prepare for the events.
17. Explore career opportunities related to emergency response.

RESOURCES

In preparation for this course, the HOSA advisor must have ready access to the Internet. The resources are free and accessible via the web. Resources for each of the competitive events are listed in the corresponding module. There are many resources for the Emergency Preparedness Events, however the major resources include:

- ◆ Centers for Disease Control (CDC) (www.cdc.gov)
- ◆ Citizen Corps (www.citizencorps.gov)
- ◆ Federal Emergency Management Agency (FEMA) (www.training.fema.gov)
- ◆ National Institutes of Health (NIH) (www.nih.gov)
- ◆ College Board (www.collegeboard.com).

As resources are updated and revised, it is important that the HOSA advisor utilize the most current editions. It is not uncommon for web pages or web addresses to change over time. If the user is unable to click on the links included in the modules, copying and pasting the web address in the browser will work. However, as changes in the resources do occur, they are posted to the HOSA website as “event updates” at <http://www.hosa.org/natorg/sectb/index.html>.

Each website will list instructions and availability for downloading curricula, lessons, and documents. In addition, please review the following specific notes:

- NIH curriculum: *Emerging and Re-emerging Diseases*-This supplement is out of print, however HTML and PDF versions are available at <http://science.education.nih.gov/supplements>. Users may make copies of the PDFs for educational use only, as long as the materials are neither changed nor sold.
- The files available for download throughout the course are primarily in PDF format. Users will need to Adobe Acrobat Reader, which is also available for free download. Some files are in Word and many of the files are zipped, requiring the WinZip application. Information about these types of files, along with instructions are available on the websites.

ASSESSMENT

This course includes four (4) modules and a number of assignments that must be completed. All of the assignments should be collected in a course notebook. At the conclusion of the course, the notebook can be submitted to a CEU or degree-granting institution for credit.

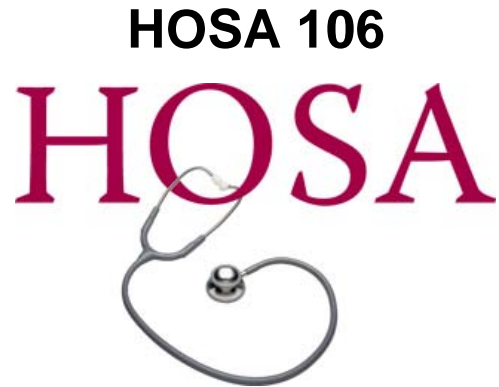
Teachers or HOSA advisors who wish to complete this course for any type of credit need to BE SURE to have prior approval from the credit-granting institution.

HOSA 106 NOTEBOOK ASSESSMENT CHECKLIST

Course participants must collect evidence of course completion in a notebook or portfolio, and include the items in the order listed below.

- Assignment Page from Module 1
- Epidemiology Website Scavenger Hunt (Attachment 1-1)
- Lesson Plan: "Introduction to Epidemiology" (Attachment 1-2)
- Student Debrief Summary OR Test Items from assignment four (4), *Epidemiology in the Classroom*
- Epidemiology Background Concepts (Attachment 1-3)
- PowerPoint OR flashcards from assignment six (6); OR Creative Activity for the *Young Epidemiology Scholars* website (Attachment 1-4)
- Understanding Emerging and Re-emerging Infectious Diseases (Attachment 1-5) AND content outline from assignment seven (7)
- Website description (*What is Public Health?*) and Instructional Strategy/Tool for assignment eight (8)
- A copy of the Presentation PowerPoint for the website, **Disaster Epidemiology and Assessment**, and rubric (if students created the PowerPoint)
- Assignment Page from Module 2
- Specific Hazard Chart (Attachment 2-1)
- Lesson Plan Emergency Preparedness and You (Attachment 2-2)
- Get Email Updates* confirmation page
- Emergency Preparedness Presentation Plan samples (Attachment 2-3)
- What's New in Public Health Emergency Preparedness (Attachment 2-4)
- Speaker Summary (Attachment 2-5A) OR Interview Summary (Attachment 2-5B)
- Assignment Page from Module 3
- Copy of HOSA 105 certificate OR Lesson Summary (Attachment 3-1A) OR Assignment Summary (Attachment 3-1B)
- NIMS Curriculum Tips for Students (Attachment 3-2)
- Test Plan Resource Chart (Attachment 3-3)
- Event Resource Chart (Attachment 3-4)
- Scenarios from assignment six (6)

- Disaster Kit Check Off Sheet (Attachment 3-5)
- Assignment Page from Module 4
- Official Reference Chart (Attachment 4-1)
- Reflection Page for assignment three (3) (Attachment 4-2)
- Career Profiles (2) student handouts



HOSA STRATEGIES FOR EMERGENCY PREPAREDNESS: COMPETITIVE EVENTS

MODULE 1: EPIDEMIOLOGY COMPETITIVE EVENT

PURPOSE

The purpose of this module is to familiarize HOSA advisors with the Epidemiology Competitive Event. This is written event for an individual competitor evaluating the competitor's knowledge of the incidence and distribution of diseases in large populations, and the conditions influencing the spread and severity of disease.

In preparing for this event, students will study the effects of health and disease in populations, improve their scientific literacy, and gain insights into public health careers.

OBJECTIVES

1. Explain the purpose of the Epidemiology Competitive Event.
2. Identify official references that support the knowledge and skills needed to help HOSA chapter members prepare for this event.
3. Describe the components of the Epidemiology Competitive Event.
4. Analyze opportunities for integrating epidemiology event knowledge and skills into the health science classroom.
5. Explore career opportunities in the field of public health epidemiology.

RESOURCES

Epidemiology Competitive Event Guidelines from the HOSA Handbook, Section B, available at <http://www.hosa.org/natorg/sectb/cat-ii/ep.pdf>.

This event consists of a written test containing fifty (50) multiple-choice items, AND a case study that is composed of between five (5) and twenty (20) short answer questions worth 50% of the final total score.

The official references for the development of all test items and the case study are entirely web-based. Below is a list of the resources and test plan:

WEBSITE	TOPIC	TEST %
Excite! http://www.cdc.gov/excite/classroom/index.htm	An Introduction to Epidemiology	10
	Steps of an Outbreak Investigation	10
Detectives in the Classroom http://www.montclair.edu/Detectives/project/EpiBackgrounds.htm	Epidemiology Backgrounds and Essential Questions	10
Young Epidemiology Scholars http://www.collegeboard.com/yes/ft/iu/framework.html http://www.collegeboard.com/yes/ae/gloss.html	Epidemiology Glossary	10
	Intellectual Framework	15
Emerging and Re-emerging Infectious Diseases http://science-education.nih.gov/customers.nsf/HSDiseases.htm	Understanding Emerging and Re-emerging Infectious Diseases	20
What is Public Health? http://www.whatispublichealth.org/careers/index.html	Careers in Public Health	15
Disaster Epidemiology and Assessment http://www.cdc.gov/nceh/hsb/disaster/default.htm#pubs	CDC Activities <ul style="list-style-type: none"> • Mission, goals and objectives • Application and service in disaster settings: surveillance and rapid needs assessment • Applied research to prevent injuries, illnesses and deaths • Consultation and training • Field investigations 	10
Excite website http://www.cdc.gov/excite/classroom/index.htm#exercises	Case Study – Epidemiological scenario – short answer questions	

CONTENT

Perhaps it is best to begin this module with an understanding of the various websites, programs, and agencies that serve as the references for the Epidemiology Competitive Event. Below is a description of the reference, along with highlights of availability to the HOSA advisor. It is important to review each site and become familiar with the support and resources they offer. Additionally, the user will want to crosswalk the information to course content and identify opportunities for the students to learn new knowledge while practicing their analytical and problem-solving skills.

EXCITE! — Excellence in Curriculum Innovation through Teaching Epidemiology and the Science of Public Health– This website resource, developed by the CDC, teaches students about the causes and prevention of disease and injury. Students improve their research and analytical skills, by following the suggestions offered in their teaching and reference materials. Learning in this manner provides real-world relevance to what they have learned about the scientific method. Essentially, students will learn how to solve real disease outbreaks on their own. The site contains an extensive resource library, sample lesson plans and case studies, career information, and easy-to-follow content on epidemiology and disease outbreak investigation.

Young Epidemiology Scholars – This resource includes workshops and teaching units designed to help teachers educate students about epidemiology as they teach their curriculum. Goals include improving scientific literacy and encouraging more students to prepare for careers in public health. The teaching units cover a wide variety of topics. For preparation of round one of this competitive event, the user will need to refer to the topics listed in the test plan. Also, on this site are additional articles and websites, as well as dates for workshops held around the country.

Detectives in the Classroom - This curriculum, developed by Montclair State University, consists of five instructional modules that explore specific health-related issues relevant to through the science of epidemiology. Each module contains an essential question for students to answer as they work through multiple investigations. These lesson plans align with the National Science Education Standards. The website also contains valuable resources and information about evaluations, partnerships, and workshops.

Emerging and Re-emerging Infectious Diseases – This high school supplement was developed by the National Institutes of Health. The user can view the web version or download the Teachers' Guide. The curriculum contains general information about infectious diseases and five interactive student activities designed so that students learn valuable epidemiological concepts. Students learn basic scientific principles related to emerging and re-emerging infectious diseases, experience the process of scientific inquiry, and recognize the role of science in society and the relationship between basic science and personal and public health.

What is Public Health? - This website, developed by the Association of Schools of Public Health, was designed to help the learner understand the various roles that public health professionals play to ensure the American public remains healthy. The site provides a look into the world of public health and the impact it has on the lives of society. It also gives an overview of public health careers and contains numerous links to a diverse range of those careers.

Disaster Epidemiology and Assessment – This portion of the CDC website contains information regarding preparing for, responding to, and recovering from a natural or technologic disaster. Examples of actual field studies conducted by the CDC are included, as well as other activities for service in disaster settings.

4. Locate the webpage, *Epidemiology in the Classroom*, on the **Excite** website. Choose one of the case study exercises (Legionnaires or Smoking and Lung Cancer) and review the teaching directions in the section titled, *Suggestions for Classroom Use*.
 - a. If possible, implement one or more of the activities in your classroom. Once the activity is completed, debrief with the students by having them discuss what they have learned about epidemiology. Have them submit a summary of what they learned for you to include in your course notebook.
 - b. If you are unable to complete a lesson in your classroom, review the case study and develop ten (10) multiple choice items which can be utilized by HOSA members as they prepare for the competitive event round one test. It is suggested to use traditional testing on specific knowledge points regarding epidemiology and outbreak investigation. If you are unsure about writing high quality test items, take time to review *Multiple Choice Testing: Advanced Assessment for HOSA Advisors*, pages 8 – 19, a document used in HOSA 103, which can be located/downloaded from the HOSA website at <http://www.hosa.org/hosa103/module2/Docs/M2MultipleChoiceTesting.pdf>.
5. Download *Epidemiology Backgrounds* from the **Detectives in the Classroom** website. There are 5 modules containing a total of 34 investigations. Read and study the document and ask yourself the following questions: What is the essential question for this module? What are the major concepts students need to understand in order to adequately answer the question? As you identify the major concepts complete the information on the form provided (Attachment 1-3).
6. Locate the *Epidemiology Glossary* and *Intellectual Framework for the Teaching of Epidemiology* webpages. These are the two official event resources on the **Young Epidemiology Scholars** website. Note that these two resources are 25% of the test plan. Review each of the webpages and be able to compare the concepts and terminology. Incorporate this content into flash cards for your HOSA members or into a PowerPoint Q & A game, which can be used as class starters. Include a copy of your chosen activity in your course notebook. Or, if you prefer, create a different learning tool that can be used by your students to prepare for this event. Describe the activity you created on the form provided. (Attachment 1-4)

7. Locate the *Teachers' Guide to Emerging and Re-emerging Infectious Diseases*. You will find the information referenced in the event test plan on pages 5-19. Read these pages and develop a content outline that can be used as a guide for HOSA competitors as they prepare for the epidemiology event. Once you have finished, complete the form. (Attachment 1-5) Include the outline and completed form in your course notebook.
8. Write a description of the website for the topic *What is Public Health?* Since you will be advising and encouraging HOSA members as they prepare to compete in this event, develop a tool or instructional strategy you can provide them, which will assist them in their study. This tool may be developed from ideas such as note-taking strategies, popular games, or anticipation guides. Make sure you include your tool in your course notebook.
9. Go to the link for the CDC website, **Disaster Epidemiology and Assessment**. Create an informational PowerPoint presentation on the CDC activities included on the test plan. If you are currently working with HOSA members, you may wish to assign this as their project. If you do so, develop a rubric for them to use as a guide and an evaluation tool. Include copies of the slides and rubric in your notebook.
10. *Optional:* The following websites offer UPDATED information about emerging and re-emerging infectious diseases. Checking these sites periodically will help you obtain current and reliable information to update your curriculum content on this topic.
 - <http://www.cdc.gov/ncidod/EID/> - This link takes you to the publication, *Emerging Infectious Diseases*, a monthly journal published by the Coordinating Center for Infectious Diseases, Centers for Disease Control and Prevention.
 - <http://www.cdc.gov/ncidod/EID/rss/upcoming.xml> - This list contains articles from the *Emerging Infectious Diseases Journal*, published online ahead of print.
 - http://www.cdc.gov/ncidod/diseases/eid/disease_sites.htm - This CDC webpage contains a list of emerging and re-emerging infectious diseases. The links on this page lead to numerous webpages and articles about the diseases.
 - <http://www.cdc.gov/ncidod/student.htm> - This web address links to additional educational resources for students and teachers.

- <http://www.cdc.gov/ieip/> - This link will take you to information about the International Emerging Infections Program (IEIP), is a component of the CDC which identifies and responds to emerging infections around the world.
- http://www.who.int/topics/emerging_diseases/en/ - This address links to information about emerging diseases on the World Health Organization's website, as well as other related sites.
- <http://www3.niaid.nih.gov/topics/emerging/> - This site contains a wealth of information about emerging and re-emerging infectious diseases by the National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health.

ATTACHMENT 1-1

EPIDEMIOLOGY WEBSITE SCAVENGER HUNT

Test Plan Topic	Official Reference	Weblink to Specific Topic
<i>Example</i>		
<i>Required background information for student exercises used in "How to Investigate an Outbreak"</i>	<i>Excite!</i>	<i>http://www.cdc.gov/excite/classroom/outbreak/appendix.htm</i>
Steps to Investigating an Outbreak		
Career information about epidemic intelligence workers		
Newspaper articles about public health careers		
A list of 5 essential questions related to epidemiology		
A copy of "Epi Talk", one of the handouts used in Curriculum Investigations		
A curriculum investigation that teaches students how to form a hypothesis		
Examples of CDC activities on research in disasters		
CDC definition of Rapid Needs Assessment		
Five major types of infectious agents		
Determine if malaria is an emerging or re-emerging disease		

ATTACHMENT 1-2

LESSON PLAN: INTRODUCTION TO EPIDEMIOLOGY

INSTRUCTOR		DATE
COURSE TITLE		CLASS PERIOD
UNIT	SPECIFIC TOPIC	
INSTRUCTIONAL GOAL (outcome that students should be able to demonstrate upon completion of the lesson)		
LESSON CONTENT (How the lesson will incorporate information from "An Introduction to Epidemiology")		
INSTRUCTIONAL PROCEDURES		
<ul style="list-style-type: none">a. Focusing event (something to get the students' attention)b. Teaching procedures (methods you will use)c. Formative check (progress checks throughout the lesson)d. Student participation (how you will get the students to participate)e. Closure (how you will end the lesson)		
MATERIALS AND AIDS (what you will need in order to teach this lesson)		

ATTACHMENT 1-3

EPIDEMIOLOGY BACKGROUND CONCEPTS

Module Number	Essential Question	Major Concepts
One	How is this disease distributed and what hypotheses might explain that distribution?	
Two	Is there an association between the hypothesized cause and the disease?	
Three	Is the association causal?	
Four	What should individuals and society do when preventable causes of disease are found?	
Five	Did the prevention strategy work?	

ATTACHMENT 1-4

**CREATIVE ACTIVITY FOR THE YOUNG EPIDEMIOLOGY
SCHOLARS WEBSITE**

If you created a different learning tool (other than a PowerPoint or flash cards) for assignment six (6), describe the activity in the space below.

Description of Activity
Materials/Equipment Needed
Notes to Students (explain how to use activity and other pertinent information)

ATTACHMENT 1-5

UNDERSTANDING EMERGING AND RE-EMERGING INFECTIOUS DISEASES

After completing the outline from this assignment, answer the following questions as you reflect on the information contained in this resource.

1. Is there new knowledge taught in this resource that you have not noted in previous resources from this module? Explain your answer.

2. Think about the information which is taught in this resource and compose several essential questions related to those concepts.

3. Does any of the information in your outline align with courses you are currently teaching? If so, please write suggestions for how you might incorporate this information in your classroom.

4. What are your suggestions to HOSA members who will need to study this material in preparing for the epidemiology event?



HOSA STRATEGIES FOR EMERGENCY PREPAREDNESS: COMPETITIVE EVENTS

MODULE 2: PUBLIC HEALTH EMERGENCY PREPAREDNESS COMPETITIVE EVENT

PURPOSE

The purpose of this module is to familiarize HOSA advisors with the Public Health Emergency Preparedness Competitive Event, which involves a presentation by a team of HOSA members on a topic in public health. Topic areas include the following:

- Bioterrorism, radiation, and chemical emergencies
- Mass casualties
- Natural disasters and severe weather
- Recent outbreaks and incidents

One of these topic areas will be designated each year by National HOSA. The purpose of this event is to encourage health science students to work as a team to plan and teach others about public health emergencies.

OBJECTIVES

1. Explain the purpose of the Public Health Emergency Preparedness Competitive Event.
2. Identify official references that support the knowledge and skills needed to assist HOSA chapter members prepare for the event.
3. Describe components of the Public Health Emergency Preparedness Competitive Event.
4. Analyze opportunities for integrating the Public Health Emergency Preparedness Competitive Event knowledge and skills into the health science classroom.

5. Explore career opportunities in the field of Public Health Emergency Preparedness.

RESOURCES

Public Health Emergency Preparedness Competitive Event Guidelines from the HOSA Handbook, Section B, available at <http://www.hosa.org/natorg/sectb/cat-ii/ep.pdf>.

The purpose of this event is for students to work as a team and inform the public about public health emergencies. The official resource is the CDC Emergency Preparedness website at <http://emergency.cdc.gov/>. The specific topic must come from the major category of public health emergencies for the year assigned and may include information about one or more of the types of emergencies presented on the website.

The CDC website must be the resource for specific topic selection by the team; however, other resources may be used in developing the presentation.

CONTENT

On this CDC website, <http://emergency.cdc.gov/>, the user will find information on numerous types of emergencies that affect the public. According to the CDC, the site is intended to increase the nation's ability to prepare for and respond to public health emergencies. There is information on public health hazards, how to prepare for the hazards, what the CDC is doing to protect the public, and what the public can do to protect themselves and their communities. There is information designated for the public and for professionals. For those interested in more information, additional links are available. In addition, the site contains easily retrieveable updated information which can be used in class in the *What's New* section. Some career information is available by searching the website.

4. The CDC offers a free email subscription service through their website, <http://emergency.cdc.gov/>, helping the public stay informed about various health issues. Your email address will only be used to deliver the requested information or to give you access to your profile of subscriptions. You can customize the topics for which you would like information. In order to stay abreast of the information you can use in your classroom:
 - Go to the opening page of the CDC website listed above.
 - You will find a *Get Email Updates* area on the right hand side of the webpage.
 - Enter your information in the space provided. (Make sure you are following school policies.)
 - Print a copy of the confirmation page which states that you have successfully subscribed and include it in your course notebook.

5. Using HOSA events in the classroom can be a valuable learning experience if the activity is aligned with your instructional objectives. In this activity, assign students in teams of 2-4 members who will work together to create a plan for a presentation which follows the competitive event guidelines. Familiarize yourself with the event guidelines and, in your own words, introduce the activity to your class. Then follow the steps below:
 - Assign each group a specific category of disaster as identified in the Hazard Chart. (Attachment 2-1)
 - Give each group a copy of the event rating sheet (rubric) and the handout provided in this module. (Attachment 2-3)
 - Students will need access to computers/Internet.
 - Determine how much time you can allot to this activity and plan the activity accordingly. (Note – you can modify this assignment by having the students begin this activity in class and finish it as homework.)
 - Before students turn in their work, facilitate a classroom discussion so that groups can share what they learned about the public health hazards. You may also get them to discuss how effective their presentations would be and why. Include samples of the completed handouts from students in your course notebook.

- *Optional* – Select one or more groups to actually follow through with their plan and presentation. For HOSA members who may choose to participate in this event, you may encourage them to first present to their class, then to other classes or groups within the school. Select “judges” to complete the rating sheet during each presentation, therefore, providing feedback for improvement. Once the team has put the “final touches” on the presentation, partner with community groups who will volunteer to serve as the audience as the team practices for the competition. *It is important to remember that the process the team uses to reach their goals and the learning and personal growth involved is a major purpose of competitive events. Encourage students to reflect on their experiences along the way and help them celebrate their accomplishments regardless of whether or not they place as a top team in the competition.*
6. As issues in public health emergencies continue to emerge and as information and guidelines for preparation are updated, it is important that you incorporate current information into the curriculum as necessary. You have likely encountered times in your career when classroom information became outdated and the need arose to obtain credible updates. In the area of public emergency preparedness, the CDC website contains a variety of methods for updating the public and professionals with updated information. On the website, click on the link, *What’s New*. Scroll through the posted updates and choose 3-5 updates that relate to what you are teaching in the health science curriculum. Note the key points which have relevancy to your class content and include them in the chart included in this module. (Attachment 2-4)
7. Complete one of the following assignments:
- Invite a guest speaker to speak during your class or HOSA Chapter meeting from your local Office of Emergency Management Services. Develop at least four (4) learning objectives to provide guidance to the guest on information to include in the presentation. Make sure to include career objectives. Then write at least four (4) questions you anticipate students might ask after the presentation. Complete a Speaker Summary. (Attachment 2-5A)
 - Schedule an interview with someone from your local Office of Emergency Management Services. Information you obtain in the interview should be appropriate for use as a student resource for this competitive event and for identifying opportunities for a HOSA partnership. Complete an Interview Summary. (Attachment 2-5B)

ATTACHMENT 2-1

SPECIFIC HAZARD CHART

Hazard	Examples
Bioterrorism	
Mass Casualties	
Chemical Emergencies	
Natural Disasters & Severe Weather	
Radiation Emergencies	
Recent Outbreaks &Incidents	

ATTACHMENT 2-2

LESSON PLAN – EMERGENCY PREPAREDNESS AND YOU

Develop a lesson plan which incorporates any or all of the information from the webpage, *Emergency Preparedness and You*. Create the lesson and obtain or develop the materials (PowerPoints, brochures, handouts, checklists) needed. Since this webpage is also sponsored by the American Red Cross, you may wish to review any materials they offer. Search and explore other websites to obtain materials or create your own from this website.

INSTRUCTOR		DATE
COURSE TITLE		CLASS PERIOD
UNIT	SPECIFIC TOPIC	
INSTRUCTIONAL GOAL (outcome that students should be able to demonstrate upon completion of the lesson.)		
LESSON CONTENT (How the lesson will incorporate information from PandemicFlu.gov)		
INSTRUCTIONAL PROCEDURES a. Focusing event (something to get the students' attention) b. Teaching procedures (methods you will use) c. Formative check (progress checks throughout the lesson) d. Student participation (how you will get the students to participate) e. Closure (how you will end the lesson)		
MATERIALS AND AIDS (what you will need in order to teach this lesson)		

ATTACHMENT 2-3

PUBLIC PREPAREDNESS PRESENTATION PLAN

Assignment: Plan a 15 minute group presentation designed to inform the public about public health emergencies.

Handouts: This activity page
Rubric for Public Health Emergency Preparation
Public health hazard category assignment from your teacher

Directions: Follow the instructions in this handout completing the work as a team. Turn in the completed form and required attachments to your teacher.

Assigned Hazard _____

1. Using the CDC Emergency Preparedness website at <http://emergency.cdc.gov/> as your primary resource, research your hazard category and determine which specific topic(s) your group will present. List your selected topic(s) below.

2. Continue your research into your specific topic and identify additional resources your group may use to plan your presentation. List these resources below.

3. Develop a brief outline of the information you wish to include in your presentation and attach a copy to this handout.

4. Divide the responsibilities for the presentation among your group members. In the space below, describe the process your group used to determine these responsibilities. Attach the list of responsibilities to this handout.

5. Make a list of supplies and equipment needed for the presentation.

6. Compare your plan with the presentation rubric and answer each question. Be prepared to share your thoughts in a class discussion.

- Other than the “team member” section of the rubric, identify the areas of strength in your plan.

- Are there criteria for which you have not considered in the development of your plan (such as organization of content and originality or creativity)?

- Are there any changes that you would like to make in your plan? If so, explain,

ATTACHMENT 2-4

**WHAT'S NEW IN PUBLIC HEALTH EMERGENCY
PREPAREDNESS?**

CDC Posting Date	Title of Update	Summary of Key Points	Relevancy to Curriculum

ATTACHMENT 2-5A

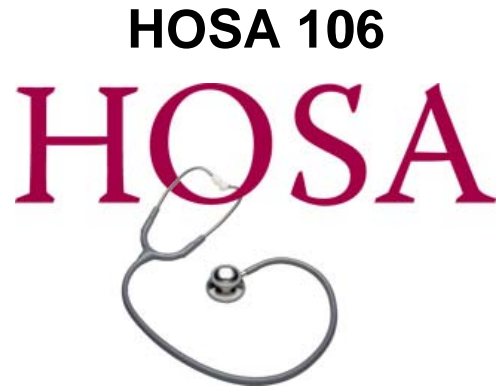
GUEST SPEAKER SUMMARY

Date	Speaker Name	Title
Objectives of presentation		
Questions for speaker		
Brief description of presentation		
Were objectives met? If not, describe any changes you would make to this activity in the future.		
List any follow-up activities that may occur as a result of this presentation		

ATTACHMENT 2-5B

INTERVIEW SUMMARY

Date	Name of person interviewed	Title
List interview questions.		
Describe information learned which can be used as a resource for HOSA members.		
Describe opportunities for a HOSA partnership.		
List any follow-up activities that may occur as a result of this presentation		



HOSA STRATEGIES FOR EMERGENCY PREPAREDNESS: COMPETITIVE EVENTS

MODULE 3: COMMUNITY EMERGENCY RESPONSE TEAM COMPETITIVE EVENT

PURPOSE

The purpose of this module is to familiarize HOSA advisors with the Community Emergency Response Team (CERT) Competitive Event. This event is designed to provide health science students with an opportunity to develop and demonstrate the knowledge and skills they will need to respond to their community's immediate needs in the aftermath of a disaster, when emergency services are not immediately available. There are two rounds of competition for a two-person team. Round One is a written test. Top-scoring teams advancing to Round Two will perform selected skill procedure(s) identified in a written scenario.

OBJECTIVES

1. Explain the purpose of the Community Emergency Response Team (CERT) Competitive Event.
2. Identify official references that support the knowledge and skills needed to help HOSA chapter members prepare for the event.
3. Describe the Community Emergency Response Team Competitive Event process.
4. Analyze opportunities for integrating the CERT Event knowledge and skills into the health science classroom.

RESOURCES

Community Emergency Response Team (CERT) Competitive Event Guidelines from the HOSA Handbook, Section B, available at <http://www.hosa.org/natorg/sectb/cat-ii/ep.pdf>.

HOSA 105: Emergency Preparedness, staff development course for HOSA advisors available at: <http://www.hosa.org/hosa105/index.htm>.

This event is designed to align with the CERT Program designed by the US Citizen Corps and supported by FEMA. The official resources are described below:

NIMS Curriculum IS 700a: National Incident Management System, An Introduction is an interactive web-based course which introduces the National Incident Management System (NIMS). NIMS provides a consistent nationwide template to enable all government, private-sector, and non-governmental organizations to work together during domestic incidents. Completion of the course takes about three hours. The training is comprised of the following units:

- Unit 1: Course Overview
- Unit 2: Understanding NIMS
- Unit 3: NIMS Preparedness
- Unit 4: NIMS Communications and Information Management
- Unit 5: NIMS Resource Management
- Unit 6: NIMS Command and Management
- Unit 7: Additional Resources and Course Summary

The classroom materials include an instructor guide and PowerPoint files, which are available for free download. The website to access this resource is <http://training.fema.gov/emiweb/is/is700a.asp>.

CERT Curriculum IS 317: Community Emergency Response Training provides private citizens with the basic skills they will need to respond to their community's immediate needs in the aftermath of a disaster, when emergency services are not immediately available. By working together, CERTs can assist in saving lives and protecting property using the basic techniques in this course. The materials are available for free download and include an instructor's guide, participant's guide, PowerPoint slides, photos, and more. The curriculum is also available in Spanish. Content includes:

- Unit 1: Disaster Preparedness
- Unit 2: Fire Safety
- Unit 3: Disaster Medical Operations Part 1

- Unit 4: Disaster Medical Operations Part 2
- Unit 5: Light Search and Rescue
- Unit 6: CERT Organization
- Unit 7: Disaster Psychology
- Unit 8: Terrorism and CERT
- Unit 9: Course Review and Disaster Simulation

CONTENT

You are familiar with first responders who provide fire and medical services following emergencies. In major disasters, it can be difficult for emergency services to meet the needs of citizens immediately. In these situations, neighbors and family members will help each other with life-saving and life-sustaining needs.

In order to better meet the needs of its citizens following disasters, the government developed a plan to help prepare citizens to help each other in these cases through training. The plan consists of:

- Providing facts about what services are immediately available after a disaster,
- Informing citizens of their responsibility,
- Training interested citizens in specialized life-saving skills, and
- Organizing trained citizens in teams to provide immediate assistance.

Users who have completed HOSA 105, are probably very familiar with CERT. For those needing a refresher or for users who have not completed HOSA 105, begin this module by reviewing pages 1-4 of Module 4 from HOSA 105. The information may be accessed by following the link:

http://www.hosa.org/hosa105/hosa_105_module_4.pdf, **OR**

- Go to the HOSA website (www.hosa.org)
- Click on the “Advisor Services” link on the left side of the page
- Scroll down to “Online Staff Development for HOSA Advisors”
- Click on “HOSA 105 - Emergency Preparedness”

Students may wish to complete CERT training and become a volunteer in an organized community-based team, or they may wish to pursue the information and training only. HOSA 105 contains valuable suggestions for partnering with local CERT organizations. Either way, students are extending their learning beyond classroom walls and will become more responsible citizens by learning how to get involved in their own communities.

As an instructor, the websites for this event contain many resources, which can be downloaded for free and used in the classroom to supplement curricula, or for students as they prepare for the competitive event.

3. Access the website, <http://training.fema.gov/emiweb/is/is700a.asp>. You may wish to download both the student guide and the instructor guide for this web-based course. Review the downloaded guides, and then access the interactive course by clicking on the link on the opening page. As you review the materials, think about the HOSA members or students who will be interested in completing this course or studying the content for event preparation. What tips can you provide which will help them master the content? How will you suggest they approach the course? Complete the NIMS Curriculum Student Tips for Students (Attachment 3-2).
4. On the CERT training website, click on or download the *Table of Contents*. Compare the contents with the test plan topics. In the Test Plan Resource Chart, write in the location of the required content and any pertinent notes about the resources (Attachment 3-3).
5. Review the CERT curriculum for information that supports skill development for each of the four procedures in the competitive event. In the CERT Competitive Event Resource Chart, list the location of this information. (Attachment 3-4)
6. Review the skills-related curriculum information from the above assignment and complete the following:
 - Develop at least one scenario for each of the procedures I-III (Scenarios are not necessary for procedure IV). Use these scenarios after students have learned the procedures using the HOSA rating sheets. Assist students as they practice for the HOSA competitive event. Include your scenarios in your course notebook.
 - Gather the necessary equipment and supplies for the Disaster Kit. Complete the check off sheet as you obtain the necessary items. (Attachment 3-5)

ATTACHMENT 3-1A

CERT ONLINE LESSON SUMMARY

Date completed _____

Lesson # and Title

Why did you choose this particular lesson?

Give a brief summary of the lesson.

What did you learn in this lesson that you could integrate into your health science classroom?

ATTACHMENT 3-1B

ASSIGNMENT SUMMARY

Date HOSA 105 was completed_____ (attach documentation)

1. As a result of completing HOSA 105, have you made any changes in what you are teaching in relation to Community Emergency Response Team (CERT)? Explain the changes you have made. If you have not made changes, explain why.

2. Has completing HOSA 105 had any impact on HOSA activities for your chapter or individual HOSA members? Please explain.

3. Develop at least two goals for students/HOSA chapter activities which incorporate the knowledge you gained from completing HOSA 105, Module 4 – Community Emergency Response Team (CERT).

1 _____

2 _____

4. Think about what you learned in HOSA 105 and how you incorporated that information in your classroom. What additional information do you need to further develop the knowledge and skill of your students, yourself, or your classroom resources? Include your thoughts in the KWL chart below. Finish the chart as you complete this module.

ATTACHMENT 3-1B (CONTINUED)

ASSIGNMENT SUMMARY

KWL CHART

Community Emergency Response Team

<p>K</p> <p>What I <i>Know</i> (from HOSA 105)</p>	<p>W</p> <p>What I <i>Want To Learn</i> to further develop the knowledge and skills</p>	<p>L</p> <p>What I Have <i>Learned</i> by completing this module</p>

ATTACHMENT 3-2

NIMS CURRICULUM TIPS FOR STUDENTS

Document your suggestions for students as they study the curriculum and materials for the NIMS Curriculum (IS700a).

1. What materials will the student need to have readily available PRIOR to beginning this course?

2. What are some helpful hints students might need to know in order to effectively organize their materials and notes?

3. What guidance can you give students about the time involved in completing the course or studying the content? For example, should they complete the curriculum in one sitting? What are some ideas for planning their time with the course? Should they allow for review time?

4. How does the curriculum fit into the HOSA Round One test plan? What are your ideas about how HOSA members can practice or review for this test?

ATTACHMENT 3-3

CERT COMPETITIVE EVENT TEST PLAN RESOURCE CHART

Topic	% Weight	Official Resource	Unit #	Notes
National Incident Management System (NIMS)	10	NIMS IS 700a http://training.fema.gov/emiweb/is/is700a.asp		
Disaster Preparedness	16	CERT Curriculum http://www.citizencorps.gov/cert/training_downloads.shtm#CERTVis		
Treating Life Threatening Conditions	14	CERT Curriculum http://www.citizencorps.gov/cert/training_downloads.shtm#CERTVis		
Triage	10	CERT Curriculum http://www.citizencorps.gov/cert/training_downloads.shtm#CERTVis		
Disaster Medical Operations	28	CERT Curriculum http://www.citizencorps.gov/cert/training_downloads.shtm#CERTVis		
Light Search & Rescue	12	CERT Curriculum http://www.citizencorps.gov/cert/training_downloads.shtm#CERTVis		
Disaster Psychology	10	CERT Curriculum http://www.citizencorps.gov/cert/training_downloads.shtm#CERTVis		

ATTACHMENT 3-4

**CERT COMPETITIVE EVENT
SKILLS RESOURCE CHART**

Procedure	Location of information	Notes
I. Treating Life Threatening Conditions		
II. Triage		
III. Head to Toe Assessment		
IV. Lifts and Carries		

ATTACHMENT 3-5

DISASTER KIT CHECK SHEET


(Enough barrier supplies for each competitor should be included)

- _____ Box of latex gloves
- _____ Goggles or safety glasses
- _____ 2 dust masks
- _____ Helmet
- _____ Boots
- _____ 4x4 dressings (2 per team member)
- _____ Pressure bandages
- _____ Scissors
- _____ Flashlights
- _____ Watch with a second hand
- _____ Blankets (one per team member)
- _____ Victim tags (14) (note cards) and pen or marker
- _____ Plain paper (or note cards) for writing triage documentation and labeling treatment areas if needed
- _____ Masking tape

Teams have the option of bringing one kit per person or one kit per team.

HOSA 106

HOSA



HOSA STRATEGIES FOR EMERGENCY PREPAREDNESS: COMPETITIVE EVENTS

MODULE 4: CPR/FIRST AID, EMERGENCY MEDICAL TECHNICIAN, AND FIRST AID/RESCUE BREATHING

PURPOSE

The purpose of this module is to review the CPR/First Aid, Emergency Medical Technician (EMT), and First Aid/Rescue Breathing (FA/RB) Competitive Events and identify the most recent updates for HOSA advisors.

OBJECTIVES

1. Identify resources for obtaining updated information for CPR/First Aid, Emergency Medical Technician, and First Aid/Rescue Breathing events.
2. Identify official references that support the knowledge and skills needed to help HOSA chapter members prepare for the events.
3. Explore career opportunities related to emergency response.

RESOURCES

Public Health Emergency Preparedness Competitive Event Guidelines from the HOSA Handbook, Section B, available at <http://www.hosa.org/natorg/sectb/cat-ii/ep.pdf>.

CPR First Aid

American Heart Association, *Basic Life Support for Healthcare Providers*, Latest edition. Distributed by Channing L. Bete Co., Inc.

Simmers, Louise, *Diversified Health Occupations (OR Introduction to Health Science Technology)* Delmar, Latest edition.

American Red Cross, *First Aid and Emergency Preparedness: Quick Reference Guide*. Latest edition.

EMT

Beebe and Funk, *Fundamentals of Emergency Care*, Delmar, Latest edition.

American Heart Association, *Basic Life Support for Healthcare Providers*, Latest edition. Distributed by Channing L. Bete Co., Inc. – 1-800-611-6083.

Limmer, Daniel. *Emergency Care*. Published by Prentice Hall, a “Brady” book, Latest edition.

NREMT Basic Level Skill Sheets

http://www.nremt.org/EMTServices/exam_coord_man.asp?seclID=1#BSkillSheets

FA/RB

American Heart Association, *Basic Life Support for Healthcare Providers*. Channing L. Bete Co., Latest edition.

Simmers, Louise, *Diversified Health Occupations (OR Introduction to Health Science Technology)* Delmar, Latest edition.

CONTENT

Until the 2007-08 school year, CPR/First Aid, Emergency Medical Technician, and First Aid/Rescue Breathing Competitive Events were Category II (skill) events. The events were re-categorized as Emergency Preparedness Events, along with CERT, in 2007-08. Two additional events were added in 2008-09 (see Modules 1-2.) CPR/First Aid and EMT are also team events, requiring the competitors to work in pairs to provide emergency medical care. First Aid/Rescue Breathing is designed for special needs students. While the performance standards are the same as all other skill events, students in special needs events only compete against other special needs students. Each event is briefly described on the next page.

CPR/First Aid

This is the oldest of HOSA's emergency preparedness events, and consists of two rounds of competition for a two-person team. Round one is a written, multiple choice test of knowledge and understanding. The top scoring teams will advance to Round two for the performance of selected skill procedure(s) identified in a written scenario. The scenario will require the use of critical thinking skills. The performance will be timed and evaluated according to the event guidelines. Skills include:

- Bleeding
- Fracture
- Burns
- Heat Exposure
- Choking: Responsive Infant Becomes Unresponsive
- Obstructed Airway: Conscious Adult Becomes Unconscious
- Adult Team CPR
- Two-Rescuer AED-CPR – Adult

EMT

The EMT event is similar to the CPR/First Aid event but incorporates the more advanced skills of the basic EMT, including:

- Patient Assessment - Trauma
- Patient Assessment - Medical
- Airway, Oxygen and Ventilation Skills
- Immobilization/Splinting
- Bleeding Control/Shock Management
- Cardiac Arrest Management/AED

First Aid/Rescue Breathing

The goal of this event is to provide health science students with an opportunity to develop and demonstrate knowledge and skills in basic first aid and rescue breathing in emergency care. The difference between this event and CPR/First Aid is that the Rescue Breathing event is exclusively for students with special needs. Competitors must be classified under the provision of The Individuals with Disabilities Education Act Amendments of 1997 Public Law 105-17 and must have an Individualized Education Plan (IEP). The skills are slightly easier than those in CPR/First Aid, but the standards for care are the same.

- Bleeding
- Fracture
- Adult Rescue Breathing
- Infant Rescue Breathing

4. As a professional, you know that procedures and standards in healthcare often change, such as CPR guidelines. As a teacher, it is important to know where to find updated resources and information in order to teach the current information to students. Review the HOSA website and document at least three places that you can find updates on these competitive events and curricula-related information. **Write the URL and the type of update which can be obtained at the site.**

What resources, other than the HOSA website, might be useful in obtaining updates which relate to the body of knowledge and skills required in CPR/First Aid, Emergency Medical Technician, and First Aid/Rescue Breathing? **Include the list of resources in the space provided.**

The American Heart Association publishes a quarterly newsletter, *Currents in Emergency Cardiovascular Care*. Online subscribers can read each new issue on the Internet at no charge at (<http://www.americanheart.org/presenter.jhtml?identifier=3064687>). To receive email alerts for this publication, you will need to register by going to the link, <http://www.americanheart.org/presenter.jhtml?identifier=3012240#Register>, and following the instructions at that site. You do not need to be an American Heart Instructor. At this time, go to the site and click on the link for the current issue. **Review the issue to determine if this publication would be a valuable classroom resource and write your opinion in the space below.**

5. As students learn about CPR, and first aid, they may become curious as to the required education and training to become certified as an EMT. Locate the section in the Simmers' text which provides this information. Then, go to the link, <http://www.fema.gov/about/contact/statedr.shtm>, click on your state and research the site for additional and/or nontraditional jobs within the emergency response cluster. Additional information can be researched within the website for the Homeland Security, <http://www.dhs.gov/xabout/careers/>. As you review the site for career information, select two jobs that you believe your students would find interesting. Create a career profile on each of the two jobs as a handout for your students. Include a copy of the handouts in your course notebook.

ATTACHMENT 4-1

**OFFICIAL REFERENCE CHART FOR CPR/FIRST AID,
EMERGENCY MEDICAL TECHNICIAN, AND FIRST
AID/RESCUE BREATHING**

CPR/FIRST AID	EMERGENCY MEDICAL TECHNICIAN	FIRST AID/RESCUE BREATHING

ATTACHMENT 4-2

REFLECTION PAGE FOR ASSIGNMENT 3

Once you have completed one of the activities from assignment number three (3), answer the questions which pertain to your chosen activity. Answer questions 1-4 if you served in the management of one of the events and answer questions 4-8 if you chose the student interaction activity.

Activity I selected: _____

Event Chair/Section Leader Questions

1. How do you feel about your participation in the management of the event?

2. How do you think the competitors felt, as a group, about their participation in the event? Include how you arrived at your answer.

3. Will you encourage HOSA members to compete in this event? Why or why not?

4. As a result of your involvement in this event, will you change or do anything differently in your classes or with your students? Please explain your answer.

Summarizing Event Process to Students Questions.

5. How well did your students understand your explanation of the event process?

6. Was there a particular point of the event process that could be explained more clearly? If so, describe below.

7. What impact may your delivery of the student interaction, such as tone, confidence in your voice, etc. have had on the reaction or response from your students? (For example, did you excite them, confuse them, etc.?)

8. Listen or view your video or audio recording of this activity. (If you were unable to record, review your notes from this activity.) Will you change or do anything differently in your classes or with your students as a result? Please explain your answer.
