

CDC Science Ambassador Workshop

2014 Lesson Plan

Making Room: Public Health Response to Unaccompanied Children Crossing the U.S. Border

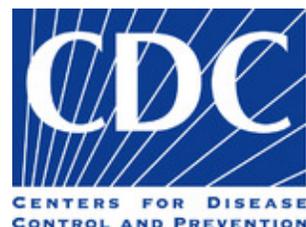
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The findings and conclusions in this Science Ambassador Workshop lesson plan are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention (CDC).

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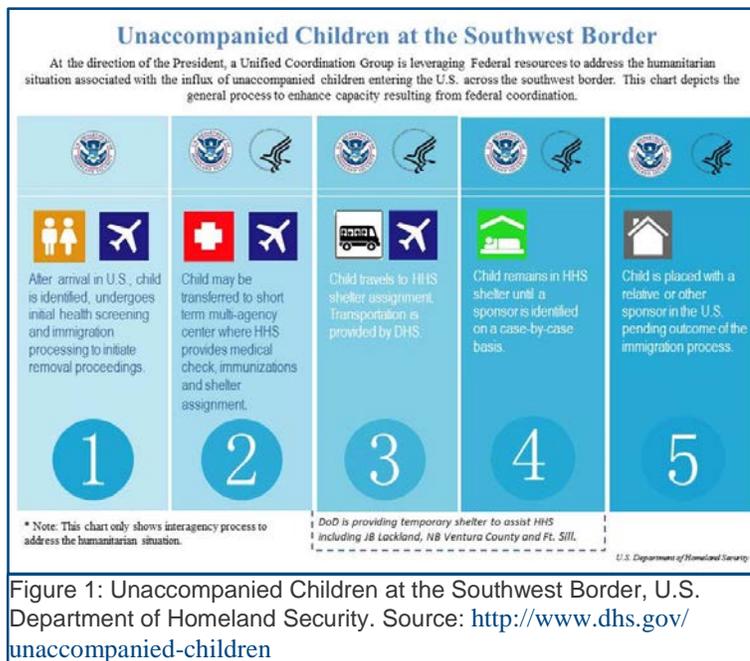
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Making Room: Public Health Response to Unaccompanied Children Crossing the U.S. Border

Summary

The Centers for Disease Control and Prevention (CDC) responds to chemical, biological, radiological, nuclear, natural and man-made disasters. CDC also responds to urgent humanitarian situations. In 2014, the U.S. Department of Health and Human Services (HHS) and Department of Homeland Security (DHS) led the humanitarian response to unaccompanied children crossing the U.S. southwest border from Central America, which included housing, feeding, and providing necessary medical evaluation and treatment to protect public health. In support of HHS and DHS activities, CDC provided consultation on medical screening, surveillance, and public health response when requested. Source:

<http://www.cdc.gov/usmexicohealth/unaccompanied-children.html>.



Children from Mexico and Central America, primarily El Salvador, Honduras, and Guatemala, often immigrate to the United States to escape violence, abuse, or persecution; seek work opportunities; or to find family members. The average annual number of children migrating to the United States from these countries is approximately 7,000–8,000. During 2012, this number increased to 13,000, followed by 25,000 in 2013, and 60,000 in 2014. By law, HHS must provide for the custody and care of unaccompanied children. An unaccompanied child is a child who has no lawful immigration status in the United States, is under 18 years of age, and does not have a parent or legal guardian in the United States who is able to provide care and physical custody¹.

This lesson is designed for a high school environmental science, health science, or biology class to explore public health response, specifically the public health response related to the influx of unaccompanied children into the United States from Central America. Students learn reasons for and public health implications of the increased influx of unaccompanied children into the United States. Students will identify services provided by HHS and how federal agencies coordinate to provide humanitarian assistance (Figure 1). By identifying the needs of these unaccompanied children, students discover the different public health professionals needed for an effective public health response. Useful previous knowledge includes an awareness of geography, particularly the southern U.S. border states and Central America, U.S. immigration regulations, and common disease prevention strategies (e.g., vaccinations).

¹ See 6 U.S.C. § 279(g)(2), Available at: <https://www.law.cornell.edu/uscode/text/6/279>

Learning Outcomes

After completing the lesson, students should be able to

- identify patterns of health and disease using maps.
- characterize a public health problem, including general health, spread of disease, and vaccination status, by using maps.
- describe how scientific, social, economic, environmental, cultural, and political systems influence a public health response.
- identify different public health professions involved in a public health response.

Duration

This lesson can be conducted as one 90-minute lesson or divided into two 45-minute lessons.

Procedures

Day 1: Making Room, Part 1, 45 minutes

Preparation

Before Day 1

- Review Background Information (Appendix 1) to prepare for discussions.
- Make copies of Worksheet 1: Brainstorm, Part 1 (Appendix 2A) and Worksheet 2: Mapping the U.S. Southwest Border, Central and South America and the Caribbean (Appendix 3A), 1 copy per student.
- Print out Worksheet 3A: Disease Cards (Appendix 4A) and Worksheet 3B: Symptom Cards (Appendix 4B) for each pair or group of 3. Cut out all the disease cards and symptom cards from the sheets, making separate cards. In an envelope, place a complete set of cards for each student team. Make sure the cards are well mixed.
- Reserve laptops, tablets, or time in a media center for students to access the Internet and research disease topics.

Materials

- Worksheet 1: Brainstorm, Part 1 (Appendix 2A)
Description: List of questions that students should discuss together before lesson.
- Worksheet 2: Mapping the U.S. Southwest Border, Central and South America and the Caribbean (Appendix 3A)
Description: Students will locate multiple states and Central American countries involved in the 2014 public health response to unaccompanied children.
- Worksheet 3: Disease Cards (Appendix 4A) and Symptoms Cards (Appendix 4B)
Description: Students will match disease and symptom cards during an activity. Diseases represent those of concern for children crossing the border with disease symptoms.
- Computers and Internet access.

Online Resources

- CDC Office of Public Health Preparedness and Response Internet site
URL: <http://www.cdc.gov/phpr/>
Description: Use this website to discover CDC's role in emergencies.
- CDC Emergency Preparedness and Response Internet site
URL: <http://emergency.cdc.gov/hazards-specific.asp>
Description: Use this website to explore different types of public health emergencies.
- Video 1: Behind the Scenes; Emergency Operations Center (release date, June 15, 2009).
URL: <http://www.cdc.gov/CDCTV/BehindTheScenes/>.
Description: A behind-the-scenes look at the command center and staff responsible for coordinating emergency response to domestic and international public health threats. Since 2001, CDC has responded to dozens of events and incidents, including anthrax attacks, Hurricane Katrina, severe acute respiratory syndrome (SARS), Haiti earthquake, avian influenza (H7N9), Middle East respiratory syndrome coronavirus (MERS-CoV), *Escherichia coli*, and influenza A (H1N1) (running time 6:42).

Activity

1. Show Video 1: Behind the Scenes — CDC Emergency Operations.
2. Introduce students to Emergency Preparedness and Response. Use the Background Information (Appendix 1) or online resources for more information. Discuss the following:
 - CDC and CDC's Office of Public Health Preparedness and Response's role in public health emergencies (<http://www.cdc.gov/phpr/>).
 - Types of public health emergencies (e.g., natural disasters or severe weather, bioterrorism, chemical emergencies, disease outbreaks, mass casualty incidents, radiation emergencies, or man-made disasters) (<http://emergency.cdc.gov/hazards-specific.asp>).
3. Introduce students to response. Explain that during 2014, CDC supported the urgent humanitarian response concerning the health of unaccompanied children (i.e., persons aged <18 years and leaving their country without an adult) from Central America crossing the U.S. border.
4. Assign Worksheet 1: Brainstorm, Part 1 (Appendix 2A) and Worksheet 2: Mapping the U.S. Southwest Border, Central and South America and the Caribbean (Appendix 3A). Students should work in pairs or groups of 3.
5. Discuss Worksheet 1: Brainstorm, Part 1 (Appendix 2A) as a class. Focus on the following concepts:
 - Discuss what is meant by man-made disasters, and why the influx of unaccompanied children crossing into the United States qualifies. Discuss the increased numbers of children, why a CDC response was necessary, and why children are crossing the border. Encourage students to discuss what they think life is like for children their own age in Central America, how their lives differ, and what it means to be poor in the United States, compared with countries in Central America. See Background Information (Appendix 1).
 - Discuss legalities associated with U.S. border control of unaccompanied children. Describe federal services provided to unaccompanied children during immigration processing. Identify preventing infectious disease, providing preventive medical and mental health care, education, family reunification and long-term care as responsibilities of HHS. See background information (Appendix 1).
6. Provide each team with an envelope containing 24 disease cards (12 diseases and 12 corresponding symptom descriptions) prepared from Worksheet 3: Disease Cards and Disease Symptoms Cards (Appendices 4A and 4B). Instruct teams to match the disease of concern with the correct symptoms. If students are having difficulty, have them research each disease using <http://www.cdc.gov>.
7. If time permits, assign one disease to each student pair or group. Have the pair or group research symptoms, consequences, prevention, and disease treatment and then have students present their findings to the class. If time is limited, have students complete as a homework assignment.

Day 2: Making Room Part 2 — One Step at a Time, 45 minutes

Preparation

Before Day 2

- Make copies of Assessment 1: Emergency Preparedness Quiz, Part 1. (Appendix 5A), Worksheet 4: Brainstorm, Part 2 (Appendix 2A) and Worksheet 5: Careers in Public Health (Appendix 7).
- Reserve laptops, tablets, or time in a media center so that students can have Internet access to research disease topics.

Materials

- Assessment 1: Emergency Preparedness Quiz, Part 1. (Appendix 5A)
Description: This short assessment is used to review Day 1 activities.
- Worksheet 4: Brainstorm, Part 2. (Appendix 6A)
Description: List of questions that students should discuss before Day 2 of the lesson.
- Worksheet 5: Careers in Public Health (Appendix 7)
Description: Multiple professionals are needed for a coordinated emergency response. Students will research careers from this list to describe the different roles of such a task force.
- Assessment 2: Emergency Preparedness Quiz, Part 2 (Appendix 8A)
Description: Part 2 of the quiz will cover Day 2 activities.
- Computers and Internet access

Activity

1. Assign Assessment 1: Emergency Preparedness Quiz, Part 1 (Appendix 5A).
2. Review Assessment 1: Emergency Preparedness Quiz, Part 1 (Appendix 5A) as a class to review Day 1 activities. Ask for a student volunteer to share the information they learned about the different diseases on Day 1 (Worksheet 3: Disease Cards). Discuss why these particular diseases are of such concern and what can be done to prevent or reduce their spread in the United States, both among immigrant populations and what the students can do in their own community.
3. Assign Worksheet 4: Brainstorm, Part 2 (Appendix 6A) in pairs or groups. Drawing on their Day 1 experience and the information shared during the Day 1 review, students will discuss what types of professionals they think might be required by CDC to respond to an urgent humanitarian response, such as the influx of unaccompanied children from Central America.
4. Review Worksheet 4: Brainstorm, Part 2 (Appendix 6A) as a class. Encourage students to think about the different professions and agencies needed to respond to a disaster, while presenting information on immediate factors associated with the unaccompanied minor response.
5. Provide students with Worksheet 5: Careers in Emergency Preparedness (Appendix 7). Assign or have students choose a public health profession. Have students research how the selected public health professional might be needed in an emergency situation. Have students share findings with the class.
6. If time permits, students can complete Assessment 2: Emergency Preparedness Quiz, Part 2 (Appendix 8A) during class.

Conclusion

At the end of the Day 1 lesson, students will have a greater understanding of the following

- CDC mission;
- geographic association between the United States and Central America;
- reasons for immigrating to the United States from Central America, particularly as a minor; and
- public health problems, particularly diseases, arising from large-scale immigration of unaccompanied children into the United States.

At the end of the Day 2 lesson, students will have a greater understanding of the following

- multiple professions included with an emergency public health response;
- urgent humanitarian responses and why multiple professions are needed for response;
- operation scope of during which CDC is called to respond; and
- public health problems, particularly diseases, arising from large-scale immigration of unaccompanied children into the United States.

Assessments

- Assessment 1: Emergency Preparedness Quiz, Part 1 (Appendix 4A).

Learning Outcomes Assessed

- identify patterns of health and disease using maps
- characterize a public health problem, including general health, spread of disease, and vaccination status, by using maps.

Description: This assessment consists of short-answer questions addressing vocabulary and material covered during Day 1 activities. Duration is approximately 5 minutes (if necessary, students can be allowed to complete assessment as homework and bring during the next class session).

- Assessment 2: Emergency Preparedness Quiz, Part 2 (Appendix 7A).

Learning Outcomes Assessed

- describe how scientific, social, economic, environmental, cultural, and political systems influence a public health response; and
- identify different public health professions involved in a public health response.

Description: This assessment consists of short-answer questions addressing the vocabulary and material covered during Day 2 activities. Duration is approximately 5 minutes (if necessary, students can be allowed to complete assessment as homework and bring back during the next class session).

Educational Standards

In this lesson, the following CDC Epidemiology and Public Health Science (EPHS) Core Competencies for High School Students¹, Next Generation Science Standards* (NGSS) Science & Engineering Practices², and NGSS Cross-cutting Concepts³ are addressed:

HS-EPHS 1-1: Apply epidemiologic thinking and a public health approach to a model (e.g., outbreak) to explain the cause and effect relationships that influence disease.

NGSS Key Science & Engineering Practice²
Developing and Using Models Develop, revise, and/or use a model based on evidence to illustrate and/or predict the relationship between systems or between components of a system.
NGSS Key Crosscutting Concept³
Cause and Effect Cause and effect relationships can be suggested and predicted for complex natural and human designed systems by examining what is known about smaller scale mechanisms within the system.

HS-EPHS 2-4: Use patterns in empirical evidence to formulate hypotheses.

NGSS Key Science & Engineering Practice²
Asking Questions & Defining Problems Ask questions that arise from careful observation of phenomena, or unexpected results, to clarify and/or seek additional information, that arise from examining models or a theory, to clarify and/or seek additional information and relationships, to determine relationships, including quantitative relationships, between independent and dependent variables, and to clarify and refine a model, an explanation, or an engineering problem.
NGSS Key Crosscutting Concept³
Patterns Empirical evidence is needed to identify patterns.

HS-EPHS 4-1: Describe a model illustrating how scientific, social, economic, environmental, cultural, and political systems influence intervention performance patterns.

NGSS Key Science & Engineering Practice²
Developing and Using Models Develop, revise, and/or use a model based on evidence to illustrate and/or predict the relationships between systems or between components of a system.
NGSS Key Crosscutting Concept³
Cause and Effect Changes in systems may have various causes that may not have equal effects.

*Next Generation Science Standards is a registered trademark of Achieve. Neither Achieve nor the lead states and partners that developed the Next Generation Science Standards was involved in the production of, and does not endorse, this product.

- ¹Centers for Disease Control and Prevention (CDC). Science Ambassador Workshop—Epidemiology and Public Health Science: Core Competencies for high school students. Atlanta, GA: US Department of Health and Human Services, CDC; 2015. Not currently available for public use.
- ²NGSS Lead States. Next Generation Science Standards: For States, By States (Appendix F—Science and Engineering Practices). Achieve, Inc. on behalf of the twenty-six states and partners that collaborated on the NGSS. 2013. Available at: <http://www.nextgenscience.org/sites/ngss/files/Appendix%20F%20%20Science%20and%20Engineering%20Practices%20in%20the%20NGSS%20-%20FINAL%20060513.pdf>
- ³NGSS Lead States. Next Generation Science Standards: For States, By States (Appendix G—Crosscutting Concepts). Achieve, Inc. on behalf of the twenty-six states and partners that collaborated on the NGSS. 2013. Available at: <http://www.nextgenscience.org/sites/ngss/files/Appendix%20G%20-%20Crosscutting%20Concepts%20FINAL%20edited%204.10.13.pdf>.

Appendices: Supplementary Documents

Appendix 1: Background Information

Background Information

CDC Preparedness and Response

The Centers for Disease Control and Prevention (CDC) with its headquarters in Atlanta, Georgia, is an agency of the federal government. CDC provides expertise, information, and tools for persons and communities to protect their health. CDC works 24/7 to protect America from health, safety and security threats, both foreign and in the United States. Whether diseases start at home or abroad, are chronic or acute, result from natural occurrences or deliberate attack, CDC fights disease and supports communities and citizens to do the same. CDC increases the health security of our nation. As the nation's health protection agency, CDC saves lives and protects people from health threats. To accomplish this mission, CDC conducts critical science and provides health information that protects our nation against expensive and dangerous health threats, and responds when these arise.

CDC's Office of Public Health Preparedness and Response leads the agency's preparedness and response activities by providing strategic direction, support, and coordination for activities across CDC as well as with local, state, tribal, national, territorial, and international public health partners. CDC provides funding and technical assistance to states to build and strengthen public health capabilities. Ensuring that states can adequately respond to threats will result in greater health security; a critical component of overall U.S. national security. (Source: <http://www.cdc.gov/phpr/whatcdcisdoing.htm>.)

Many professionals are needed to respond to public health emergencies. CDC employs people in nearly all professional fields. Career opportunities are available in science, technology, medicine, healthcare, education, and business, at CDC. (Source: <http://jobs.cdc.gov/article/careerfields>.)

Types of Public Health Emergencies

Types of public health emergencies include natural disasters or severe weather, bioterrorism, chemical emergencies, disease outbreaks, mass casualty incidents, radiation emergencies, and man-made disasters. (Source: <http://emergency.cdc.gov/hazards-specific.asp>.)

Unaccompanied Children by the Numbers

Unaccompanied children are persons aged <18 years who leave their country without an adult. During 2014, a substantial number of unaccompanied children crossed the U.S. border. According to the U.S. Border Patrol, during 2001–2014, an increase in unaccompanied children from Central American countries, including El Salvador, Guatemala, and Honduras was reported. During 2013, in addition to El Salvador (26%), Guatemala (37%), and Honduras (50%), a small percentage of children crossed from Mexico (3%) and Ecuador (2%). In the United States, Texas detained the majority of unaccompanied children in 2014 (>57,000 children), a substantial increase from 2013 (>38,000 children) and 2012 (>24,000 children). (Source: http://www.acf.hhs.gov/sites/default/files/orr/unaccompanied_childrens_services_fact_sheet.pdf.)

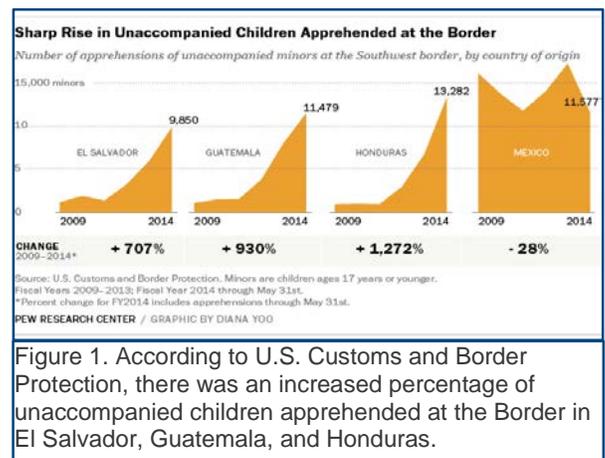


Figure 1. According to U.S. Customs and Border Protection, there was an increased percentage of unaccompanied children apprehended at the Border in El Salvador, Guatemala, and Honduras.

Legal Basis

By law, the U.S. Department of Health and Human Services (HHS) must provide for the custody and care of unaccompanied children. Children are referred to the Administration for Children and Families, Office of Refugee Resettlement, Unaccompanied Alien Children Program for placement by another federal agency, usually the Department of Homeland Security (DHS). The majority of children are placed into care because they were apprehended by immigration authorities while trying to cross the border; others are referred after coming to the attention of immigration authorities after crossing the border. The average

length of stay in the program is approximately 35 days. Of the children served, approximately 85% are reunified with their families.



Figure 2: Unaccompanied Children at the Southwest Border, U.S. Department of Homeland Security. Source: <http://www.dhs.gov/unaccompanied-children>

Processing

To address the increased influx of unaccompanied children crossing the border, a general process was determined to address the humanitarian situation. See Figure 3 for a detailed overview of this process.

Government Agencies Involved

In this response, federal agencies, including HHS (CDC, Administration for Children and Families), DHS, Department of Education, and state and local governments were involved in the response. The World Health Organization, Amnesty International, and national governments of other countries provided international oversight.

Potential Reasons for Becoming Refugees

Children often immigrate to the United States to escape violence, abuse, or persecution; seek work opportunities; or to find family members.

Public Health Concerns

In public health emergencies and humanitarian responses, CDC is asked to respond to urgent public health concerns. Two major public health concerns with the influx of unaccompanied children are infectious disease and mental health. Children carrying infectious disease might arrive ill, require medical attention, and can expose others. Common infectious diseases of concern in this type of public health emergency include tuberculosis, influenza, dengue fever, plague, lice, scabies, chickenpox, meningitis, pertussis, hepatitis A and hepatitis B, diphtheria, and measles. This requires oversight during health screening, providing medical care to those who are ill, and vaccinations for prevention. Children escaping violence and abuse might also be affected by mental trauma that needs immediate medical attention and can have public health implications.

Source: See the U.S. Department of Human Services, Administration for Children and Families, Office of Refugee Resettlement, Unaccompanied Children Program Factsheet for more information: http://www.acf.hhs.gov/sites/default/files/orr/unaccompanied_childrens_services_fact_sheet.pdf.

Appendix 2B: Worksheet 1: Brainstorm, Part 1 (Answer Key)

Brainstorm, Part 1

Name: _____ Answer Key _____

Date: _____

Directions: Using information you have gained from the lesson, answer the following questions.

1. What is CDC? What does the acronym stand for, and what is the agency mission?
Answer: CDC stands for the Centers for Disease Control and Prevention. CDC's mission is to work 24 hours a day, 7 days a week to protect America from health, safety and security threats, both foreign and domestic. Whether diseases start at home or abroad, are chronic or acute, or are naturally occurring or the result of deliberate attack, CDC fights disease and supports communities and citizens to do the same. CDC increases the health security of our nation. As the nation's health protection agency, CDC saves lives and protects people from health threats. To accomplish its mission, CDC conducts critical health investigations and provides health information that protects our nation against expensive and dangerous health threats, and responds when these arise. More information is available at: <http://www.cdc.gov/about/organization/cio.htm>.
2. What types of emergencies involve a CDC response?
Answer: CDC responds to several types of emergencies, including natural disasters and severe weather, bioterrorism, chemical emergencies, disease outbreaks, mass casualties, and radiation emergencies. More information is available at: <http://emergency.cdc.gov/>.
3. What do you know about unaccompanied children crossing into the United States?
Answer: Answers will vary; knowledge should be enhanced after lesson.
4. What does it mean to you to be poor?
Answer: Answers will vary, depending on student's experiences; during the lesson, poverty of the unaccompanied children will be compared with these answers.
5. Why would people want to come to the United States?
Answer: The main reasons why children come to the United States are to escape prostitution, abuse, and poverty. Certain children say they are seeking safety. They also might come seeking opportunities or reunification with family members already in the United States.
6. Name three diseases or disorders that you think unaccompanied children might be diagnosed with.
Answer: Diseases that have been diagnosed among unaccompanied children include tuberculosis, influenza, dengue fever, plague, lice, scabies, chickenpox, meningitis, pertussis, hepatitis A, hepatitis B, diphtheria, and measles. More information is available at: http://www.slate.com/articles/health_and_science/medical_examiner/2014/07/children_crossing_border_illegally_a_possible_public_health_crisis_from.html.

Mapping the U.S. Southwest Border, Central and South America and the Caribbean

Name: _____

Date: _____

Directions: Identify the location of the following countries on the map: El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Belize, Costa Rica, Panama, Cuba, Jamaica, Colombia, and the Bahamas. Also, identify in the United States: Texas, New Mexico, and Arizona.

Central America



Source: http://www.freeusandworldmaps.com/images/World_Regions_Print/CentralAmericaPrintableNoText.jpg.

Appendix 3B: Worksheet 2: Mapping the U.S. Southwest Border and Central America (Answer Key)

Mapping the U.S. Southwest Border, Central and South America and the Caribbean

Name: _____ Answer Key _____

Date: _____

Directions: Identify the location of the following countries on the map: El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Belize, Costa Rica, Panama, Cuba, Jamaica, Colombia, and the Bahamas. Also, identify in the United States: Texas, New Mexico, and Arizona.

Central America



Source: http://www.freeusandworldmaps.com/images/World_Regions_Print/CentralAmericaPrintable.jpg.

Appendix 4A: Worksheet 3: Disease Cards

Disease Cards

Name: _____

Date: _____

Directions: Cut the cards apart. Research symptoms of each disease on the cards by using www.cdc.gov. Match the symptoms with the symptoms cards.

Disease	Disease
Tuberculosis	Influenza (the flu)
Dengue fever	Measles
Lice infestation	Scabies
Chickenpox	Meningococcal meningitis
Pertussis	Hepatitis A and B
Diphtheria	Plague

Appendix 4B: Worksheet 3: Symptoms Cards

Symptom Cards

Name: _____

Date: _____

Directions: Cut the cards apart. Research symptoms of each disease on the cards by using www.cdc.gov. Match the symptoms with the disease cards.

Symptoms	Symptoms
Itching on the head or body, infection of bites, irritability, sleeplessness, and sores	Itching, severe itching (pruritus), especially at night is the earliest and most common symptom; a pimple-like (papular) itchy (pruritic) rash is also common
Weakness, sore throat, fever, and swollen glands in the neck	High fever and ≥ 2 of the following: severe headache, severe eye pain (behind eyes), joint pain, muscle or bone pain, rash, mild bleeding, and low white blood cell count
Runny nose, low-grade fever, mild occasional cough, apnea (a pause in breathing, especially among infants), and inhalation with a loud whooping sound	Sudden onset of fever, headache, stiff neck, nausea, vomiting, photophobia (sensitivity to light), and altered mental status (confusion)
Fever or feeling feverish or chills, cough, sore throat, runny or stuffy nose, muscle or body aches, headaches, and fatigue (tiredness); certain persons can experience vomiting and diarrhea, although this is more common among children than adults	Blotchy rash, fever, cough, runny nose, red or watery eyes (conjunctivitis), feeling run down, achy (malaise), and small white spots with bluish-white centers located inside the mouth (Koplik's spots)
Fluid-filled blisters, rash on the face, chest, and back then inside the mouth, eyelids, or genital area, high fever, fatigue, headache, and loss of appetite	Fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored bowel movements, joint pain, and jaundice (a yellowing of the skin or eyes)
Sudden onset of fever, headache, chills, weakness, ≥ 1 swollen, and tender and painful lymph nodes (known as buboes)	Severe cough lasting ≥ 3 weeks, chest pain, coughing up blood or sputum (phlegm from deep inside the lungs), weakness or fatigue, weight loss, limited appetite, chills, fever, and night sweats

Appendix 4C: Worksheet 3: Disease and Symptom Cards (Answer Key)

Disease and Symptom Cards

Name: _____ Answer Key _____

Date: _____

Directions: Cut the cards apart. Research symptoms of each disease on the cards by using www.cdc.gov. Match the symptoms with the disease cards.

Disease/Symptoms	Disease/Symptoms
<p>Tuberculosis symptoms: Severe cough lasting ≥ 3 weeks, chest pain, coughing up blood or sputum (phlegm from deep inside the lungs), weakness or fatigue, weight loss, limited appetite, chills, fever, and night sweats. Source: http://www.cdc.gov/features/tbsymptoms/.</p>	<p>Flu symptoms: Fever or feeling feverish or chills, cough, sore throat, runny or stuffy nose, muscle or body aches, headaches, and fatigue (tiredness); certain persons can experience vomiting and diarrhea, although this is more common among children than adults. Source: http://www.cdc.gov/flu/index.htm.</p>
<p>Dengue fever symptoms: High fever and ≥ 2 of the following: severe headache, severe eye pain (behind eyes), joint pain, muscle or bone pain, rash, mild bleeding, and low white blood cell count. Source: http://www.cdc.gov/dengue/Symptoms/.</p>	<p>Measles symptoms: Blotchy rash, fever, cough, runny nose, red or watery eyes (conjunctivitis), feeling run down, achy (malaise), and small white spots with bluish-white centers found inside the mouth (Koplik's spots) Source: http://www.cdc.gov/measles/index.html.</p>
<p>Lice symptoms: Itching on the head or body, infection of bites, irritability, sleeplessness, and sores. Source: http://www.cdc.gov/parasites/lice/.</p>	<p>Scabies symptoms: Itching, severe itching (pruritus), especially at night, is the earliest and most common symptom; a pimple-like (papular) itchy (pruritic) rash is also common. Source: http://www.cdc.gov/parasites/scabies/.</p>
<p>Chickenpox symptoms: Fluid-filled blisters; rash on the face, chest, and back then inside the mouth, eyelids, or genital area; high fever, fatigue, headache, and loss of appetite. Source: http://www.cdc.gov/chickenpox/index.html.</p>	<p>Meningitis symptoms: Sudden onset of fever, headache, stiff neck, nausea, vomiting, photophobia (sensitivity to light), and altered mental status (confusion). Source: http://www.cdc.gov/meningitis/index.html.</p>
<p>Pertussis symptoms: Runny nose, low-grade fever, mild, occasional cough, apnea (a pause in breathing, especially among infants), and inhalation with a loud whooping sound. Source: http://www.cdc.gov/pertussis/about/signs-symptoms.html.</p>	<p>Hepatitis A and B symptoms: Fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored bowel movements, joint pain, and jaundice (a yellowing of the skin or eyes). Source: http://www.cdc.gov/hepatitis/a/afaq.htm#symptoms.</p>
<p>Diphtheria symptoms: Weakness, sore throat, fever, and swollen glands in the neck. Source: http://www.cdc.gov/diphtheria/about/symptoms.html.</p>	<p>Plague symptoms: Sudden onset of fever, headache, chills, weakness, ≥ 1 swollen, and tender and painful lymph nodes (known as buboes). Source: http://www.cdc.gov/plague/symptoms/.</p>

Appendix 5A: Assessment 1: Emergency Preparedness Quiz, Part 1

Emergency Preparedness Quiz, Part 1

Name: _____

Date: _____

Directions: Using information you have learned during today's lesson, answer the following questions.

1. What does the acronym CDC stand for?
2. What is the difference between a natural and a man-made disaster?
3. What is an unaccompanied minor?
4. Which four states border Mexico?
5. From which three countries in Central America are the majority of the unaccompanied children coming?
6. List three reasons these unaccompanied children are coming to the United States.
7. List three diseases that unaccompanied children might be diagnosed with that can become a concern when entering the United States.

Appendix 5B: Assessment 1: Emergency Preparedness Quiz, Part 1 (Answer Key)

Emergency Preparedness Quiz, Part 1

Name: _____ Answer Key _____

Date: _____

Directions: Using information you have learned during today's lesson, answer the following questions.

1. What does the acronym CDC stand for?
Answer: CDC stands for the Centers for Disease Control and Prevention.
2. What is the difference between a natural and a man-made disaster?
Answer: A man-made disaster is an event caused directly and principally by one or more identifiable deliberate or negligent human actions. A natural disaster is caused by natural hazards.
Source: <http://www.businessdictionary.com/definition/man-made-disaster.html>.
3. What is an unaccompanied minor?
Answer: An unaccompanied child is a child who has no lawful immigration status in the United States, is under 18 years of age, and does not have a parent or legal guardian in the United States who is able to provide care and physical custody
Source: <http://www.ilw.com/immigrationdaily/news/2008,0602-crs.pdf>.
4. Which four states border Mexico?
Answer: Arizona, California, New Mexico, and Texas.
5. From which three countries in Central America are the majority of the unaccompanied children coming?
Answer: El Salvador, Honduras, and Guatemala.
6. List three reasons these unaccompanied children are coming to the United States.
Answer: Answers will vary, but can include children are coming to the United States to escape abuse, poverty, and prostitution. They are also coming for reasons of safety and opportunity. Additionally, they might also have family members already in the United States with whom they wish to be reunited.
7. List three diseases that unaccompanied children might be diagnosed with that can become a concern when entering the United States.
Answer: Answers will vary, but diseases that have been reported among unaccompanied children include tuberculosis, influenza, dengue fever, plague, lice, scabies, chickenpox, meningococcal meningitis, pertussis, hepatitis A, hepatitis B, diphtheria, and measles.
Source: http://www.slate.com/articles/health_and_science/medical_examiner/2014/07/children_crossing_border_illegally_a_possible_public_health_crisis_from.html.

Appendix 6A: Worksheet 4: Brainstorm, Part 2

Brainstorm, Part 2

Name: _____

Date: _____

Directions: Fill in the table by naming 3 careers you believe would be involved in emergency response to the man-made disaster of unaccompanied children crossing the border and what their role might be in responding.

Career	Role in man-made disaster

Name 2 possible long-term (as opposed to immediate) needs of unaccompanied children who have entered the United States.

- 1.
- 2.

Appendix 6B: Worksheet 4: Brainstorm, Part 2 (Answer Key)

Brainstorm, Part 2

Name: _____ Answer Key _____

Date: _____

Directions: Fill in the table by naming 3 careers you believe would be involved in emergency response to the man-made disaster of unaccompanied children crossing the border and what their role might be in responding.

Career	Role in man-made disaster
Sample Answer: Doctor or nurse	Sample Answer: These professionals will assess, diagnose, and treat unaccompanied children after they have crossed the border into the United States, by conducting health screenings and providing vaccinations.
Sample Answer: Lawyer	Sample Answer: Addressing the legal aspect of this man-made disaster will involve lawyers on both sides of the situation, including proponents of wanting the unaccompanied children returned to their home country and those contending the children should be allowed to remain in the United States.
Sample Answer: Epidemiologist	Sample Answer: Epidemiologists develop protocols to rapidly detect and respond to health threats in unaccompanied children. Increasingly, epidemiologists focus on the social as well as medical aspects of disease and regarding behavioral risk assessment.

Name 2 possible long-term (as opposed to immediate) needs of unaccompanied children who have entered the United States.

Answer: Student answers will vary, but correctness in terms of these questions is a matter of the students being able to support their answers with information from the lesson. Examples might include certain information that follows.

- Answer:** Education. Unaccompanied children will all need education services to be provided to be able to live productive lives, maintain health, and possibly become employable in the future.
- Answer:** Mental health. Mental health concerns are potential long-term problems because of any trauma experienced or poor living conditions the unaccompanied children might have encountered, in addition to the reasons seeking to come to the United States

Appendix 7: Worksheet 5: Careers in Public Health

Careers in Public Health

Name: _____

Date: _____

Directions: Cut the Careers in Public Health worksheet into cards. Then, randomly draw a career card and research how a person with that career would respond to a public health response related to unaccompanied children crossing the U.S. border.

Careers in Public Health	Careers in Public Health
Pediatric social worker	Epidemiologist
Medical doctor	Nurse
Health education specialist	Biologist
Health scientist	Geographic information specialist
Finance or budget administrator	Engineer

Appendix 8A: Assessment 2: Emergency Preparedness Quiz, Part 2

Emergency Preparedness Quiz, Part 2

Name: _____

Date: _____

Directions: Using information you have learned during today's lesson, answer the following questions.

1. What are the immediate needs of unaccompanied children after they have crossed the border from Central America to the United States?
2. Name three long-term needs of the unaccompanied children.
3. Name three federal agencies that might get involved with the unaccompanied children response.
4. Why might international organizations become involved with the United States' response to the unaccompanied children?
5. Why might state and local government agencies get involved with the response to the unaccompanied children?
6. Besides medical doctors or nurses, name three professions that might be need to respond to the unaccompanied minor crisis, and briefly explain why.

Appendix 8B: Assessment 2: Emergency Preparedness Quiz

Emergency Preparedness Quiz, Part 2

Name: _____ Answer Key _____ Date: _____

Directions: Using information you have learned during today's lesson, answer the following questions.

1. What are the immediate needs of unaccompanied children after they have crossed the border from Central America to the United States?
Answer: The immediate needs are food, water, shelter, and health care.
2. Name three long-term needs of the unaccompanied children.
Answer: Multiple answers are possible, including legal issues, long-term health care, mental health care, education, family reunification, integration with U.S. society, and learning self-sufficiency.
Source: <http://www.refugees.org/our-work/refugee-resettlement/>.
3. Name three federal agencies that might get involved with the unaccompanied children response.
Answer: Department of Health and Human Services (e.g., CDC, Office of Refugee Resettlement), Department of Homeland Security, Department of Defense, and Department of Education.
4. Why might international organizations become involved with the United States' response to the unaccompanied children?
Answer: Unaccompanied minors have certain rights after entrance to the United States, depending on country of citizenship. Through the provisions of the William Wilberforce Trafficking Victims Protection Reauthorization Act of 2008, unaccompanied children from countries which do not have a common border with the United States are given substantial rights and protection.
Source: http://forabettertexas.org/images/A_Child_Alone_and_Without_Papers.pdf.
5. Why might state and local government agencies get involved with the response to the unaccompanied children?
Answer: The influx of unaccompanied children coming into the United States has overwhelmed resources for border states that lack resources to adequately care for all of these children. Also, different states handle the situation differently, both legally and societally. It may also be important to consider if state and local agencies do not get involved, it could lead to increase in the spread of disease; overcrowding in poor areas; insufficient access to education and basic medical care; and increases in child abuse, neglect, illegal activities, violence, crime, and poverty.
Source: <http://www.motherjones.com/politics/2014/06/child-migrants-surge-unaccompanied-central-america>.
6. Besides medical doctors or nurses, name three professions that might be need to respond to the unaccompanied minor crisis, and briefly explain why.
Answer: Answers can include different professions, as long as the student's reasoning for including that profession is sound.