

UNIT 2: CHILD SURVIVAL — CHALLENGES AND RESPONSES

Unit Overview:

In this unit students will:

- Learn about the concept of the under-five mortality rate and why the number of deaths is higher in some regions of the world than in others;
- Read and interpret tables, graphs, and pie charts in the *Youth Report*, Chapter 2;
- Discover readily available, low-cost solutions to the main causes of child mortality.

Lesson 1: Students will learn about the calculation of the under-five mortality rate (U5MR) and why it is an important indicator of a country's commitment to the well-being of children and families. Using real data, students will have opportunities to read and interpret graphs and charts as well as calculate percentage changes in U5MR rates. This lesson will also point out that child survival is a pressing issue for many children living in what UNICEF has designated as "60 priority countries."

Lesson 2: Students will learn about some of the challenges to child survival as well as simple, affordable, and effective solutions to those challenges. Working in small groups, students will report on simple solutions to life-threatening problems described in the *Youth Report*, including malaria and measles, undernutrition, and lack of safe drinking water.

 **Tip:** While this unit was designed to be taught over two to three consecutive days, feel free to customize it to fit your specific curriculum schedule.

National Standards Unit 2

MATHEMATICS

Mathematics Standards — Grades 6-8

Standard 1: Number and Operations

In grades 6–8 all students should work flexibly with fractions, decimals, and percents to solve problems.

Standard 10: Representation

In grades 6–8 all students should use representations to model and interpret physical, social, and mathematical phenomena.

ENGLISH/LANGUAGE ARTS — Grades K-12

Standard 1: Students read a wide range of print and non-print texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment.

Standard 4: Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.

Standard 7: Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

SCIENCE

Science Content Standards — Grades 5-8

Content Standard F: Science in Personal and Social Perspectives

Students should develop an understanding of:

- Populations, resources, and environments
- Science and technology in society

HISTORY/SOCIAL STUDIES/ GEOGRAPHY

World History Standards — Grades 5-12

Era 9: The 20th Century Since 1945 — Promises and Paradoxes

Students understand the search for community, stability, and peace in an interdependent world.

Social Studies Standards — Grades K-12

Strand III: People, Places, and Environments

Strand VIII: Science, Technology, and Society

Strand IX: Global Connections

Geography Standards — Grades K-12

The Geographically Informed Person knows and understands

The World in Spatial Terms

Standard 1: How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective.

UNIT 2:

Lesson 1: Child Survival — What Does It Mean?

Suggested Class Time: 45 Minutes

Objectives:

- Understand what is meant by child survival;
- Discover reasons why young children are dying in some parts of the world.

Session Plan:

- Introduction: *Child Survival: A Global Challenge*: 10 minutes
- Defining Child Survival: 10 minutes
- What Do the Numbers Tell Us? 20 minutes
- Wrapping Up: 5 minutes

Vocabulary:

child survival, developing world, immunization, industrialized world, iodine deficiency disorders (IDD), neonatal, under-five mortality rate (U5MR)

 **Tip:** Definitions for many of these vocabulary items are in the Glossary on page 38 of the *Youth Report*.

Materials Needed:

- *Child Survival: A Global Challenge*: Welcome, Chapters 1 and 2
- World map or globe
- Handout 3: Understanding the U5MR (Under-Five Mortality Rate)

Introduction: Child Survival: A Global Challenge

Directions

1. Begin by reminding students of their memories of being age five. Point out that in parts of the world living to age five is not always possible for many children.

2. Introduce UNICEF and the *Youth Report* by reviewing with students the information on pages 2 and 3 of the *Youth Report*.

 **Tip: Distribute copies of pages 2 and 3 before starting Unit 2 so students are familiar with the content before class. In class, make sure students understand that the four bullet points at the end of page 3 describe what they will take away from the *Youth Report* and these units.**

Defining Child Survival

Directions

1. Define *child survival* as the survival of any child to age five.
2. Introduce the subject of child mortality (deaths of children under five years of age) by reading in pairs pages 5 and 6 of the *Youth Report*.
3. Discuss student responses to the following questions after they have finished reading pages 5 and 6:
 - What is the child survival revolution? (*UNICEF's effort to reduce the number of children dying before age five from preventable causes.*)
 - In 2006, 9.7 million children under the age of five died. Why is this something to celebrate? (*This was the first time the annual number of deaths dropped to less than 10 million.*)
4. Point out that data on deaths of children under age five is collected from all over the world; every country has some child deaths. Explain that students will now learn more about differences in child survival in different regions of the world.

What Do the Numbers Tell Us?

Directions

1. Define the under-five mortality rate, U5MR, as the number of deaths of children under five years of age out of 1,000 live births in a given period of time.
2. Distribute Handout 3 and explain that the students' task is to use real data to calculate changes in the U5MR in different regions, and in the world, between 1990 and 2006.
3. Ask students to work in pairs to complete the table and answer questions on Handout 3.
4. Facilitate a class discussion and review students' responses to Handout 3.

Tip: Have students identify the location of these regions on a world map or globe. For a map showing the countries included in CEE/CIS, go to www.unicef.org/ceecis/where.html. UNICEF's list of industrialized countries can be found at www.unicef.org/progressforchildren/2004v1/industrialized.php.

Handout 3 (page 40): Answer Key

| | | | | |
|-------------------------------------|-----|-----|--------------|--------------------------|
| Sub-Saharan Africa [Example] | 187 | 160 | $187-160=27$ | $27/187 \times 100=14\%$ |
| Middle East/North Africa | 79 | 46 | $79-46=33$ | $33/79 \times 100=42\%$ |
| South Asia | 123 | 83 | $123-83=40$ | $40/123 \times 100=32\%$ |
| East Asia/Pacific | 55 | 29 | $55-29=26$ | $26/55 \times 100=47\%$ |
| Latin America/Caribbean | 55 | 27 | $55-27=28$ | $28/55 \times 100=51\%$ |
| CEE/CIS* | 53 | 27 | $53-27=26$ | $26/53 \times 100=49\%$ |
| Industrialized Countries | 10 | 6 | $10-6=4$ | $4/10 \times 100=40\%$ |
| World | 93 | 72 | $93-72=21$ | $21/93 \times 100=23\%$ |

* Central and Eastern Europe/the Commonwealth of Independent States

1. For every 1,000 children born alive in Industrialized Countries in 2006, how many died before they were five years old? [6]
2. Which region had the lowest U5MR in 1990? 2006? [*Industrialized Countries*]
3. Which region had the highest percentage decrease in U5MR between 1990 and 2006? [CEE/CIS 49%]
4. Which region had the highest U5MR in 1990 and 2006? [*Sub-Saharan Africa*]
5. Which region had the lowest percentage decrease in U5MR between 1990 and 2006? [*Sub-Saharan Africa*]

Wrapping Up

Directions

1. Ask students to think about some of the reasons for a high U5MR. (*Answers may include: poverty, war, natural disasters, lack of food and clean water, lack of health care.*)
2. Read with students the section, “Why Do Children Die Before Age Five?” on page 11 of the *Youth Report*, and interpret the graph. Use this factual information to correct any misconceptions students may have expressed as reasons for a high U5MR in different regions of the world.

Extension Activities: Child Survival

1. 60 Priority Countries: Have each student report to the class on one or more of the 60 Priority Countries shown on the map in the *Youth Report*, page 8. Students can investigate the country’s U5MR in more detail using UNICEF’s information-by-country reports at: <http://www.unicef.org/infobycountry/index.html>.

(Students can choose a country and click on Statistics. The “basic indicators” section includes the country’s U5MR.)

2. “Child Survival has a Face”: Have students imagine they can write a letter to one of the very young children pictured in the *Youth Report*. Have them compose a letter responding to these prompts: What knowledge do you want to share with this young child? What can you say about your own early years? What do you love to do now? What do you wish for this child and for other children of the world?

HANDOUT 3

Understanding the U5MR (Under-Five Mortality Rate)

In 2006, for the first time since records were kept, the total number of children in the world who died before their fifth birthday fell below 10 million — to 9.7 million. One way to measure progress in child health is by looking at changes in the rate of deaths (mortality) in children under age five. This is called the under-five mortality rate, U5MR. The U5MR indicates the probability of 1 child out of 1,000 dying between birth and exactly five years of age. In comparing the U5MR for two different years, a decrease means that children are getting healthier. The table below shows the U5MR in various regions for two years, 1990 and 2006.

Directions: First look at the Sub-Saharan Africa example below, and then compute the “decrease” and “approximate percentage decrease” in the U5MR for the other regions listed.

| Region | U5MR 1990 | U5MR 2006 | Decrease | Approximate % Decrease |
|---------------------------------------|-----------|-----------|--------------|--------------------------|
| EXAMPLE: Sub-Saharan Africa | 187 | 160 | $187-160=27$ | $27/187 \times 100=14\%$ |
| Middle East/ North Africa | 79 | 46 | | |
| South Asia | 123 | 83 | | |
| East Asia/ Pacific | 55 | 29 | | |
| Latin America/ Caribbean | 55 | 27 | | |
| CEE/CIS* | 53 | 27 | | |
| Industrialized Countries | 10 | 6 | | |
| World | 93 | 72 | | |

Source: United Nations Children’s Fund, Progress for Children: A World Fit for Children Statistical Review, UNICEF, New York, December 2007, p. 18.

* Central and Eastern Europe/the Commonwealth of Independent States

Answer these questions, based on the information on the chart:

- For every 1,000 children born alive in Industrialized Countries in 2006, how many died before they were five years old?
- Which region had the lowest U5MR in 1990? 2006?
- Which two regions had the highest percentage decrease in U5MR between 1990 and 2006?
- Which region had the highest U5MR in 1990 and 2006?
- Which region had the lowest percentage decrease in U5MR between 1990 and 2006?

UNIT 2:

Lesson 2: Child Survival — Problems and Solutions

Suggested Class Time: 90 Minutes

Objectives:

- To consider some of the challenges to child survival;
- To explore several of the simple effective and affordable solutions to these challenges.

Session Plan:

- Learning about Solutions: 45 Minutes
- Group Presentations: 35 Minutes
- Wrapping Up: 10 Minutes

Vocabulary:

dehydration, immunization, insecticide-treated bed nets (ITNs), malaria, micronutrient, nutrients, oral rehydration salts (ORS), oral rehydration therapy (ORT), pneumonia, under-five mortality rate (U5MR), undernutrition

 **Tip:** Definitions for these Vocabulary items are in the Glossary on page 38 of the *Youth Report*.

Materials Needed:

- *Child Survival: A Global Challenge*: Chapter 2
- Newsprint/Chalkboard/Whiteboard
- Markers

Learning About Solutions

Directions

1. Have students read page 12 of the *Youth Report*. Facilitate a general discussion about the information in the chart.

 **Tip:** If time permits, create an overhead of page 12 and cover columns 2 and 3, showing only column 1. Ask students to speculate about why each item in column 1 is a problem. Then reveal and discuss the information in columns 2 and 3.

2. Divide students into four groups to report on inexpensive, simple solutions to life-threatening problems described in the *Youth Report*, Chapter 2. Assign malaria to Group 1; preventable diseases (such as measles) to Group 2; undernutrition to Group 3; and lack of safe drinking water to Group 4. Groups can find information in the Solving Problems chart in the *Youth Report*.

Group Presentations

Directions

Ask the groups to report their findings. Encourage students to use creative presentations methods including a skit or a panel discussion.

 **Tip: If possible, extend the preparation time so students can develop presentation formats, such as a song, a series of drawings, or a large mural.**

Wrapping Up

Directions

1. Facilitate a group discussion on these three questions (from page 20 of the *Youth Report*):
 - What are three major causes of under-five child deaths around the world?
 - Which intervention [solution] did you find most interesting?
 - Why do you think it has been so successful?

Extension Activities: Combating Childhood Diseases

1. **Looking Back:** Many of the diseases currently affecting young children in some developing countries were once problems in this country. Refer small groups of students to page 36 of the *Youth Report* and encourage them to investigate a disease that is no longer a major cause of death for children in the United States. The disease could be polio, smallpox, or another infectious disease.

For each disease, students should answer these questions: What steps were taken to solve the problem? For polio, students can access information from the Smithsonian Institution's website at <http://americanhistory.si.edu/polio/americanepi/index.htm>.

2. **What Was It Like?** Invite students to interview older family members or friends about their memories of polio or other contagious childhood diseases in the early to mid-20th century and report their findings to the class.