

Got Lemonade?

A Second Grade Inquiry Unit: Nothing But Nets

Written by
Peggy Dyckman
Dr. Emily Alford

Holy Family Catholic Academy
2515 Palatine Rd
Inverness, IL 60067
Archdiocese of Chicago, IL

Economics Inquiry Learning Mini-Unit

First Grade Curriculum

Index

Description of Second Grade Challenge

Dividers to Separate Unit Components

Letter to Students from the NothingButNets and the UN Foundation

Inquiry-Based Learning Planner

Lesson Plans

Non-Fiction Reading Resources:

 Goods/Services chart

 Lemonade Game Record Sheet

 Malaria and the Economy, Peggy Dyckman and Emily Alford

 All About Malaria, Peggy Dyckman and Emily Alford

 Bed Nets Save Lives, Peggy Dyckman and Emily Alford

Unit Overview

Unit Overview: description of second grade challenge

Got Lemonade?

Second grade students will receive a special letter from NothingButNets and the U.N. Foundation asking them to help tell people about malaria and how to end this terrible disease. Attached is a curriculum plan for a mini-unit that focuses on economics, how malaria affects economics in Africa, and ways in which people can help eliminate malaria and improve economic conditions. The lessons are designed to enhance a primary unit on economics, usually taught across the United States in first or second grades (1, 2).

The attached curriculum meets the content established by State Goal 15: Understand economic systems, with an emphasis on the United States.

Standard A. Understand how different economic systems operate in the exchange, production, distribution and consumption of goods and services. The curriculum is color coded, linking standards and benchmarks to teaching activities. These materials include activities that engage the students as well as provide other resources (or links to specific websites) necessary to complete the unit.

The mini-unit culminates with students working in teams to create a book or brochure explaining the economic burden of malaria and ways in which a school can get involved with a solution. After playing the Internet game, *Lemonade Stand* (optional), 2nd graders run a lemonade stand earn money for their service project.

- (1) All references are made to Illinois State Goals and Standards. Please refer to your specific state's goals and standards for reference.
- (2) The curriculum also meets the content established by the Office of Catholic Schools, Archdiocese of Chicago Curriculum Framework.

Holy Family Catholic Academy
2515 Palatine Rd.
Inverness, Illinois 60067

Second Grade Letter



Dear Students,

The United Nations Foundation's Nothing But Nets Campaign needs your help. People in Africa and other parts of the world are dying every day because they were bitten by a mosquito and injected with a parasite. That parasite causes fever, pain, and sometimes, death.

We know that in second grade you study economics. You learn about needs and wants, goods and services, opportunity costs, and interdependence. People who have malaria are very, very sick and don't feel like working or going to school. Because of this, they can't earn as much money as people who aren't sick. Their illness prevents them from enjoying the same level of income as people in countries that do not have malaria.



We would like you to work in teams to create a brochure that can be given to parents and people in your community. Your materials should tell about how economics affects people's lives. We need you to research economic ideas and ways in which people could raise money to help protect people from malaria.

Inquiry-Based Learning
Unit Organizer:
Nothing But Nets

Inquiry-Based Learning Unit Organizer: Nothing But Nets

Authors: Peggy Dyckman, Dr. Emily Alford, Holy Family Catholic Academy, Inverness, Illinois 60067
 Title: Got Lemonade?
 Grade Level: 2nd

Goals/Standards/Concepts:

State Goal 15: Understand economic systems, with an emphasis on the United States.

Standard A. Understand how different economic systems operate in the exchange, production, distribution and consumption of goods and services.

- **Compare needs and wants, goods and services, and opportunity costs for people in our economy to that of a developing nation.**
- Determine how human, natural, and capital resources impact the production of goods and services.

Important Note

The following website is an excellent resource for this unit. In addition to providing economic lessons, it lists guiding questions about economic concepts for specific children's books.

<http://www.kidseconbooks.com/index.html>

▶ CONTEXT ▶

Engaging the Learner

Students are placed in teams and given pictures of the teacher's dog. They must make a list of the dog's needs and wants. Each team shares their ideas and makes corrections as necessary. Then they must determine how those needs are supplied by listing goods and services related to pets.

The United Nations Foundation is asking students to get involved with a project to eliminate malaria from countries around the world. They want people to understand the economic burden of this disease.

Team Service Project

Teams create a brochure explaining the economic burden of malaria and ways in which a school can get involved with a solution. The 2nd graders will run a lemonade stand earn money for their service project.

▶ CONTENT ▶

Teaching and Learning Events

NOTE: Each bullet point in this section has a corresponding lesson plan. The unit organizer gives teachers a summary of goals, standards, and benchmarks as well as ways in which students are engaged to begin the unit, and challenged by the final team performance.

Opening Activity (see Lesson Plans for details of all activities listed below)

- Following the opening activities, students read the letter from the NothingButNets and United Nations Foundation. Guide students through task analysis and records the tasks on chart paper. Write their questions on a second piece of chart paper.
- **Purchase or check out the following book from the library. Read aloud, "If You Give a Pig a Pancake" and use the questions that accompany the book found at www.kidseconbooks.com/html/if-you-give-a-pig-a-pancake.html** Model the following activity: sort items wanted by the pig using the Goods/Services chart. Then give each team one of the following: Click, Clack, Moo, If You Give a Moose a Muffin, If You Take a Mouse to School If you Give a Mouse a Cookie. Have each team use the Goods/Services chart to sort the needs/ wants and goods/services named in their book.

Individual Student Assessments

- Post pictures of items representing economic goods and services. Give each student a copy of the Goods/Services chart and have them sort the pictured items by writing the name of the item in the appropriate square.
- Have students write in their own words, reasons why it is important to raise \$10 for bed nets.

Integrated Curriculum and Instruction Design: Inquiry-Based Learning

Title: _____
 Authors: _____
 Grade Level: _____

Goals/Standards: (#'s)	▶CONTEXT◀	▶CONTENT◀
<p style="text-align: center;"><u>Engaging the Learner</u></p>	<p>Additional ideas at the following website http://www.kidseconbooks.com/html/click_clack_moo_cows_that_tvp.html</p> <ul style="list-style-type: none"> • Locate informational text articles on malaria and the economic burden of the disease in the Resource section of this unit. Individuals read their article, then meet with other students who have read the same text to summarize what they have learned. Teams jigsaw to share the information. Hold class discussion and make connections to economic concepts (needs/wants, opportunity costs, goods/services). Discuss what goods and services can be purchased for \$10, the price of a bed net. • Begin work on the brochure by summarizing information on goods/services, wants/needs and economic burden of malaria. Teams should be made up of students who have read the three articles. • Introduce the Lemonade Stand Game at www.ae4tv.com/games/lemonade.htm (Optional activity) Read aloud, Lemonade for Sale, by Stuart 	<p style="text-align: center;"><u>Individual Student Assessments</u></p>
<p style="text-align: center;"><u>Final Team Performance</u></p>	<p style="text-align: center;"><u>Final Team Performance</u></p>	

NO = outcome is assessed
 (Number refers to assessment)

Integrated Curriculum and Instruction Design: Inquiry-Based Learning

Title: _____ Authors: _____ Grade Level: _____

Goals/Standards: (#'S)

	CONTEXT	CONTENT
	<p><u>Engaging the Learner</u></p>	<ul style="list-style-type: none"> Murphy: Begin playing Lemonade Stand and charting results. Teams play two or three days (use record sheet). Sell lemonade! Complete work on the brochure by adding pictures.
	<p><u>Final Team Performance</u></p>	<p><u>Individual Student Assessments</u></p> <ul style="list-style-type: none"> Following the parent interviews, each student names the job that was described, determines whether they are a producer, consumer or both, and what goods or services are delivered (create a worksheet). Reread Lemonade Stand and select questions on cost factors for individual students to answer (create worksheet)

✓() = outcome is assessed
(Number refers to assessment)

*Numbers after Teaching and Learning Events refer to assessments

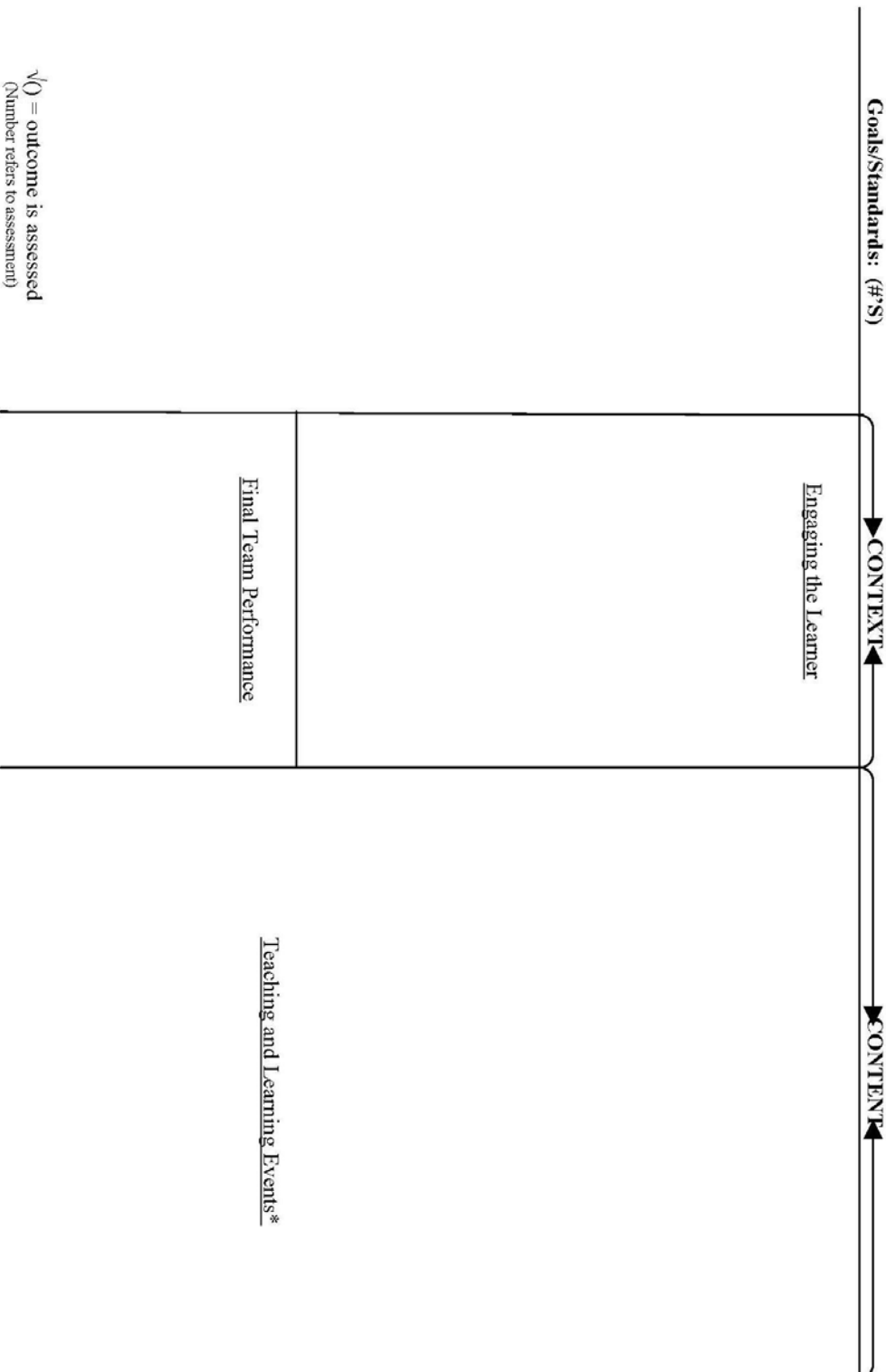
Integrated Curriculum and Instruction Design: Inquiry-Based Learning

Goals/Standards: (#*S)

Title:

Authors:

Grade Level:



√() = outcome is assessed
(Number refers to assessment)

Lesson Plans

Teaching and Learning Events

Opening Activities

Estimated time: 1 hour

Engaging the Learner

Active, intellectual engagement of students results in successful instruction. The opening activities for this series of lessons are designed to introduce big ideas for the content and engage students in discovery and authentic tasks. A strategy employed to accomplish this task is to design activities that help learner's make connections between the curriculum content and their experiences. A learner's experience includes interests, cultural experiences, values, and beliefs. With these above points in mind, begin the unit by completing the following opening activities.

Teaching and Learning Event: Opening Activity

The unit begins with the teacher introducing her dog (or other pet) to the class through pictures and stories. She asks them to think of what a pet needs. Through this discussion the students are introduced to the difference between wants and needs.

Description and Detailed Sequence of Activities:

- The pet is introduced to the class.
- Ask the students to think about what the dog needs.
- Organize students into teams of 3 or 4 and give each team a picture of the pet with room around the picture for brainstorming lists. Ask each team to list as many of the pet's needs as they could think of. After 10 minutes have them share their lists with the whole class. Record some of the ideas on the board or chart paper.
- After all the teams have shared, write the words **food**, **shelter**, and **water**, on the board or chart paper. Then ask which of the ideas recorded on the board or chart paper are needs. Circle those ideas that are needs.
- Teams then use a highlighter to mark the words related to food, shelter, and water. Emphasize that these are **ONLY** needs that a dog really has and all the rest are wants.
- The class then has a brief discussion of the difference between wants and needs. Explain how dogs can survive without things it might want (such as a bed or a collar).

Teaching and Learning Events
Social Studies Goals, Standards, and Benchmarks
Estimated time: 1 hour

State Goal 15: Understands economic systems with an emphasis on the United States.

Standard A. Understand how different economic systems operate in the exchange, production, distribution, and consumption of good and service.

- Compare needs and wants and goods and services for people in our economy to that of a developing nation.

Teaching and Learning Event: Letter from NothingButNets and the United Nations Foundation

The topic of Malaria and the impact that it has on children around the world is brought to the students' attention through a letter from NothingButNets and the United Nations Foundation. After reading and discussing the letter, the class develops a list of what the NothingButNets is asking them to do, and then makes a list of questions that will help guide them as they research and create their team brochures.

Description and Detailed Sequence of Activities:

- Ask students to sit quietly and watch the clock. After 30 seconds announce, "One child has died." Students start building questions in their minds as you continue announcing, after every thirty seconds, that another child has died.
- Now, hand each student a copy of the letter from the United Nations Foundation and read it aloud. Do not mention the name of the animal until it is revealed in the letter. **NOTE: Be sure to explain that the mosquito is a special kind and not found in the United States.**
- Re-read the letter and discuss the major points with your students. Now complete Task Analysis as detailed below.

In order to set parameters for content and focus on the challenge, complete task analysis using the following strategies:

- 1. Pin or tape two pieces of chart paper on the wall. Label the first one, Task Analysis and the second sheet, Questions we have to answer.**

2. Ask, “What are we being asked to do (see the model on the following page)?” The answer to each question is found in the body of the letter from NothingButNets and the United Nations Foundation. Response; “We need to create a brochure that explains the economic burden of malaria and ways in which a school can get involved with a solution and run a lemonade stand to earn money for this service project.” Write the student’s response on the first sheet of chart paper. Then probe further by asking, “What will the money be used for?” Student response, “The United Nations will purchase mosquito nets to protect people.” Add this response to the first statement.

3. Ask, “What information do we need to include in our brochure?” Student response, “We need to learn about mosquitoes and malaria.” Write this response under the task on the first chart.

Ask, “What else do we need to learn about and include in our brochure?” response, “We need to include information about NothingButNets and the UN Foundation.” Add this response to the first chart.

Ask, “Is there anything else we need to include?” Student response, “We need to figure out how to set up a lemonade stand/ business so we can raise money to buy bed nets.” Again, add this response to the chart.

Finally, ask, “What questions do we have now?” List the questions on the second chart.

See model charts below.

Chart paper on wall

Task Analysis

We must create a brochure that tells people about:

- the problem of malaria
- how malaria affects the economy
- bed nets that protect families from mosquitoes
- the mission of the U.N. Foundation and Nothing But Nets to purchase nets and eliminate malaria

Questions we have now (samples):

- What is malaria?
- How is malaria spread?
- What are bed nets?
- How does malaria affect the economy?
- What can we do to stop the spread of malaria?
- How can we encourage others to take action?

Teaching and Learning Events
Social Studies Goals, Standards, and Benchmarks, continued
Estimated time: two hours over a two day period

State Goal 15: Understands economic systems with an emphasis on the United States.

Standard A. Understand how different economic systems operate in the exchange, production, distribution, and consumption of good and service.

- Compare needs and wants and goods and services for people in our economy to that of a developing nation.

Teaching and Learning Event: By reading children’s books, students come to understand economic wants are those goods, services, or recreational activities that people would like to have.

Description and Detailed Sequence of Activities:

- **Purchase or check out the following book from the library. Read aloud, “If You Give a Pig a Pancake” and use the questions that accompany the book found at http://www.kidseconbooks.com/html/if_you_give_a_pig_a_pancake.html**
- **Discuss the difference between needs and wants. Make a list of items that the pig wanted. Ask students, “Of all of these items, what did the pig need (food, water, shelter). The pig could eat the pancake but could not use the tree house since pigs can’t climb trees. Now discuss the difference between goods and services. A good is something you can hold in your hand, consume, touch, and see. A service is something that someone else does for you. Download the Goods/Services chart and sort the items the pig wanted as needs/wants and goods/services.**
- **Place students into teams of three or four students. Give each team catalogues or flyers from grocery and department stores (taken from the Sunday papers). Have them cut out pictures of items that represent wants (sports equipment, candy, games, etc.) and then paste them on chart or butcher paper. Have them**

- repeat the activity cutting out pictures that represent needs (healthy food items, basic clothing, houses, etc.).
- Give each team one of the following books purchased or secured from the library. *Click, Clack, Moo*, by Betsy Lewin; *If You Give a Moose a Muffin*, by Laura Joffe Numeroff; *If You Take a Mouse to School*, by Laura Numeroff; *If You Give a Mouse a Cookie*, by Laura Numeroff. Give each team the Goods and Services chart to sort the items wanted or needed by the character.
 - One person from each team reads the assigned book aloud. Team members write down what each character wants. Teams share their book and the list of economic wants.
 - Read aloud, *Click, Clack, Moo*, by Betsy Lewin. Use the following website:
http://www.kidseconbooks.com/html/click_clack_moo_cows_that_ty_p.html

NOTE: milk and eggs are economic NEEDS. We get important vitamins and minerals from this food source. Discuss the difference between milk (need) and ice cream (want). Ice cream is an economic want because the excess fat and sugar. Continue discussion with other examples.

Teaching and Learning Events

Social Studies Goals, Standards, and Benchmarks, continued

Estimated time: 30 minutes

State Goal 15: Understand economic systems, with an emphasis on the United States.

Standard A. Understand how different economic systems operate in the exchange, production, distribution and consumption of goods and services.

- Determine how human, natural, and capital resources impact the production of goods and services.

Teaching and Learning Events: Jigsaw

Locate three articles in the Resource section of this unit and duplicate for teams (All About Malaria, Malaria and the Economy, Bed Nets). Each student reads an article and then shares with classmates who have the same article. Then group three students together, each with a different article. After the teams share, the whole class meets to pull out the main ideas from the articles and answer questions posted during task analysis.

- **Locate articles from the Resource section of this unit on the following topics; All About Malaria, Malaria and the Economy, and Bet Nets. Additional information can be obtained from the following websites: <http://www.malarianomore.org/kids/materials/g1-teachinguide.pdf>, <http://www.malarianomore.org/kids/educational-materials.php>.**
- Students read articles twice silently. The first time reading, students focus on reading through the entire article. The second time, students re-read and highlight what they think is important to the main idea of their article.
- Students who have read the same article share information with each other in small teams. Then students form groups in which each child has read a different article. They share the information from each of their articles. Give each student five cubes/chips/bears. For each piece of information they share, they turn in one token. At the end of the discussion, all students will have used all of their tokens.
- Re-visit the task analysis as a whole class. Answer questions and ask more based on the information they learned from the articles they read and shared. Discuss ways in which malaria impacts the economics in a village. Ask, “Are people who are sick able to work? If not, how do they supply economic needs for their family?”
- Download the book, Nets Are Nice, and read it aloud. Use the following: <http://www.malarianomore.org/kids/educational-materials.php> Hold up a \$10 bill. Say, “Name economic wants that people can buy for this amount of money.” Then ask, “How can this amount of money help save a village?”
- **Begin work on the brochure by summarizing information on goods/services, wants/needs and economic burden of malaria. Teams should be made up of students who have read the three articles. As a class, decide on the different subjects that need to be addressed in the brochure based on the information they have found and what they want to tell the community. (The topic of each of the articles the students were assigned to read make great section titles for the brochures.) Be sure to include information from the NothingButNets and U.N. Foundation letter.**

Teaching and Learning Events

Science Goals, Standards, and Benchmarks

Estimated time: 30 minute

State Goal 15: Understands economic systems with an emphasis on the United States.

Standard A. Understand how different economic systems operate in the exchange, production, distribution, and consumption of good and service.

- Determine how human, natural, and capital resources impact the production of goods and services.

Teaching and Learning Event: How to run a Lemonade Stand

Description and Detailed Sequence of Activities:

- Remind the students of the task presented by the United Nations' letter to set up a lemonade stand in order to raise money for bed nets.
- (Optional activity) Read aloud, *Lemonade for Sale*, by Stuart Murphy. Use the lesson ideas from: http://www.kidseconbooks.com/html/lemonade_for_sale1.html
- The teacher introduces the *Lemonade Game* by running through a sample day and explaining how to complete the record sheet with their daily data with their assets, cost per glass, charge per glass, # of glasses made, # of glasses sold, product expenses, advertising expenses, total expenses, gross profit, net profit. This chart can be downloaded from the United Nations Foundation website. The game can be found on the following website: www.ae4rv.com/games/lemonade.htm
- The students were separated into groups, and given time to complete 5 days on the game.
- Over the course of the next few days, the students are given time to complete a total of 30 "days" or turns within the game in order to see the long range affects of their economic choices.
- Use information from the book, *Lemonade for Sale*, and what students have learned from playing the game to develop a plan for setting up a lemonade stand. Students could sell lemonade at lunch and after school when parents are in the building. Their signs should advertise the purpose for raising the money. Additional donations are welcome!
- Sell lemonade!

Teaching and Learning Events
Science Goals, Standards, and Benchmarks
Estimated time: 30 minute

State Goal 15: Understands economic systems with an emphasis on the United States.

Standard A. Understand how different economic systems operate in the exchange, production, distribution, and consumption of good and service.

- Compare needs and wants and goods and services for people in our economy to that of a developing nation.
- Determine how human, natural, and capital resources impact the production of goods and services.

Teaching and Learning Event: Students work in teams to summarize information for on assigned topic for the brochure.

Description and Detailed Sequence of Activities:

- Continue working on the brochure. Students work with their teams to find appropriate pictures to accompany their brochures. A file of pictures is available at the website and you can use the following website to give students other picture choices. <http://www.wpclipart.com/> Also, “Google” additional pictures from the Internet using the term “public domain pictures” + bed nets (or malaria, lemonade, etc.)

Semantic Features Chart

Read the book _____ . Decide what the animal in the book wanted or needed. Write the name of the thing (Good) in the box named Needs if the animal must have it to live. Write the name of the things that the animal wanted in the box named Wants.

Decide if the Services the animal wanted were needed in order to live and write them in the box under Needs. If the animal just wanted them to have fun, write them in the box under Wants.

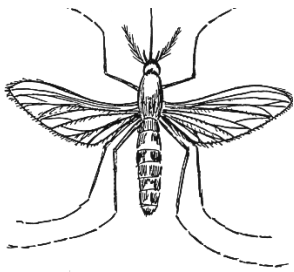
	Needs (things you MUST have in order to live)	Wants (things you would like to have because your needs have been met)
Goods (things that people use such as food, toys, and clothing)	example: milk	example: ice cream
Services (ways in which humans help other people like education and health care)	example: seeing a dentist	example: getting a haircut

Malaria

Every 30 seconds a child in Africa dies of malaria. Malaria is a disease caused by a parasite (pair- uh-site). In Africa, people get malaria when a special mosquito bites them. Once inside a human, the parasites make their way through the bloodstream to the liver. They multiply in the liver. From the liver more parasites are released into the



human's bloodstream. A mosquito that bites a person who has malaria gets the parasites along with their blood meal. The disease can then be given to another person when an infected mosquito bites another person.

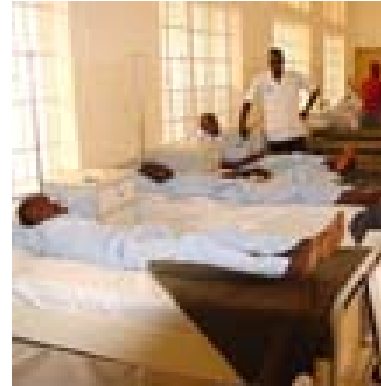


Female mosquitoes use their proboscis to suck blood from people and animals. The proboscis is a long mouthpart that is found on the head of some animals. When a mosquito “bites” an infected person or animal the infected blood is in the proboscis. The people who are bitten become infected with malaria.

When adults get sick from malaria they can't work. If they can't work they don't make money and can't buy things that their family needs. That's why we need people to know about malaria and Nothing But Nets.

Malaria and the Economy

Think about the last time you were sick. Now, imagine feeling sick everyday. If adults are sick they can't go to work and are unable to make goods or provide services. They can't make money for their family to purchase goods or services. A father in Africa may only make about \$4 US dollars a week. They don't have enough money to buy nets to protect their family from malaria. If they bought a net they may not have enough money for food.



If there aren't many producers or consumers the whole village's economy is hurt. Once malaria is removed the people will feel better and can work and make a profit from their goods or services. They can then take that profit and buy other goods and services that will now start a good cycle for producers and consumers. The economy will keep growing and get stronger. That's why we need people to know about malaria and Nothing But Nets.



Bed Nets Save Lives

Bed nets are the best way to help prevent malaria. People get malaria when



a certain type of mosquito bites them.

Preventing mosquito bites prevents

malaria. Mosquitoes are most active at

night from around 10 p.m. to 4 a.m.

The bed nets help protect people from

mosquitoes when they are sleeping. A

bed net is usually hung above the center

of a bed or sleeping area so that it completely covers sleeping people. Most

bed nets last five years. They are big enough to cover at least two people.

Bed nets are also treated with an insecticide that kills mosquitoes.

Mosquitoes have a long mouthpart called a proboscis and can bite people

through the bed net. You are probably wondering how the bed nets keep

that proboscis from reaching people. The insecticide kills mosquitoes that

come in contact with the bed net. Insecticide also has a repellent property

that will keep the mosquitoes away from the house.

In a community protected by bed nets, the number of infected

mosquitoes will become fewer. Malaria will be reduced and eventually

eliminated. Each of these nets can be bought for a cost of only \$10.00. How

many bed nets could you buy by giving up one video game? Think about

how many lives you can help save!