

Ohio Academic Content Standards

• **Tally Marks (Grade 1)**
Y2003.CMA.S05.GPK-02.BB.L01.I02

Collect and organize data into charts using tally marks.

• **Model Problems (Grade 1)**
Y2003.CMA.S04.GPK-02.BD.L01.I05

Describe orally and model a problem situation using words, objects or number phrase or sentence.

• **Picture Graphs (Grade 1)**
Y2003.CMA.S05.GPK-02.BC.L01.I03

Display data in picture graphs with units of 1 and bar graphs with intervals of 1.

• **Attribute Sort (Grade 1)**
Y2003.CMA.S04.GPK-02.BA.L01.I01

Sort, classify and order objects by two or more attributes, such as color and shape, and explain how objects were sorted.

• **Addition Facts (Grade 1)**
Y2003.CMA.S01.GPK-02.BK.L01.I16

Develop strategies for basic addition facts, such as: counting all; counting on; one more, two more; doubles; doubles plus or minus one; make ten; using tens frames; identify property (adding zero).

• **Subtraction Facts (Grade 1)**
Y2003.CMA.S01.GPK-02.BL.L01.I17

Develop strategies for basic subtraction facts, such as: relating to addition (for example, think of one less, two less; all but one (for example, 8 - 7, 5 - 4); using tens frames; missing addends.

• **Research (Grade 1)** Y2003.CEW.S04.GPK-02.BA.L01.I02

Utilize appropriate searching techniques to gather information, with teacher assistance, from a variety of locations (e.g., classroom, school library, public library or community resources).

PROBLEM SOLVING

FOCUS

▲ Collaborative Problem Solving.

VIDEO "Solutions"

Ohio Academic Content Standards

- Tally Marks (Math Grade 1)
Y2003.CMA.S05.GPK-02.BB.L01.I02
- Data Collection (Math Grade 2)
Y2003.CMA.S05.GPK-02.BA.L02.I01

Ashley and Seth use the Internet to read about destruction of the tropical rainforests. The group decides they want to do something about the destruction. A search of Internet and printed resources leads to a group decision to raise money to adopt an acre of rainforest through the Nature Conservancy Adopt An Acre Program. A "Think-Pair-Share" strategy is used by the group to decide how best to raise some money. The kids discuss and analyze options. A bake sale is the group decision, but the "Nature Discoveries" group cannot agree on what kind of baked goods to sell. Ms. Davis suggests taking a survey to determine which baked goods people would like to buy. It is decided that each child will ask 20 people what they would most likely buy at a bake sale. A sample survey (taking a tally) is done with the group so that everyone understands what to do.

VOCABULARY

▲ **Data.** A compilation of information (numeric or otherwise) gathered on a particular topic through the use of statistical procedures such as interviews, observations, surveys, questionnaires, etc.

JOURNAL TOPICS

1. What job might you like to have someday? How would you use numbers?

2. What would you like to know that a survey and graph would help you find out?
3. What could you do to help save the rainforests?

EXTENSIONS

1. RAINFOREST SURVEY

Ohio Academic Content Standards

- Research (Writing Grade 1)
Y2003.CEW.S04.GPK-02.BA.L01.I02
- Research (Writing Grade 2)
Y2003.CEW.S04.GPK-02.BA.L02.I03
- Main Idea (Writing Grade 3)
Y2003.CEW.S04.G03-04.BB.L03.I04
- Communication (Writing Grade 3)
Y2003.CEW.S04.G03-04.BD.L03.I07

Materials Needed: Rainforest information sheet (Appendix 5A), Rainforest information sheets (Appendix 5B and 5C)

▲ Ask students if they can think of anything they use that might come from a rainforest. Distribute copies of the first rainforest information sheet to students (Appendix 5A). Describe and discuss the general types of products that come from tropical forests. Have students take their lists home and work with their parents to see how many of the products they can find. Tell them to check off each item they find. When students return with their completed checklists, use the results to discuss the importance of tropical rainforests in our daily lives. Note that the demand for several of these products has led to destruction of tropical forests in some areas. Explain that for people to continue to enjoy and benefit from tropical resources, we must harvest them carefully and use them wisely. Unless people protect tropical forest ecosystems, we may never know about many other potential products. Look at and discuss activity sheets

Rainforests of the World (Appendix 5B), What Are Rainforests? and Why Should We Care About Rainforests? (Appendix 5C).

- ▲ Divide Level 2 or 3 groups into pairs and have each pair select one product from the first rainforest information sheet (Appendix 5A) to research. Ask students to try to answer some of the following research questions: “What plant does your product come from?” “Do native people use your product?” “Where in the tropics did your product originally come from?” “Are there any substitutes for your product?” “If so, what are they?” (Another suggestion might be to have first, second, and third grade classes work together.) They will be able to find these things by utilizing the literature, software, and Internet resources listed in the appendices.

2. RAINFOREST BAKE SALE

Ohio Academic Content Standards

- Money Value (Math Grade 1)
Y2003.CMA.S01.GPK-02.BD.L01.I07
- Making Change (Math Grade 2)
Y2003.CMA.S01.GPK-02.BE.L02.I03
- Measurement Tools (Math Grade 2)
Y2003.CMA.S02.GPK-02.BD.L02.I06
- Measurement Tools (Math Grade 3)
Y2003.CMA.S02.G03-04.BC.L03.I05
- Money (Math Grade 3)
Y2003.CMA.S01.G03-04.BF.L03.I04

Materials Needed: Decorations, recipe ingredients, craft supplies

- ▲ Hold a tropical rainforest bake sale of goodies (listed below) made from products grown in the rainforest. Decorate the room with a rainforest mural showing the products used. Make a sign explaining that these products can be harvested from the rainforest without harming the life within it. Use the included recipes or others that contain any of the

following ingredients—Fruits: banana, grapefruit, guava, lemon, lime, mango, orange, papaya, passion fruit, pineapple, yam; Spices and Flavorings: allspice, cinnamon, chocolate, cocoa, cardamom, cloves, mace, nutmeg, vanilla; Other Foods: Brazil nuts, cashews, coconut, coffee, corn, sugar.

BAKE SALE MATH

Decide for how many people you will prepare the recipes. Will the recipes need to be doubled, tripled, etc.? Decide on prices for the goodies. Determine how much will be made if all the goodies are sold.

RECIPES

Tropical Popcorn Crunch

Mix the following ingredients together: two oz. flaked coconut, four oz. dried pineapple cut into small pieces, two oz. dried dates (diced), four quarts popped popcorn.

Jungle Punch

Combine the following ingredients in a large punchbowl: one quart orange juice, one quart pineapple juice, one quart of lemon lime soda. Before serving add one quart of vanilla ice cream or lemon sherbet.

Rainforest Treat

Peel 16 bananas and cut in half. Insert a popsicle stick in the flat end. Melt eight oz. of chocolate chips. Dip the end of the banana in the chocolate and roll in coconut flakes. Chill the bananas before serving.

Rain Forest Cookies

Cream 1/2 cup margarine, six T. brown sugar, six T. white sugar. Beat in one egg; 1/2 tsp. vanilla. Sift and stir in one cup and two T. all purpose flour, 1/2 tsp. salt, 1/2 tsp. soda. Add any of the following rainforest products: chocolate chips, coconut flakes, Brazil

- Venn Diagrams (Grade 1)
Y2003.CER.S03.GPK-03.BD.L01.I07

Create and use graphic organizers, such as Venn diagrams or webs, with teacher assistance, to demonstrate comprehension.

- Sequencing (Grade 1)
Y2003.CER.S04.GPK-03.BC.L01.I02

Identify the sequence of events in informational text.

- Money Value (Grade 1)
Y2003.CMA.S01.GPK-02.BD.L01.I07

Determine the value of a small collection of coins (with a total value up to one dollar) using 1 or 2 different type coins, including pennies, nickels, dimes and quarters.

- Making Change (Grade 2)
Y2003.CMA.S01.GPK-02.BE.L02.I03

Count money and make change using coins and a dollar bill.

- Sequencing (Grade 2)
Y2003.CER.S04.GPK-03.BC.L02.I02

Arrange events from informational text in sequential order.

- Data Collection (Grade 2)
Y2003.CMA.S05.GPK-02.BA.L02.I01

Pose questions, use observations, interviews and surveys to collect data, and organize data in charts, picture graphs and bar graphs.

- Measurement Tools (Grade 2)
Y2003.CMA.S02.GPK-02.BD.L02.I06

Select and use appropriate measurement tools; e.g., a ruler to draw a segment 3 inches long, a measuring cup to place 2 cups of rice in a bowl, a scale to weigh 50 grams of candy.

- Model Problems (Grade 2)
Y2003.CMA.S04.GPK-02.BD.L02.I04

Use objects, pictures, numbers and other symbols to represent a problem situation.

PROBLEM SOLVING

- **Pattern Predictions (Grade 2)** Y2003.CMA.S04.GPK-02.BC.L02.I02

Use patterns to make generalizations and predictions; e.g., determine a missing element in a pattern.

- **Addition & Subtraction (Grade 2)** Y2003.CMA.S01.GPK-02.BM.L02.I12

Demonstrate multiple strategies for adding and subtracting 2- or 3-digit whole numbers, such as: compatible numbers; compensatory numbers; informal use of commutative and associative properties of addition.

- **Fact Fluency (Grade 2)** Y2003.CMA.S01.GPK-02.BK.L02.I10

Demonstrate fluency in addition facts with addends through 9 and corresponding subtractions; e.g., $9 + 9 = 18$, $18 - 9 = 9$.

- **Research (Grade 2)** Y2003.CEW.S04.GPK-02.BA.L02.I03

Acquire information with teacher assistance, from multiple sources (e.g., books, magazines, videotapes, CD-ROM's, Web sites) and collect data (e.g., interviews, experiments, observations or surveys) about the topic.

- **Problem Solving (Grade 2)** Y2003.CSS.S07.GKG-02.BD.L02.I06

Use problem-solving/decision-making skills to identify a problem and gather information while working independently and in groups.

- **Money (Grade 3)** Y2003.CMA.S01.G03-04.BF.L03.I04

Count money and make change using coins and paper bills to ten dollars.

- **Measurement Tools (Grade 3)** Y2003.CMA.S02.G03-04.BC.L03.I05

Estimate and measure length, weight and volume (capacity), using metric and U.S. customary units, accurate to the nearest $\frac{1}{2}$ or $\frac{1}{4}$ unit as appropriate.

nuts, cashews, or macadamia nuts; cinnamon and allspice. Drop by rounded teaspoonful onto cookie sheet. Bake at 375 degrees for 10–12 minutes or until lightly browned. This recipe makes about 45 two-inch cookies.

3. PROBLEM SOLVING STRATEGIES

Ohio Academic Content Standards

- Model Problems (Math Grade 1)
Y2003.CMA.S04.GPK-02.BD.L01.I05
- Model Problems (Math Grade 2)
Y2003.CMA.S04.GPK-02.BD.L02.I04
- Model Problems (Math Grade 3)
Y2003.CMA.S04.G03-04.BE.L03.I04
- Problem Solving (SS Grade 2)
Y2003.CSS.S07.GKG-02.BD.L02.I06
- Problem Solving (SS Grade 3)
Y2003.CSS.S07.G03-05.BD.L03.I06

Materials Needed: Problem-Solving Outline (Appendix 5D)

- ▲ Discuss the Problem-Solving Outline (Appendix 5D) with the class and use it to work through several examples of story problems together. Here is an example of a Level 1 problem – There are 24 students in the first grade. Some volunteer parents are going to drive them to the zoo. If only four students can ride in each car, how many cars will be needed? Level 2– Steven bought a baseball card for 75¢. He paid for it with a one-dollar bill. What possible combinations of quarters, dimes, and nickels could the clerk give him for change? Level 3– If a pack of baseball cards plus one extra costs \$1.24, and the pack costs \$1.00 more than the extra card, how much does the pack cost?
- ▲ Pose a “Problem of the Day” for students to solve using the Problem-Solving Outline (Appendix 5D). The explanations of their solutions can be used as journal entries or elements for

a portfolio. Groups can get together to share and compare solutions. Higher-level students can begin creating problems to be used as “Problem of the Day.”

*The MathTek CD activities “Logic Boxes” and “Number Pyramids” involve the application of problem-solving strategies to solve the puzzles.

4. GRAPHING SURVEY

Ohio Academic Content Standards

- Tally Marks (Math Grade 1)
Y2003.CMA.S05.GPK-02.BB.L01.I02
- Picture Graphs (Math Grade 1)
Y2003.CMA.S05.GPK-02.BC.L01.I03
- Data Collection (Math Grade 2)
Y2003.CMA.S05.GPK-02.BA.L02.I01
- Graph Types (Math Grade 3)
Y2003.CMA.S05.G03-04.BC.L03.I06

Materials Needed: Tally Sheets (Appendix 5E)

- ▲ Have the class brainstorm a list of topics which could be used to take a survey. Divide the class into groups of four. Each group decides on a topic for their survey. Using the Tally Sheet (Appendix 5E), they will decide what question to ask and three answer choices. For example, “What is your favorite flavor of ice cream– vanilla, chocolate, or strawberry?” Students should think of a title for a graph of results, such as “Favorite Ice Cream.” As they give the survey, they should keep track of the answers on the Tally Sheet. This activity can be done individually (later combining each student’s results) or as a team. They can ask the question to the rest of the members of the class, family members, or other classes in the school. Once they have accumulated their results, they can decide what kind of graph they will use to represent those results. Or, Level 1 students might be

told to construct a pictograph, Level 2 students a bar graph, and Level 3 students a circle graph. Graphs could be created using a spreadsheet application on the computer.

- ▲ Once the graphs are completed, groups should discuss their graph to determine what they found out as a result of their survey. Finally, groups can share their survey results and graphs with the class and be prepared to explain the results and answer any questions from other class members.

5. SORTING

Ohio Academic Content Standards

- Attribute Sort (Math Grade 1)
Y2003.CMA.S04.GPK-02.BA.L01.I01
- Venn Diagrams (Reading Grade 1)
Y2003.CER.S03.GPK-03.BD.L01.I07

Materials Needed: Pictures of rainforest (or other) animals, poster paper, glue

- ▲ Find (or have students find) several different pictures of rainforest animals. Divide the class into groups of four and give each a collection of animal pictures. Ask them to sort their animals in some way. They will have to decide how they will sort their animals. (With Level 1 students, you may first want to brainstorm with the class a list of ways their animals could be sorted: by type, size, color, what level of the rainforest they live in, etc.)
- ▲ After groups have sorted their animal pictures, ask them to think of a different way to sort them. If they have not thought of it, remind them that things can be sorted into more than two categories. Have groups share different ways they sorted their animals and keep a list of their ideas on a chalkboard or overhead projector. Groups can try sorting their animals in ways other groups have discovered.

- ▲ To finish the activity, each group should decide on one way to sort their animal pictures for display. Give each group a large sheet of poster paper and let them draw their animal groups, glue on the pictures and label their display with the sorting characteristics they chose. For example, one group’s display may have columns labeled “Mammals, Birds, Reptiles, Amphibians, and Insects.” Another display might show circles labeled “Large Animals, Small Animals.”
- ▲ This activity would be helpful to use when teaching Level 3 students about Venn Diagrams. They could practice sorting the animal pictures into groups that intersect such as “Animals That Live In The Trees, Animals With Four Legs, Animals With Two Legs.” See how many different ideas students can come up with for sorting animals using Venn Diagrams.

*The MathTek CD activity “Secret Code” contains puzzles to decode names of many different kinds of rainforest animals and is related to this extension. It includes 3 skill levels with addition, subtraction, multiplication, and division problems to decode the animal names.

6. PARTY PLAN

Ohio Academic Content Standards

- Create Documents (Technology Grade 1)
Y2003.CTE.S04.GKG-02.BB.L01.I01
- Tally Marks (Math Grade 1)
Y2003.CMA.S05.GPK-02.BB.L01.I02
- Data Collection (Math Grade 2)
Y2003.CMA.S05.GPK-02.BA.L02.I01
- Data Collection (Math Grade 3)
Y2003.CMA.S05.G03-04.BA.L03.I01

Technology Used: Any word processing application

- ▲ Provide an outline for a class party such as an Earth Day Birthday Party or

- Model Problems (Grade 3)
Y2003.CMA.S04.G03-04.BE.L03.I04

Model problem situations using objects, pictures, tables, numbers, letters and other symbols.

- Graph Types (Grade 3)
Y2003.CMA.S05.G03-04.BC.L03.I06

Translate information freely among charts, tables, line plots, picture graphs and bar graphs; e.g., create a bar graph from the information in a chart.

- Data Collection (Grade 3)
Y2003.CMA.S05.G03-04.BA.L03.I01

Collect and organize data from an experiment, such as recording and classifying observations or measurements, in response to a question posed.

- Pattern Predictions (Grade 3)
Y2003.CMA.S04.G03-04.BB.L03.I03

Use patterns to make predictions, identify relationships, and solve problems.

- Addition & Subtraction (Grade 3)
Y2003.CMA.S01.G03-04.BK.L03.I12

Add and subtract whole numbers with and without regrouping.

- Main Idea (Grade 3)
Y2003.CEW.S04.G03-04.BB.L03.I04

Identify important information found in the sources and summarize the important findings.

- Communication (Grade 3)
Y2003.CEW.S04.G03-04.BD.L03.I07

Use a variety of communication techniques, including oral, visual, written or multimedia reports, to present information gathered.

- **Problem Solving (Grade 3)**
Y2003.CSS.S07.G03-05.BD.L03.I06

Use a problem-solving/decision-making process which includes: Identifying a problem; Gathering information; Listing and considering options; Considering advantages and disadvantages of options; Choosing and implementing a solution.

- **Multiplication and Division (Grade 3)** Y2003.CMA.S01.G03-04.BI.L03.I13

Demonstrating fluency in multiplication facts through 10 and corresponding division facts.

PROBLEM SOLVING

Rainforest Open House. Include space for “Who to invite,” “What to serve,” “What time,” etc. Designate a dollar amount to be considered in planning. Have groups work together to plan their suggestions and then type them using a word processing application. Print plans for all groups to consider and then vote on the one to be followed.

- ▲ Students can collect information from their “bake sale” survey and then transfer it into a program like Tom Snyder’s Graph Club which will enable them to chart items in several different ways (i.e., bar graph, pie graph, line graph, etc.). Once the information has been input, a comparison of the different types of graphs can be made quickly and easily by clicking on the icon at the bottom of the page. Students will realize there are many different types of graphs but the same conclusions will be made by information given.

7. MATHTEK CD ACTIVITIES

Logic Boxes

Ohio Academic Content Standards

- Pattern Predictions (Math Grade 2)
Y2003.CMA.S04.GPK-02.BC.L02.I02
- Model Problems (Math Grade 2)
Y2003.CMA.S04.GPK-02.BD.L02.I04
- Pattern Predictions (Math Grade 3)
Y2003.CMA.S04.G03-04.BB.L03.I03
- Model Problems (Math Grade 3)
Y2003.CMA.S04.G03-04.BE.L03.I04

In this problem-solving activity, students are asked to color a design using a specified number of colors. The object is to color the sections of the box so that no two sections of the same color are touching each other. Four different designs are presented at each of two levels. Level 1 uses three colors. Level 2 uses four colors and

each box is divided into more sections.

Secret Code

Ohio Academic Content Standards

- Addition Facts (Math Grade 1)
Y2003.CMA.S01.GPK-02.BK.L01.I16
- Subtraction Facts (Math Grade 1)
Y2003.CMA.S01.GPK-02.BL.L01.I17
- Addition & Subtraction (Math Grade 2)
Y2003.CMA.S01.GPK-02.BM.L02.I12
- Addition & Subtraction (Math Grade 3)
Y2003.CMA.S01.G03-04.BK.L03.I12
- Multiplication and Division (Math Grade 3)
Y2003.CMA.S01.G03-04.BI.L03.I13

Eight animal names to decode are randomly given at each of three levels. In order to decode the name, students must solve number problems. Number answers are changed to letters using a secret code chart of corresponding numbers and letters. Once the name is decoded, a picture of the animal appears. Levels 1 and 2 present addition and subtraction problems. Level 3 includes multiplication and division problems.

Pix Mix

Ohio Academic Content Standards

- Attribute Sort - Math Grade 1)
Y2003.CMA.S04.GPK-02.BA.L01.I01
- Sequencing (Reading Grade 1)
Y2003.CER.S04.GPK-03.BC.L01.I02
- Sequencing (Reading Grade 2)
Y2003.CER.S04.GPK-03.BC.L02.I02

This activity provides three levels of sequential organization. Each level presents eight sets of pictures. Level 1 presents sets of three pictures to arrange sequentially. Each set of pictures is presented out of order and must be put in the correct order before continuing to the next set of pictures. Level 2 presents sets of four pictures, and Level 3 presents sets of five pictures.

Number Pyramids

Ohio Academic Content Standards

- Addition Facts (Math Grade 1)
Y2003.CMA.S01.GPK-02.BK.L01.I16
- Subtraction Facts (Math Grade 1)
Y2003.CMA.S01.GPK-02.BK.L01.I17
- Fact Fluency (Math Grade 2)
Y2003.CMA.S01.GPK-02.BK.L02.I10

Students must place designated numbers in a pyramid of answer boxes using clues that tell the sum of each row. Multiple solutions are possible in the eight variations offered at each of three levels.

8. ADDITIONAL RESOURCES

- ▲ *Problem Solving*
<http://www.gamequarium.com/problemsolving.html>
- ▲ *Figure This!*
<http://www.figurethis.org/>
- ▲ *Brain Boosters*
<http://school.discovery.com/brainboosters/#number>
- ▲ *Sudoku*
<http://www.brainypuzzle.com/>
- ▲ *ReviseWise: Problem Solving*
http://www.bbc.co.uk/schools/revise/maths/number/09_act.shtml
- ▲ *Sagwa: Problem Solving*
<http://pbskids.org/sagwa/games/tangrams/index.html>

Rainforest Information

Rainforest Scavenger Hunt

Although rainforests may seem remote, many of the products we use everyday have origins in tropical rainforests. Raw materials for familiar products such as cocoa, coffee, drugs, rubber products and furniture have their beginnings in the forest. After talking about these rainforest products, give each child a list to take home for a scavenger hunt. Ask them to work with their parents to read product labels and find as many items as they can. Gather the tropical treasures and create a classroom display to educate others about the rainforest.

Where In The World?

Post a large map of the world near your display of tropical treasures. Highlight the rainforests and ask the students to check labels on product containers to find out which products have ingredients grown in a rainforest. Place labels around the map and attach a pin with a string from the label to the area where the product is grown.

Woods

Some of the most beautiful woods in the world come from the rainforest trees:

Balsa, mahogany, teak, rosewood, sandalwood

House Plants

Many of the plants grown in our homes had their beginnings in the rainforests:

African violets, Anthurium, Dieffenbachia, fiddle-leaf fig, parlor ivy, rubber tree, Swiss cheese plant, Croton, Dracaena, Philodendron, Schefflera, Spathiphyllum, zebra plant, silver vase bromeliad

Spices

The rainforest has provided us with many of the spices used to make our food taste better:

allspice, cardamom, chilipepper, cloves, mace, paprika, tumeric, black pepper, cayenne, cinnamon, ginger, nutmeg, vanilla

Fruits

The rainforest is the origin of many of the fruits we enjoy:

avocado, banana, breadfruit, durian, guava, mango, orange, passion fruit, pepper, plantain, tangerine, coconut, grapefruit, jackfruit, lemon, lime, papaya, pineapple

Vegetables & Other Foods

Some of the foods we can't imagine being without were given to us by the rainforests:

Brazil nuts, cashew nuts, chocolate, cucumber, macadamia nuts, okra, pepper, tea, cane sugar, chayote, coffee, hearts of palm, manioc/tapioca, peanuts, cola, sesame seed.

Fibers

The fibers and stems of many rainforest plants have important uses for us:

bamboo (furniture, baskets)
jute (rope, burlap)
kapok (insulation, life jackets, soundproofing)
raffia (rope, cord, baskets)
ramie (cotton-ramie fabric, fishing line)
rattan (furniture, wickerwork, baskets, chair seats)

Oils

Oils distilled from different parts of rainforest trees are used for medicine, cosmetics, flavors, and scents:

bay (perfume)
camphor (perfume, soap, disinfectant, detergent)
cascarilla (confections, beverages)
coconut (suntan lotions, candles)
eucalyptus (perfume, cough drops)
palm (shampoo, detergents)
rosewood (perfume, cosmetics, flavoring)

Gums & Resins

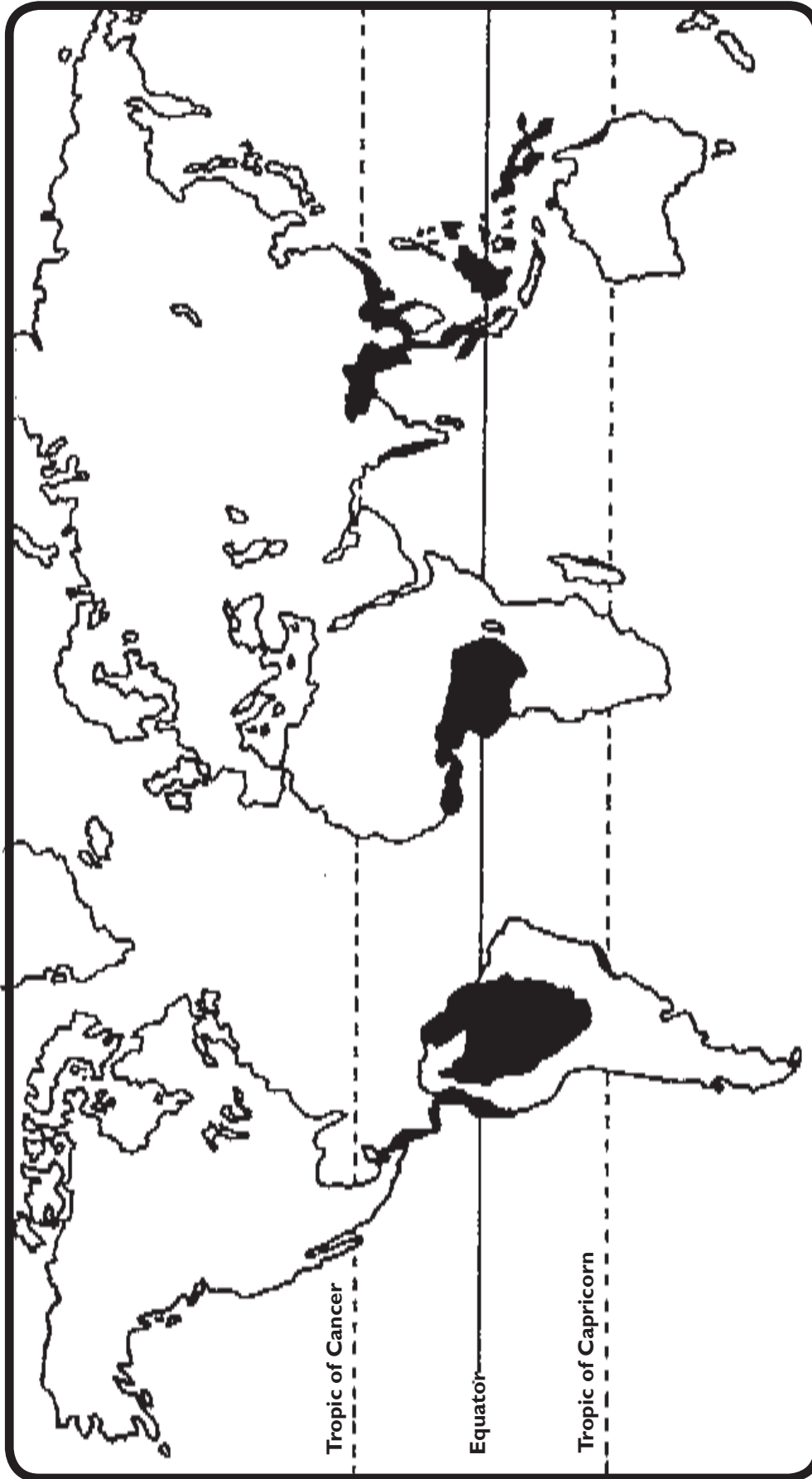
The juices and saps from tropical plants are important ingredients of many products:

Chicle (chewing gum)
copaiba (perfume, fuel)
copal (paint, varnish)
dammar (varnish, printing ink)
gutta percha (golf ball covers)
rubber latex (rubber products, erasers, balloons, rubber cement, balls, rubber bands, tires, shoes, etc.)
tung (wood finishing)

Pharmaceuticals

New drugs may come from plants that have not yet been discovered. Many important drugs come from tropical plants.

Curare (muscle relaxant for surgery)
diosgenin (steroids, asthma and arthritis treatment)
quassia (insecticide)
quinine (antimalarial and pneumonia treatment)
reserpine (sedative, tranquilizer)
strophanthus (heart medication)
strychnine (emetic, stimulant)
tuba root (rotenone, flea dip)



Rainforests Of The World

There are rainforests in many parts of the world. Look at the map. The dark areas are rainforests. Rainforests are found in a band around the middle of the earth, near the equator. This band is between the **Tropic of Capricorn** and the **Tropic of Cancer**. Color the band green. Color the continent where you live. Are there rainforests on your continent? Which rainforest is closest to you? Draw a circle around it.

Rainforest Information

What Are Rainforests?

Rainforests are very dangerous dense tropical forests. They are found near the equator in Australia, Asia, Central and South America. The largest rain forest is in Brazil.

Rainforests used to cover one-fifth of the earth's surface. Today they cover only one-tenth of the earth.

It rains almost every day of the year in the rainforests so they are very wet and humid. It is hot, with the temperature in the eighties almost all year. It is sunny 12 hours every day.

Because of the sunny, wet climate there is a great variety of plant life, such as giant trees, orchids, and ferns. These plants in turn provide food and homes for a great variety of animals, especially insects.

Each kind of animal has their own special place to live in the rainforest. Deer live on the rain forest floor. Colobus monkeys live in the flat topped trees that cover the rainforest.

Toucans live in the tops of the giant trees that tower over the rainforest. Rainforests are disappearing for many reasons. They are being burned to plant crops on large farms. The trees are being cut down for lumber and to clear pastures for cattle grazing. Roads are being built through the rainforest to transport the crops, beef, timber and mineral ores.

Why Should We Care About Rainforests

Ten Reasons To Save The Rainforests

1. Two-thirds of all the different kinds of plants and animals in the world live in the rainforests.
2. There are plants and animals living in the rainforest that scientists have not yet identified and studied.
3. One-quarter of all the medicines are derived from rainforest plants. New cures may come from plants that haven't been discovered yet.
4. Seeds of rainforest trees can be used to start new forests in other places where they have been destroyed.
5. Many people live and work in the rainforests. They have their own ways of life, cultures and traditions which we should respect.
6. Many products we use come from rainforests, such as rubber, mahogany, cinnamon, and nuts.
7. Songbirds from North America, spend winter in tropical rainforests. Songbirds help to control pests in our farmers' field and help to brighten our backyards.
8. Rainforests provide water to nearby villages for drinking and farming.
9. Some scientists think that destroying the rainforests may change the climate all over the world.
10. All living things on the planet are related. Destroying the rainforest plants and animals will affect all the other inhabitants of the earth.

Problem Solving Outline

1. What is the problem? _____

2. What do I know? _____

3. How will I solve the problem? _____

4. Here is how I solved it. _____

5. Is my answer reasonable? _____

Tally Sheet

Question? _____

Choices 1) _____

2) _____

3) _____

Title of the graph will be: _____

Choices 1) _____

2) _____

3) _____

Tally of Votes

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