Microsoft 5 Classification 5

A <u>cross-curriculum workbook</u> to help you integrate computer applications into every subject you teach



Word 98/2000 • PowerPoint 98/2000 • Encarta Africana • Publisher 98/2000

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Microsoft®

From the Editors of Instructor/Electronic Learning in Your Classroom

Dear Technology Leader:

As the school year heads into its home stretch, there's no better wrap-up for students and teachers than learning-rich classroom technology projects that tie together all the strands of your curriculum. That's what this special Spring/Summer *Microsoft Productivity in the Classroom* workbook has to offer.

Drawing on the exemplary work of technology-using classroom educators across the country (see below), this fifth edition of *Microsoft Productivity in the Classroom* is designed to make the most of your school's Windows or Power Macintosh computers and the latest in productivity software. The ten lesson plans in this workbook were designed for use with the brand-new *Microsoft Office 2000 Professional Edition (Microsoft® Word 2000, Microsoft® Excel 2000, Microsoft® PowerPoint® 2000, Microsoft® Access 2000, Microsoft Publisher 2000, and Microsoft Outlook 2000)* as well as *Microsoft® Office 98 Macintosh Edition (Microsoft® Word 98, Microsoft® Excel 98, Microsoft® PowerPoint® 98)*. Many of the lessons also integrate other Windows products, such as the *Microsoft® FrontPage 98/2000* web authoring tool, *Microsoft® Encarta 99 Reference Suite*, and the acclaimed *Microsoft® Encarta Africana*, while taking advantage of online resources with *Microsoft® Internet Explorer 4.5/5.0*. All lessons include step-by-step instructions for using software effectively while weaving it into the curriculum.

Developed by the editors of Scholastic's *Instructor* and *Electronic Learning in Your Classroom* in partnership with the Microsoft Corporation, this workbook can be an effective tool for both teachers and staff developers. With lessons like these, you're sure to finish the school year with a flourish!

Sincerely.

Mickey Revenaugh

for Instructor/Electronic Learning in Your Classroom

P.S. More free resources to help teachers use technology are available at:

www.microsoft.com/education/k12/classroom

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classroom

Lessons at-a-Glance

LESSON	GRADE LEVELS	TIME ALLOTTED
ONCE UPON A THANK YOU	Primary	Three class periods
THE INSECT FILES	Primary	Six to eight class periods
PLAN A MILLENNIUM CELEBRATION	Primary/Intermediate	Four class periods
SHAKE, RATTLE, AND ROLL	Intermediate	Three to four class periods
AROUND THE PACIFIC RIM	Intermediate	Two to three class periods
WHAT'S THE REAL DEAL?	All grade levels	Three class periods and ongoing
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NEWS AND ETHICS IN THE DIGITAL AGE	Middle School/High School	Eight class periods
FASTBALL PHYSICS	High School	Two to three class periods
GIANTS OF THE CENTURY	High School	Four to six class periods







Social Studies



Geography



Math



Science

SOFTWARE NEEDED	PAGE	CURRICULUM CONNECTION
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♦ MICROSOFT® PUBLISHER 98/2000

ONCE UPON A THANK YOU

Teacher Guide

SUMMARY

In the course of the year, kids have encountered a wide variety of authors and characters through the storybooks they have read for class. This project will encourage readers to revisit their favorite books and recall just what it was about the author who wrote each book or the characters the author created -that made the story so special. Kids will then celebrate their chosen authors and/or characters with fun thank you cards they create on your classroom computer.

OBJECTIVES

- ♦ To choose favorite books, authors, and characters, and articulate why they're favorites.
- ♦ To share opinions about books with fellow students.

PREREQUISITE SKILLS

♦ Introduction to *Microsoft Publisher 98/2000*.

TIME ALLOTTED

3 class periods

HOW TO BEGIN

1. From among the storybooks your class has read this year,



Kids use Microsoft Publisher to celebrate their favorite character.

choose several authors and/or characters you like best.

- **2.** Launch *Publisher* on a computer in your classroom that students can gather around for a demonstration.
- **3.** Bring your class together, and model for your students how you think about your favorite authors and characters. For example, you might hold up *Green Eggs and Ham* and say, "Dr. Seuss is one of my favorite writers, because the way he uses words is so funny and different." Or you might hold up a book from the *Magic School Bus* series and
- say, "I just love Ms. Frizzle: she makes learning an amazing adventure!"
- **4.** Next, follow the steps laid out in the Student Activity to create a thank you card for your favorite author or character. After your print out your card, pass it around to students and tell them it's time to create cards of their own.
- **5.** While your students are working, set up a table near your classroom library where students can display their finished cards with the books that match.

DESCRIPTION

Who wrote the books that you like best? Which characters made you wish the story would never end? Now's the time to say "Thank you!" to those who have made reading so much fun.

STEP A

Choose Favorites

SOFTWARE: None WHAT TO DO:

- 1. When you think about all the books you've read this year, which ones do you remember liking the best? Make a list of at least three books you might call your favorites. Then go get those books from your classroom or school library, or bring them in from your collection at home.
- **2.** Look at who wrote your favorite books. Choose the one author you like very best. What would you say to this author if you had the chance?
- **3.** Now think about the characters you have met through these books. Which one would you most want to meet in real life and what might you say?
- **4.** Write a note to yourself about your answers to 2 and 3.

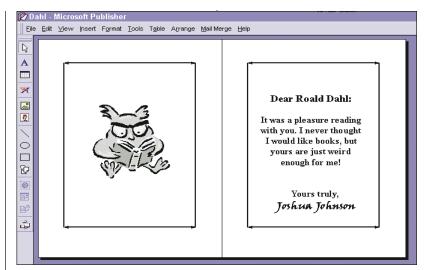
STEP B

Create Cards

SOFTWARE: Microsoft Publisher 98/2000

WHAT TO DO:

1. Go to a computer where your teacher has launched



With Publisher, you can make your thank you cards kind of funny...or not!

Publisher. On the Catalog screen, click the Publications by Wizard tab. Click on Greeting Cards, and then Thank You.

- **2.** Use the scroll bar to preview the many styles and thank you cards. Choose one you like best for the first author or character on your list, and double-click to open it.
- **3.** Read the Greeting Card Wizard introduction, then click **Next**. The next few screens will ask you to choose layouts, color schemes, sizes and folds, and suggested verses. In the Personal Information screen, choose **Home/Family** and click **Personal Name**. In the text box that appears, type your name.
- **4.** After you make each choice, click **Next**. At the end, after you click **Finish**, you can still go back and change your mind about any of these choices.
- **5.** Next, click areas of your card where the words are, and type a new message that's just right for the author or character you want to thank.

- **6.** Fine-tune your card, proof-read it, and print.
- **7.** Repeat for each author or character on your list. Or try something a little different: on the **Catalog** screen, choose **Postcards**, and then click **Thank You** and follow the wizard steps to create a postcard instead.

STEP C

Special Delivery

SOFTWARE: Microsoft Publisher 98/2000

WHAT TO DO:

- **1.** Display each card with the book it matches in a special library area your teacher has set up.
- **2.** Read the cards your classmates have created, then look through the books they're related to. (Don't be surprised if some of your favorites get cards from other kids, too!) Choose one or more new books to read...and keep those cards coming!



REQUIRED SOFTWARE

- ♦ MICROSOFT® POWERPOINT® 98/2000
- ♦ MICROSOFT® ENCARTA® DELUXE ENCYCLOPEDIA 99
- ♦ MICROSOFT® INTERNET EXPLORER 4.5/5.0
- ♦ MICROSOFT® PAINT (WINDOWS® ACCESSORY)

THE INSECT FILES

Teacher Guide

SUMMARY

Movies like last year's *Antz* and *A Bug's Life* gave kids an upclose, if fanciful, view of the insect world. Build on their interest with this research project, in which students find out all about the insect of their choice and then show what they know through a multimedia presentation to the class.

OBJECTIVES

- ♦ To provide a physical description of the insect, in words and graphics, including body parts, special adaptations, color, and so on.
- ♦ To explore and report on all four elements of an insect's habitat: food, water, shelter, and environment.
- ♦ To diagram the insect's life cycle.

PREREQUISITE SKILLS

- ◆ Basic presentation skills using *Microsoft PowerPoint* 98/2000.
- ◆ Research skills using Microsoft Encarta Deluxe Encyclopedia 99 and Microsoft Internet Explorer 4.5/5.0.
- ◆ Practice at importing and using clip art, pictures and other graphic information.

TIME ALLOTTED

6-8 class periods

HOW TO BEGIN

- **1.** To prepare before introducing this project to your class:
- ♦ Gather print resources on insects, including books and magazine articles appropriate for your students' ages and reading levels.
- ♦ Open Encarta Encyclopedia and go to Encyclopedia Articles. Click FIND in the menu bar to open the PinPointer, and type in Insect. Read through the articles and choose several for your students, then go to Favorites and choose Add to Favorites... to help your students find them.

INSECT WEB SITES

Insect World: A scholarly but fun introduction to the creepie-crawlies. http://www.insectworld.com

The Bug Club: A junior entomologist's playground. http://www.ex.ac.uk/bugclub/

The Yuckiest Site on the Internet: Science with a funny bone; includes a special area on cockroaches. http://www.yucky.com/roaches

The Insect Hotlist: A collection of linked sites about insects, including some rich in graphics. http://sln.fi.edu/tfi/hotlist/insects.html

- ♦ Check out the Web sites listed below and add the best ones to your Favorites list for easy retrieval.
- ♦ Open *PowerPoint* and create a template that includes slides with the following titles: "Title Slide," "Insect Picker," "Bug Body Parts," "Life Cycle," "Food," "Water," "Shelter," and "Environment." Use AutoLayout to choose the slide formats. The "Title Slide" should be in the title slide format; the "Insect Picker" slide should have a title and bulleted text; and the others should include text and clip art. Go to View, select Master > Slide Master, and add a footer that reads "The Insect Files." Each student will save a copy of this file and use it for his or her presentation.
- **2.** Introduce the project by reviewing with students how insects are different from other animals.
- **3.** To provide students with a starting point for their research, brainstorm as a class to create a list of all the different kinds of insects you can think of.
- **4.** Hand out the Student Activity pages, review the steps with your class, and then set students loose to create their own "Insect Files" presentations.

DESCRIPTION

From beautiful butterflies to the cockroaches nobody loves, there are more insects on our planet than any other kind of creature. Here's your chance to get to know one insect very well, as you create your own multimedia report called "The Insect Files."

STEP A

Pick an Insect

SOFTWARE: Microsoft Encarta Deluxe Encyclopedia 99, Microsoft Internet Explorer 4.5/5.0, Microsoft PowerPoint 98/2000

WHAT TO DO:

- **1.** Answer these questions to help you pick your insect: Do you want a flyer or a crawler? Backyard bug or one from a faraway place? Big or small? Open the *PowerPoint* template your teacher has set up for you, go to the "Insect Picker" slide, and type in your answers.
- **2.** Read the *Encarta Encyclopedia* articles about insects that your teacher has selected. Find insects that fit into your list and add them to your "Insect Picker" slide. List at least three insects you want to know more about.

INSECT FACTS

- ◆ Insects have exoskeletons instead of bones.
- All adult insects have three main body parts: head, thorax, and abdomen.
- ◆ The thorax has three sections, each bearing a pair of legs – for a total of six legs.



Microsoft Encarta Encyclopedia is a good source of insect information.

- **3.** Look for information about your three choices in *Encarta Encyclopedia* and the other books, magazines and Web sites your teacher has selected. Copy key facts and Web addresses you might want to return to and paste them into your "Insect Picker" slide. If you run out of room, create additional "Insect Picker" slides by going to the **Edit** menu and choosing **Duplicate**.
- **4.** Meet with your teacher, discuss your three insect choices, and pick one. In your "Insect Picker" slide, put a star next to the insect you chose, then print out the slide and post it on the bulletin board to help other kids in their search.

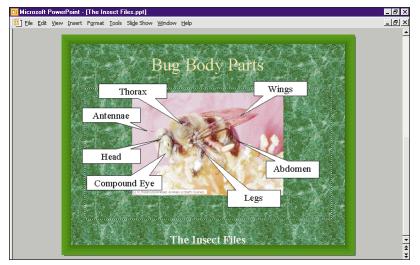
STEP B

Bug Body Parts

SOFTWARE: Microsoft Paint, Microsoft Encarta Deluxe Encyclopedia 99, Microsoft Internet Explorer 4.5/5.0, Microsoft PowerPoint 98/2000

WHAT TO DO: Now that you've chosen your insect, you need to get to know it better by studying its body parts.

- **1.** Launch *Microsoft Paint* by going to the **Start** menu and selecting **Programs** > **Accessories** > **Paint**.
- **2.** Go back to your *Encarta Encyclopedia* and Internet sources, and search for pictures that show all the different parts of your insect. Copy these pictures using the **Copy Image** function in *Encarta Encyclopedia*. Paste each one into *Paint* and save.
- **3.** Open your *PowerPoint* file, go to **Slide Sorter**, and click on the "Bug Body Parts" slide. Go to **Edit** and click **Duplicate** to copy your blank "Bug Body Parts" slide. Repeat to create as many blank slides as you have pictures. Then go to each slide, go to **Insert**, click **Picture** > **From File...**, and choose one of your saved insect pictures.
- **4.** Look at your "Bug Body Parts" slides and choose the one that shows your insect's body parts most clearly.
- **5.** Now label the body parts. Go to **View**, choose **Toolbars**, and click **Drawing**. Pick **Autoshapes**, and click **Callouts**. Use callouts to label each part on your best insect picture. Make sure that



Tell the world about your favorite insect with a *PowerPoint* slide show.

you've included the head, thorax, and abdomen, and also point out your insect's six legs. Save your *PowerPoint* file.

STEP C

Life Cycle

SOFTWARE: Microsoft Paint, Microsoft Encarta Deluxe Encyclopedia 99, Microsoft Internet Explorer 4.5/5.0, Microsoft PowerPoint 98/2000

WHAT TO DO:

- **1.** Using your *Encarta Encyclopedia* and Internet sources, find out which kind of life cycle your insect has:
- ◆ Three stages: Egg/Nymph/ Adult (also known as "incomplete metamorphosis")
- ◆ Four stages: Egg/Larva/ Pupa/Adult (also known as "complete metamorphosis")
- **2.** Look for and copy pictures or diagrams of your insect in each stage of its life cycle. Paste into *Paint* and save.
- **3.** Open your *PowerPoint* file and go to your "Life Cycles" slide. Go to the **Insert** menu, menu, choose **Picture** > **From**

- **File...**, and insert the life cycle picture(s) you have saved.
- **4.** Insert a text box beneath each picture and add text to describe that stage of the lifecycle. Save your *PowerPoint* presentation.

STEP D

Insect Habitat

SOFTWARE: Microsoft Encarta Deluxe Encyclopedia 99, Microsoft Internet Explorer 4.5/5.0, Microsoft PowerPoint 98/2000

what to do: Every insect needs three things in its habitat in order to survive: food, water, and shelter. These things may be shaped by the larger environment in which the insect lives, such as the desert, wetlands, or forest.

1. What does your insect eat? Search for answers to this question in *Encarta Encyclopedia* and Internet sources. Find and copy pictures of your insect's favorite meals or a picture of it eating. Then open your *PowerPoint* file, go to the "Food" slide, and **Insert** pictures and text.

- **2.** Where does your insect find water—and how does it drink? Repeat the process in Step D-1 to create your "Water" slide in *PowerPoint*.
- **3.** What does your insect do for shelter? Look for answers, including pictures or diagrams, to include in your "Shelter" slide.
- **4.** What is your insect's larger environment? Get more information about your insect's habitat and include it in your "Environment" slide.

STEP E

Polish and Present!

SOFTWARE: Microsoft PowerPoint 98/2000

WHAT TO DO: Now turn your report into a facinating show for your classmates.

- **1.** Look over each slide carefully, and correct any spelling errors or messy graphics.
- **2.** Hide any slides that are more for your own notes than for the presentation by going to **Slide Show** and choosing **Hide Slide**.
- **3.** Add an opening slide that shows your insect's name, a picture of it, and your name.
- **4.** Now add some fun ways to move your presentation from one slide to the next. In the **Slide Show** menu, click on **Slide Transition** for transition and sound options.
- **5.** Save your *PowerPoint* presentation, then go to **Slide Show**, choose **View Show**, and rehearse your presentation, using the arrow keys to move from one slide to the next.
- **6.** Present your report and have fun!



REQUIRED SOFTWARE

- ♦ MICROSOFT® EXCEL 98/2000
- ♦ MICROSOFT® WORD 98/2000
- ♦ MICROSOFT® INTERNET EXPLORER 4.5/5.0
- ◆ MICROSOFT® ENCARTA® DELUXE ENCYCLOPEDIA 99

PLAN A MILLENNIUM CELEBRATION

Teacher Guide

SUMMARY

How would your students mark December 31, 1999, if they could design the celebration of their own choice? With this project, kids focus on the coming change of millennium while developing their math and language skills.

OBJECTIVES

- ◆ To decide how to celebrate the millennium as a class.
- ♦ To develop schedules and budgets for the celebration.

PREREQUISITE SKILLS

- ♦ Ability to write and edit using *Microsoft Word 98/2000*.
- ♦ Basic familiarity with *Microsoft Excel 98/2000*.
- ♦ Fundamental Internet research skills using *Microsoft Internet Explorer 4.5/5.0*.

TIME ALLOTTED

4 class periods

HOW TO BEGIN

1. Preview the Web sites listed in Step A on the next page, and add as **Favorites** the sites

- you think will be most useful to your students.
- 2. Remind students that not only is 1999 the last year of the 20th century, it is also the last year of the millennium—a period of 1,000 years. Note that people around the world are planning special celebrations for this milestone, and now it's your students' turn to think how your class might best mark the millennium.
- **3.** With your students, create a Millennium Countdown clock. Launch *Excel* and open a new workbook. Follow the format of the worksheet below to set up your clock. For cell B3, go to **Insert**, choose **Function**, select
- **Date & Time** as the category, and click on NOW. This will insert a dynamic date and time that's always current. In cell B5, type 1/1/00 12:01 AM. For the cell that calculates the days and hours until the millennium, create a formula that subtracts the NOW cell from 1/1/00, 12:01 a.m. In the sample, it's =B5-B3. Save the clock, and display it while students work.
- **4.** Display students' completed celebration proposals on the classroom bulletin board, or help them save their documents as HTML to post on your school intranet.

S 1	🔀 Microsoft Excel - Millennium Clock				
150	<u>File Edit View İnsert Format Tools Data Window H</u> elp				
	B3 = = NOW()				
	А	В			
1	MILLENNIUM COUNTDOWN CLOCK				
2					
3	IT IS NOW (Date and Time):	2/7/99 6:10 PM			
4					
5	THE NEW MILLENNIUM BEGINS:	1/1/00 12:01 AM			
6					
7	HOW LONG UNTIL THE MILLENNIUM?				
8	Months/Days/Years Hours/Minutes	11/22/00 5:50			
	•				

Let *Microsoft Excel* do the counting and you'll have more time to plan the party!

DESCRIPTION

New Year's Eve may seem like a long time away, but there's good reason to start planning now for December 31, 1999. That's because this New Year's Eve is actually the kick-off of not only a new century but also a new 1,000-year period known as a millennium. So what should your class do to celebrate? You decide!

STEP A

Choose Your Celebration

SOFTWARE: Microsoft Internet Explorer 4.5/5.0, Microsoft Encarta Deluxe Encyclopedia 99, Microsoft Word 98/2000

WHAT TO DO: How should your class celebrate the change of the millennium? Here's your chance to imagine.

- **1.** First, know the ground rules:
- ♦ You have \$2,000 to spend for a class millennium celebration.
- ♦ Your celebration can take any

shape you want, but it should be meaningful and exciting.

- ♦ You will need to carefully schedule and budget your celebration.
- **2.** Next, consider these possibilities to jumpstart your thinking (you may come up with something totally different!):
- ♦ A party for the class, the school, or the whole community
- ♦ A journey to a symbolic location, such as Antarctica, New York City, or the International Date Line
- ♦ A public art project such as a sculpture or exhibit commemorating the past or celebrating the future
- ♦ A donation to a cause you feel is important
- ♦ A multi-media technology project bringing history to life or bringing people together from faraway places
- **3.** Check out these Web sites to see what other people are planning for the millennium: http://www.everything2000.com/, http://www.newyearseve2000.com/, and http://www.countup2000.com/.

4. Launch *Word*, open a new document, and write a paragraph that answers these questions: How should your class celebrate the millennium, and why is this idea the best one?

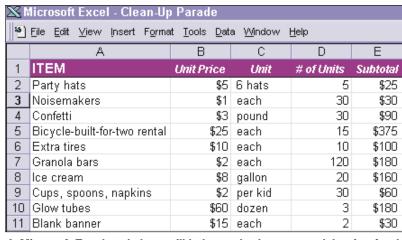
STEP B

Create Your Budget

SOFTWARE: Microsoft Excel 98/2000

WHAT TO DO: How will you spend your \$2,000 celebration fund? Create a budget to plan it.

- **1.** Open a new *Excel* workbook.
- **2.** In cell A1, type the label *Item*. In the cells below, list each of the items you'll need for your celebration.
- **3.** In cell B1, type the label *Unit Price*. In C1, type *Unit*. In D1, type # of *Units*. In E1, type the label *Subtotal*.
- **4.** In cell E2, create the following formula: =B2*D2. Select the cell, point to the handle in the lower right corner, and drag to copy the formula down Column D to the last of your items.
- **5.** In the row beneath your last item, type *TOTAL*. In the cell where that row meets Column E, enter the formula *=SUM* followed by an open parenthesis, select the subtotal cells for all your items, then type a close parenthesis.
- **6.** Do some research to pin down the price of each item. Some prices (such as those for travel) you might find on the Internet, while others (such as food for a party) you'll want to find from local merchants.



A Microsoft Excel worksheet will help you budget your celebration fund.

7. Adjust as necessary to keep your total at or below \$2,000.

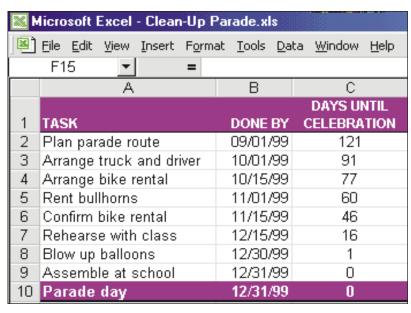
STEP C

Plan Your Schedule

SOFTWARE: Microsoft Excel 98/2000

WHAT TO DO: Now that you know how you'll finance your celebration, plan a timeline for making it happen.

- **1.** Click on the Sheet 2 tab at the bottom left of your *Excel* worksheet to open a new worksheet.
- **2.** In A1, type the label Task. In B1, type *Done By*. In C1, *Days Until Celebration*.
- **3.** In Column A, list the various steps you'll need to take to bring your celebration to fruition. If you're planning a bus trip to the Continental Divide, for example, include renting the bus, mapping the route, confirming passengers, departure date and time, and arrival time. Make your last task the actual celebration, on December 31, 1999.
- **4.** Assign dates to each task in Column B. Select this column, choose **Format**, choose **Number**, and select the mm/dd/yy format.
- **5.** Select Column C, choose **Format**, choose **Number**, and select **General**.
- **6.** In cell C2, type in a formula to subtract the date in this cell from 12/31/99. The result will show you the number of days between this task and your celebration.



Use Microsoft Excel to create a schedule for your millennium celebration.

STEP D

Preview Your Celebration

SOFTWARE: Microsoft Word 98/2000, Microsoft Excel 98/2000

WHAT TO DO: Pull together all your plans into a polished final report.

- **1.** Reopen your *Word* document from Step B.
- **2.** Create a fancy heading by going to **Insert**, choosing **Picture**, and clicking on **WordArt**. Give your celebration a catchy name, perhaps one that includes your own first name.
- **3.** Flesh out your paragraph to provide a much more detailed description of your planned celebration. Add photos and other graphics from the Web and *Encarta Encyclopedia*.
- **4.** Create a section heading for your budget. Write a few

sentences of introduction, then go to your *Exce*l worksheet, select the cells that make up your budget, go to **Edit**, and select **Copy**. Go back to your *Word* document and paste in your budget.

- **5.** Repeat for your schedule.
- **6.** Proofread, polish, and print. Hand in to your teacher to display on the class bulletin board.



Present your celebration idea as a polished *Microsoft Word* document, with graphics and charts.



+÷ INTERMEDIATE

REQUIRED SOFTWARE

- ♦ MICROSOFT® WORD 98/2000
- ◆ MICROSOFT® ENCARTA® DELUXE ENCYCLOPEDIA 99
- ♦ MICROSOFT® INTERNET EXPLORER 4.5/5.0
- ♦ MICROSOFT® POWERPOINT® 98/2000
- ♦ MICROSOFT® ENCARTA® VIRTUAL GLOBE 99

SHAKE, RATTLE, AND ROLL

Teacher Guide

SUMMARY

With all the apocalyptic predictions kids might be hearing about the millennium, it's a good time to set the record straight about at least one kind of natural disaster. This activity will feed the students' curiosity and fascination with earthquakes while teaching them fundamental research and reporting skills.

OBJECTIVES

- ♦ To teach students facts about earthquakes—how they are caused, what they do, efforts at predicting them, how to prepare for one.
- ♦ To help students improve their research, reporting, and presentation skills.

PREREQUISITE SKILLS

- ♦ Basic experience with *Microsoft Word 98/2000*.
- ♦ Basic skills using Microsoft Encarta Deluxe Encyclopedia 99, Microsoft Encarta Virtual Globe 99 and Microsoft Internet Explorer 4.5/5.0.
- ◆ Basic slide show creation and presentation skills using *Microsoft PowerPoint 98/2000*.



Your students can learn about earthquakes generally, as well as about specific quakes that made history, in *Microsoft Encarta Encyclopedia*.

TIME ALLOTTED

3-4 class periods

HOW TO BEGIN

- **1.** Before introducing this project to your class:
- Review the "Earthquake Web Sites" listed on the first page of the Student Activity section so you can guide students who are looking for specific information.
- ♦ Navigate through the Encarta Encyclopedia and Virtual Globe articles on earthquakes and find related infor-

mation that your students might want to pursue.

- ♦ Ask your students if any of them have experienced an earthquake and would be willing to describe it to the class.
- **2.** As a class, discuss earthquakes that have been in the news. Ask the students if they would know what to do if they experienced an earthquake.
- **3.** Divide the class into teams of three to five students each, hand out the Student Activity pages, and start researching quakes!

DESCRIPTION

Earthquakes have fascinated and frightened people since the dawn of recorded history. They can strike without warning and cause great damage. In this activity, you'll learn all about earthquakes—what they are, what causes them, and what's being done to predict them and reduce their destructive consequences. You'll investigate some of the most famous earthquakes ever. It's about as close to an earthquake as you'll ever get—if you're lucky!

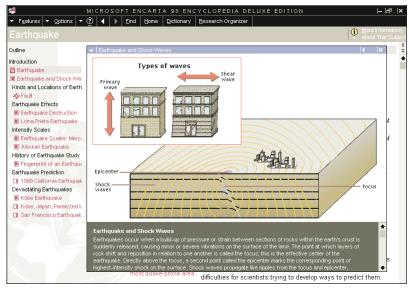
STEP A

Know Your Quakes

SOFTWARE: Microsoft Word 98/2000, Microsoft Encarta Deluxe Encyclopedia 99, Microsoft Encarta Virtual Globe 99, Microsoft Internet Explorer 4.5/5.0

WHAT TO DO:

1. Open a new *Word* document. You'll use it to collect all the information you'll gather about earthquakes. Title it something like "Shake, Rattle, and Roll Report" and save it with your team name.



Microsoft Encarta Encyclopedia is a good place to start your research.

- **2.** Launch *Encarta Encyclopedia* and click FIND in the menu bar to open the PinPointer (if it's not already open). Type *earthquake* into the PinPointer to find earthquake-related articles. Click on the "Earthquake" title to jump to the article.
- **3.** Scan the article to find the answers to the following questions. Record them in your report.
- ♦ What is an earthquake?
- ♦ How do tectonic and volcanic earthquakes differ? Which tend to be more serious?

- What is the Richter scale? What does it measure? Give some examples of Richter scale measurements of some famous earthquakes.
- **4.** Launch *Virtual Globe*. In the **Features** menu, click on **Global Themes**, select "Physical World," then select "Earthquakes." Scan the "Earthquakes" article for answers to the following questions and include them in your report.
- ♦ Explain the differences between normal, reverse, and strike-slip faults. Which best describes the San Andreas fault?
- ♦ What is a tsunami? How is it formed?
- ♦ When subjected to the shock waves of a quake, soil may undergo "liquifaction" and behave like quicksand, swallowing up entire buildings. If you knew an earthquake were coming, would

EARTHQUAKE WEB SITES

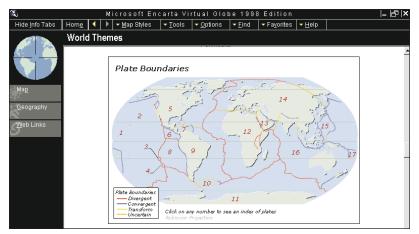
http://www.geo.ed.ac.uk/quakes/quakes.html - The World-Wide Earthquake Locator. Includes maps of recent quake activity and links to FAQ and general quake information.

http://www.nd.edu/~quake/education/ - Photos, video segments, and even an earth-quake simulation program that you can use to test different motion control systems.

http://www.crustal.ucsb.edu/ics/understanding/ - A user-friendly site with earthquake facts, fiction, animations, and links.

http://www.abag.ca.gov/bayarea/eqmaps/eqmaps.html - An excellent site with a Southern California focus and broader ranging relevance and links.

http://scign.jpl.nasa.gov/learn/egact.htm - A kid approach, with a California slant.



Microsoft Encarta Virtual Globe explains how, why, and where earthquakes occur.

you put a building on soil or bedrock?

- **5.** Explore the Web sites listed on the previous page to find additional earthquake information and images.
- **6.** Illustrate your report with images you like.
- ◆ To copy images in *Encarta Encyclopedia*, expand the image, then click the down arrow in the top of the image frame and choose **Copy** from the menu that appears.
- ◆ In *Virtual Globe*, you'll find the **Copy** > **Picture** command in the **Options** menu.
- ◆ To copy images you find on the Web, right-click on the image and select **Save Picture As...** from the menu that appears.
- ♦ Once you have saved images to your hard disk, you can paste them into your Word document by going to the Word Insert menu, clicking Picture, and choosing From File. Be sure to cite your sources!

STEP B

What's Shakin'?

SOFTWARE: Microsoft Word 98/2000, Microsoft Encarta Deluxe Encyclopedia 99, Microsoft Internet Explorer 4.5/5.0

WHAT TO DO: Now gather information about some specific earthquakes and add it to your report.

1. Using Encarta Encyclopedia and Virtual Globe, pick five earthquakes that occurred anywhere in the world—major, minor, recent, or not so recent—

- and collect the following information about each: location, date, duration (if given), magnitude, and damage. Add this information to your report in the form of a table.
- ♦ To create a table in *Word*, place the cursor where you want the table to be, then go to the **Table** menu and choose **Insert Table**. Select five columns (one for each type of data you are collecting) by six rows (one for each quake plus the top row for column headings), then click **OK**. Enter the data into your table. If you want to include images, insert them them into your report beneath the table and label them with captions.
- **2.** Using *Explorer*, look at the latest earthquake reports from around the world at http:// quake.wr.usgs.gov/cgi-bin/quake/gldfs.cr.usgs.gov. Scroll down until you see the map that shows where the earthquakes occurred. With your team, compare this map with the map of tectonic plate boundaries in the *Virtual Globe* earthquake article. Do the earthquakes seem to line

EARTHQUAKE HISTORY

Historical records of earthquakes before the middle of the 18th century are generally lacking or unreliable. However, reasonably trustworthy records do exist for the following ancient quakes: a quake off the coast of Greece in 425 BC that created the island of Évvoia, one that destroyed the city of Ephesus in Asia Minor in AD 17, one that leveled much of Pompeii in 63, and those that partially destroyed Rome in 476 and Constantinople (now Istanbul) in 557 and again in 936. In the Middle Ages, severe quakes struck England in 1318, Naples in 1456, and Lisbon in 1531.1

An earthquake in 1556 in the Shaanxi (Shensi) Province of China, which killed about 800,000 people, was one of the greatest natural disasters in history.

¹ "Earthquakes," Microsoft® Encarta® 98 Virtual Globe. © 1995-1997 Microsoft Corporation. All rights reserved.

up with the fractures between plates? You might want to print out both images to make it easier to compare them side by side. Do your five quakes fit the pattern?

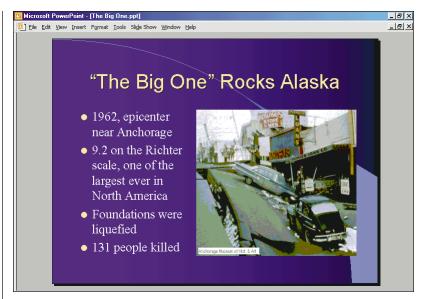
STEP C

Living with Ouakes

SOFTWARE: Microsoft Word 98/2000, Microsoft Encarta Deluxe Encyclopedia 99, Microsoft Internet Explorer 4.5/5.0

what to do: Although we don't know how to prevent earthquakes, modern science is finding better ways to predict when and where earthquakes will occur so that people can be prepared. New building designs can withstand earthquakes better, saving lives and reducing damage. Using your Encarta Encyclopedia and Internet sources, explore the following issues and discuss them in your report.

- **1.** What is seismology? How does a seismograph work? How is it used to help predict earthquakes?
- **2.** What other clues are used to help predict earthquakes?
- **3.** To withstand earthquakes, buildings need to be both strong and flexible. Read the article on this subject at http://quake.wr.usgs.gov/QUAKES/FactSheets/SaferStructures. What kind of building do you think would be safer in an earthquake: a wood-frame house or a brick house? Why?



Feature famous quakes in your Microsoft PowerPoint presentation.

4. We can't prevent quakes, but we can be prepared for them. Read the article at http://www.abag.ca.gov/bayarea/eqmaps/doc/youdo.html and see what you can do. Conclude your report with a checklist of steps we can take to reduce the danger and damage that earthquakes can cause.

STEP D

Show and Tell

SOFTWARE: Microsoft Word 98/2000, Microsoft PowerPoint 98/2000

WHAT TO DO: Now let's make a slide show version of your Shake, Rattle and Roll Report.

- **1.** Launch *PowerPoint* and select **Blank Presentation**. Select a design for your show, then start building slides.
- **2.** Create an opening slide that presents the name of your show and the members of your team.

- **3.** Create additional slides that cover the major sections of your report, including earthquake causes, effects, prediction, and preparation. Copy and paste text from your report, edited to fit a more concise, bulleted format for the slides. Add images you have collected using the **Picture** command in the **Insert** menu.
- **4.** Create a slide for each of the five earthquakes you selected in Step B. Include information and images you collected in your *Word* table.
- **5.** To make your slide show livelier, you can add some special effects. Go to the **Slide Show** menu and and click on **Slide Transition** for transition and sound options.
- **6.** Save your presentation, then go to **Slide Show**, choose **View Show**, and rehearse your presentation, using the arrow keys to move from one slide to the next.
- **6.** Present your *PowerPoint* show to the class.

REQUIRED SOFTWARE

- ♦ MICROSOFT® WORD 98/2000
- ◆ MICROSOFT® POWERPOINT® 98/2000
- ♦ MICROSOFT® INTERNET EXPLORER® 4.5/5.0

AROUND THE PACIFIC RIM

Teacher Guide

SUMMARY

In the dynamic setting of current world affairs, regional alliances are more important than ever. And few are as important to the United States as the Pacific Rim: a collection of countries that ring the Pacific Ocean. With this lesson, students will learn all about the region (beginning with the members of the Asia-Pacific Economic Cooperation, or APEC) while conducting and reporting on individual "nation explorations."

OBJECTIVES

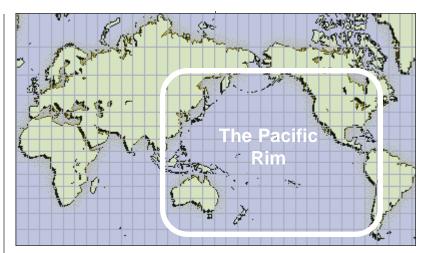
- ♦ To explore the Pacific Rim region and its countries.
- ◆ To present geographic and demographic information in a catchy and informative way.

PREREQUISITE SKILLS

- Basic library research skills.
- ♦ Essential grasp of world geography.
- ◆ Practice at presenting ideas and information using Microsoft Word 98/2000 and Microsoft PowerPoint 98/2000.

TIME ALLOTTED

2-3 class periods



Your students will explore the nations that ring the Pacific Ocean.

HOW TO BEGIN

- **1.** Open *Microsoft Word* and type all the names of Pacific Rim countries shown in the box in the Student Activity.
- **2.** Select all of the names and use the **Formatting** toolbar to increase the type size to 18. Double space between names, and print out.
- **3.** Cut the names apart so that each is on a horizontal slip of paper. Roll each slip of paper into a scroll and tie with a small ribbon or piece of string.
- **4.** Place scrolls in a blue bowl, bin, or box (representing the Pacific Ocean).
- **5.** Find a map of the Pacific

- Rim to display on the wall of your classroom.
- **6.** Determine the cardinal directions—north, south, east, and west—in your classroom, and post signs to indicate them.
- **7.** Divide your class into enough one- and two-person teams to cover all the Pacific Rim nations.
- **8.** Set up your classroom computers for easy access by the teams.
- **9.** Tell kids that they are about to explore one of the world's most fascinating and diverse regions: those countries on whose shores lap the Pacific Ocean—otherwise known as the Pacific Rim.

DESCRIPTION

You're about to set off on a journey of discovery around the world's greatest ocean: the Pacific. You'll start off by learning all about one country touching the Pacific, and end by knowing many!

STEP A

Circle the Rim

SOFTWARE: None

WHAT TO DO: In this step, you will convene with your team, select a country, and begin getting your geographic bearings.

- **1.** Choose one of the scrolls out of the bowl your teacher has prepared. The country named on your scroll will be your focus for the first part of this project.
- **2.** Find your chosen country on the Pacific Rim map. Notice

its position according to the cardinal directions (north, south, east, west).

3. At your teacher's signal, assemble with your classmates in a circle around the classroom in the same order as the nations around the Pacific Rim. Hold up your scroll, and acknowledge both your immediate neighbors and those from across the sea.

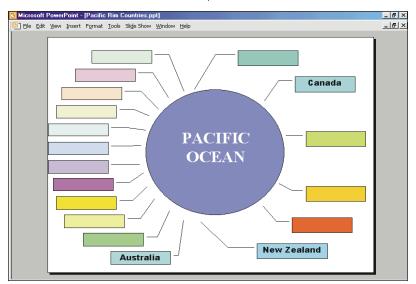
STEP B

Virtual Rim

SOFTWARE: Microsoft PowerPoint 98/2000

WHAT TO DO: Now your whole class will collaborate on a *PowerPoint* "map" that will soon link to every group's individual country presentation.

1. Launch *PowerPoint*, open a new presentation, choose **Blank Presentation**, and select **Blank** slide layout.



Microsoft PowerPoint makes it easy to create a colorful display of the Pacific Rim countries in their relative locations around the Pacific Ocean.

NATIONS OF THE PACIFIC RIM*

Australia Brunei Canada Chile China **Indonesia Japan** Malaysia **Mexico New Zealand Papua New Guinea Philippines Singapore** South Korea **Taiwan Thailand United States**

* Members of Asia-Pacific Economic Cooperation, or APEC. What other nations touch the Pacific?

- **2.** Next, go to **View** on the menu bar and choose the **Drawing** toolbar.
- **3.** Select the oval tool, and draw an oval in the center of the slide. This will serve as a graphic stand-in for the Pacific. Double-click on the oval, select **Fill** and choose just the right shade of blue.
- **4.** Click on **AutoShapes**, choose **Callouts**, and select a callout you can use to designate each Pacific Rim nation. Duplicate callouts and place them in the countries' relative locations. To work on the opposite side of the oval, go to the **Draw** menu and choose **Rotate** or **Flip**.

5. Now label your country's callout by clicking in the middle and typing the country name. To change fill color or pattern, double-click the callout to open the Format Autoshape dialog box. Choose the Colors and Lines tab. click the list button in the Fill box, and choose a color or the More Colors... or Fill Effects... options. You can even change the shape and style of the callout by going to the **Drawing** toolbar, selecting Draw, then Change Autoshape, and picking a different callout.

STEP C

Nation Exploration

SOFTWARE: Microsoft Word 98/2000, Internet Explorer 4.5/5.0

WHAT TO DO: In this research phase, you and your teammates should approach your country of focus as if you were explorers on an expedition.



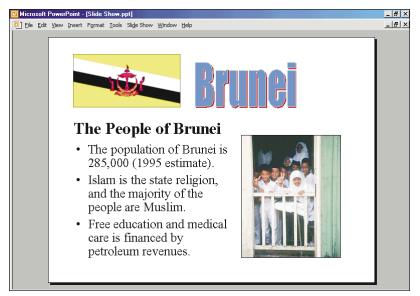
Gather images and information about your Pacific Rim country in a *Microsoft Word* document.



The Asiaville page (http://www.asiaville. com/index2.html) is one of many Web sites that can help vou find information about your Pacific Rim country. You'll find links to a wealth of facts and photos, like this image of Brunei schoolchildren from http://www. Ionelyplanet.com/ dest/sea/graphics/ brun01.htm.

- **1.** Open a new *Word* document in which you can type facts you'll find in your library research, and in which you can paste maps and photos you'll find on the Internet or in other electronic sources.
- **2.** Consult sources such as the *World Almanac* for population statistics and key economic indicators (such as gross national product).
- **3.** Look through print and electronic atlases for geographic features and points of interest. Copy the best electronic maps and photos and save them as bitmap (.bmp) files. In your *Word* document, go to **Insert** > **Picture** and select these maps and photos.
- **4.** Find a graphic of your nation's flag, and save it to insert into your *Word* document as you did in Step C-3.
- **5.** Explore your nation's history in relation to the other Pacific Rim countries. Is there a tradition of trade and cultural exchange between your country and some others in the region? Of immigration? Of

- warfare and conflict? Summarize these in your *Word* document. Be sure to cite your sources.
- **6.** The Pacific Rim countries are constantly in the news. Use the *Reader's Guide to Periodical Literature* and the Internet to find recent news stories involving your country of focus. Summarize these in your *Word* document, being certain to cite your sources.
- **7.** Look for information that helps you understand what daily life is like in your country. In your *Word* document, write a paragraph about a day in the life of a made-up family (with a name common in your country). Include information about the jobs the parents might have, what the kids do in school and out, what the family's home is like, and so on.
- **8.** Now, based on what you know about your nation, create a sign for your location in the classroom. In your *Word* document, **Insert Picture**, and choose **WordArt.** Select a style and type the name of your country.



Turn your research into an interactive presentation with *Microsoft PowerPoint*.

STEP D

Create a Kiosk

SOFTWARE: Microsoft PowerPoint 98/2000, Microsoft Word 98/2000

WHAT TO DO: Now you'll translate all your research into a *PowerPoint* kiosk—an interactive display your classmates can browse on their own.

- **1.** In *PowerPoint*, go to **File** and choose **New.** You can then:
- ♦ Click on the Presentation tab, and select an interesting design.
- ♦ Click on the General tab and choose Blank Presentation to create your own design. For example, you may want your nation's flag to appear at the top of every slide, or its map to appear as a background. After you have opened the presentation, go to View, Slide Master, and position

these elements as you choose. Go to **Format**, scroll down to **Slide Color Scheme** or **Background**, and make further design choices. Then **Close Slide Master**.

- **2.** Now begin creating slides using the information you collected in Step C. Open your *Word* document, and where possible simply highlight text or other elements, then **Copy**. **Paste** them into your *PowerPoint* slides. For example:
- ◆ In PowerPoint, Insert a New Slide, and in the Autolayout box, choose the Title Only. Go back to your Word document, select the WordArt version of your country's name, Copy it, and Paste it in the Title area of your PowerPoint slide.
- ♦ For slides providing statistical background information about your country, such as population and education,

Copy and then **Paste** the data you gathered in Step C-2.

- ♦ Use the pictures and graphics you collected in Step C by either copying them from your *Word* document or, in *PowerPoint*, using **Insert** > **Picture** > **From File**, and selecting the picture or graphic directly from the file you created while working on your *Word* document.
- ♦ Expand on your "day in the life" paragraph from *Word* to create several slides that follow your typical family's day. Be sure to include pictures.
- **3.** When all your slides are complete, go to **View**, and then choose **SlideSorter**. Go to the **Slide Show** menu, and add **Slide Transitions**. Specify the speed of each transition, and select the **on mouse click** option in the Advance box. Click **View** > **Show**, and click through your presentation to see how well your transitions serve your material. Save your work.
- **4.** Go back to the "map" you created in Step B and select your country's callout. Go to **Slide Show**, choose **Action Buttons**, and create a **Hyperlink** to your country presentation.
- **5.** After all of the teams have finished their work, go with your team to the computer, and browse through the presentation on each country. You might even want to invite other classes in to discover the Pacific Rim through the multimedia kiosk you've created!

SPECIAL CLASS PROJECT: INTELLECTUAL PROPERTY FOR YOUNG CONSUMERS

(ALL GRADE LEVELS)

REQUIRED SOFTWARE

- ♦ MICROSOFT® WORD 98/2000
- ♦ MICROSOFT® POWERPOINT® 98/2000
- ♦ MICROSOFT® INTERNET EXPLORER 4.5/5.0
- ♦ MICROSOFT® PUBLISHER 98/2000

WHAT'S THE REAL DEAL?

Teacher Guide

SUMMARY

In today's global marketplace, intellectual property is a hot commodity - and a concept sometimes lost on consumers of all ages. As a result, thieves of intellectual property (also known as "pirates") counterfeit a dizzying array of merchandise, from software to toys to sneakers. As consumers, your students need to understand what intellectual property is and how to safeguard themselves against fakes. This project provides a fun, kid-sized introduction to these concepts.

OBJECTIVES

♦ To understand the concept of intellectual property and identify ways to overcome piracy and counterfeiting.

PREREQUISITE SKILLS

- Basic computer skills.
- ♦ Research skills using library and Internet resources.

TIME ALLOTTED

4 class periods and ongoing

HOW TO BEGIN

1. Call your class together, and ask: Should someone be able to "own" an idea? Call for a show of hands, yes or no. Then pose



H. Kong Cinemas Close for Day

By TARA SUILEN DUFFY Associated Press Writer

HONG KONG (AP) — All of Hong Kong's cinemas closed for the day Wednesday and action star Jackie Chan led the territory's glitterati in protesting the pirated film trade.

About 1,600 actors, singers, and other film and music industry figures marched to government offices to demand action against intellectual property violations they say are costing them millions and eliminating thousands of jobs here.

Counterfeiting affects a wide array of fields your students care about.

the question this way: What if the idea took the form of an invention? A song? A design? What rights should the person have who came up with the idea? What protections should there be for the original idea?

- **2.** Introduce the concept of intellectual property in an ageappropriate way:
- ♦ Assign older students to use the dictionary, library resources, and the Internet to develop a working definition of intellectual property, with examples of what it is and how it's protected in key fields such as fashion and technology.
- Assign younger students to find out who "invented" their favorite toy, cartoon, or song.

- Have them use the library and the Internet to explore how their favorites came to be—and what keeps them unique.
- **3.** Next, take your students online to one of the Web sites listed on the Student Activity page. While they're reading through the warnings about counterfeiting, pose these questions: What's so bad about this kind of copying? Who cares whether what you buy is the real thing or a fake? Expect some heated discussion!
- **4.** Together, develop a list of fields that particularly attract counterfeiters (also known as pirates) and where those pirates might sell their wares. Then divide the class into small groups for the Student Activity.

DESCRIPTION

Is that CD you're spinning "the real deal?" How about beanbag toy you just added to your collection or that designer shirt you're wearing? There's a booming market in stolen ideas and illegal copies these days. To be a smart shopper, you need to be aware of counterfeits, knock-offs, and fakes not to mention the modern-day "pirates" who create them! With this class project, you'll investigate just how big a problem counterfeiting really is, why you should care, and how to fight back.

STEP A

Find the Fakes

WHAT TO DO: Piracy takes many different forms in different fields. In this step, your team will explore the problem in one particular field.

REAL-DEAL WEB SITES

Microsoft "Be Sure It's Legal"
Protection Against Software Piracy
(http://www.microsoft.com/piracy)
Facts about piracy in the computer software field, and what you can do to fight it.

The International AntiCounterfeiting Coalition

(http://www.ari.net/iacc/home.html)
A clearinghouse site on piracy and counterfeiting. Includes areas such as Facts on Fakes (including economic impact), Museum of Fakes, and The Law.

Beanie Babies (http://www.ty.com/)
The official Beanie Babies site has a
Guestbook area (http://www.ty.com/fastc-gi/viewguest.fcgi) that warns about the
prevalence of fakes.

DID YOU KNOW?

27% of all software in use in the U.S. is illegally copied.

HOW SOFTWARE PIRACY HAPPENS:

1. Cool program, can I "borrow" it?

Copying software is against the law unless you have permission from the software maker.

2. It came with my computer.

Unscrupulous computer-sellers sometimes install software illegally.

3. Not quite the real thing.

Counterfeiting operations turn out knock-offs of software programs--often without important user information, and sometimes with bugs or viruses.

4. For you, a special price.

Dealers sometimes improperly make special discounts meant for certain kinds of customers –like schools –available to others who don't qualify.

Present the facts you discover about "piracy" in your field of focus.

- 1. Gather with the team your teacher has assigned you to, and choose a field of focus, such as music, toys, publishing, or software. Discuss the examples of counterfeiting you might have personally encountered. Did anyone ever copy a favorite software program for you? Ever see Chicago Bulls jerseys so cheap you just knew they must be fake? Make a list of the many ways pirates might work in your field of focus.
- **2.** Now go to the library and to the Internet to track down news reports and statistics about counterfeiting in your field (see box at left for leads). In particular, look for information about:
- ♦ The volume of fake merchandise produced.
- ♦ Where and when these fakes are most likely to be sold (such as online, on the street, or through stores).
- ♦ The financial impact on con-

- sumers, the industry, and the economy as a whole.
- ♦ Common types of piracy in this field and how to spot them.
- Problems that piracy causes for end-users (such as inflated prices or merchandise that doesn't work right).
- ♦ How piracy affects the original creators—musicians, software developers, game designers, and so on.
- ♦ Law enforcement action against fakes.

Keep a list of your facts to use in the following steps.

STEP B

Reality Check

WHAT TO DO: Translate what you've learned about counterfeiting into a fact sheet alerting other kids to the problem.

1. With your team, discuss your various research results

from Step A. Which aspects of piracy in your field will seem most important to kids your age?

- **2.** Create a fact sheet with *Microsoft Word* to collect your most compelling facts. Rephrase your points in language kids will pay attention to, and add graphics for impact.
- **3.** Share your fact sheet with the class either by printing and distributing it or by giving a presentation.
- **4.** Read or listen to the other groups' facts, and discuss similarities and differences among fields when it comes to piracy.

STEP C

Fighting the Good Fight

WHAT TO DO: Build on your work in Step B to develop a campaign against piracy in your field and others. Here are some ideas you might want to try:

- **1.** Create a Top 10 list, David Letterman-style. For example, you might want to tackle "Top 10 Signs You've Got Bootleg Software" or "Top 10 Ways a Pirated Video Can Ruin Your Evening." (Remember, even though the subject is serious. your Top 10 list should be funny, because the most important points can sometimes be made through humor.) With the help of your classroom computer, turn your Top 10 list into a paper handout, a presentation, or a Web page.
- **2.** Develop a slogan that captures your anti-piracy mes-



Plan a kids' campaign against piracy in your own field of focus.

sage in one easy-to-remember phrase. Your groups should brainstorm several slogans and then pick a favorite.

3. Create anti-piracy reminders that your classmates will see every time they use their computers by turning your slogan into "wallpaper" or a screen saver. To do this, use *Microsoft Publisher* or *Microsoft PowerPoint* to create

a catchy layout with your slogan and some art, then use the PrintScreen or "screen snapshot" function on your computer to "take a picture" of your computer screen. You can then import this picture into a graphics accessory such as *Paint* and save it as a bitmap, which can then become wallpaper or a screen saver.

TOOLS TO USE FOR THIS PROJECT

Microsoft Word 98/2000: Collect your piracy research notes — even photos and graphics — to write up as a report or publish as a Web page.

Microsoft PowerPoint 98/2000: Turn your research into a persuasive presentation, complete with sound effects and animation.

Microsoft Internet Explorer 4.5/5.0: Use the Internet to find out all about modern-day pirates.

Microsoft Publisher 98/2000: Spread the word with brochures, banners, newsletters, and more.



The publicity committee can use *Microsoft Publisher* to spread the word about your anti-piracy plays. Make banners to hang in the hallways, then create invitations, a playbill, and more!

4. Wrap up by thinking of some "big ideas" for getting your anti-piracy message across. Imagine that you have a million-dollar budget. What high-impact ideas might your group have for reaching young people with an anti-piracy message? Would you create a TV ad campaign, build a school Web site, launch a blimp, run a contest? Decide together on your three best ideas, and create a PowerPoint presentation that explains each idea. Explain your strategy and include mock-ups of slogans and art. Then present your campaign to the class.

STEP D

Setting the Stage For the Real Deal

WHAT TO DO: Now your class's challenge is to take your anti-piracy message to the world outside your school in a way that parents, neighbors, and local businesspeople can really understand. A play's the thing!

1. Bring your small groups together as a class. Have each group summarize the high-

- lights of what it discovered in Steps A-C, and how group members feel about what they learned about piracy in their chosen field. What's the one thing they would most want the general public to know about this topic?
- **2.** Next, each group should make up a five-minute skit dramatizing the problem of piracy in its particular field. To keep the skits fresh and fun, try an approach like one of the following:
- ♦ Show the perils of counterfeiting from the point of view of a product: What if you were a real Beanie Baby that someone was trying to make illegal copies of? How might you play if you were a pirated computer game?
- ♦ Make up a super-heroine (or hero) character called The Piracy Buster, and dramatize this character's exploits in fighting fakes.
- ♦ Create list of smart tips for consumers to guard against counterfeit merchandise—and then present it as a rapping rhyme. Be sure to credit any music "samples" you use!
- ♦ Take your audience on a

- tour of a "pirate's den" showing how knock-offs are produced (and what dangers they pose for consumers).
- ♦ Use the form of an animal fable—like those of Aesop— to explain why "making a copy for a friend" can also be a form of piracy.
- **3.** Your group should show the class a "rough cut" of your skit, and ask for feedback on how to improve or clarify it.
- **4.** Each group should designate a member to the publicity committee to set a date or dates for the performance and start getting the word out to families and the community.
- **5.** Each group should also designate one member to be part of a production team to write an introduction to the series of skits, arrange the order in which the skits are presented, plan for any needed scenery or props, and set a rehearsal schedule leading up to opening night.
- **6.** When the big debut comes, break a leg! (That means "good luck" in theater lingo.) You'll already be doing your part to break the piracy trend.

REQUIRED SOFTWARE

- ♦ MICROSOFT® ENCARTA® AFRICANA
- ♦ MICROSOFT® WORD 98/2000
- ♦ MICROSOFT® INTERNET EXPLORER 4.5/5.0

DISCOVERING JUNETEENTH

Teacher Guide

SUMMARY

On June 19, 1865 – more than two years after the Emancipation Proclamation – the word that they were free finally reached slaves in Texas. This day is now commemorated in African American communities across the country as Juneteenth, a special kind of Independence Day. In this project, your students will explore Juneteenth and document it in a multimedia encyclopedia entry.

OBJECTIVES

◆ To understand the historical context of the end of slavery and its commemoration.

PREREQUISITE SKILLS

- ♦ Introduction to *Microsoft Encarta Africana*.
- ♦ Ability to write and edit using *Microsoft Word 98/*2000.
- ♦ Internet skills using *Microsoft Internet Explorer 4.5/5.0*.

TIME ALLOTTED

3 class periods

HOW TO BEGIN

1. Gather the books listed in



Microsoft Encarta Africana documents African American slavery and freedom with source materials like this painting of a slave auction.

the box in Step B of the Student Activity, and add the Web sites listed there as Favorites in *Explorer*.

2. If you do not yet have access to *Encarta Africana*, your students can use *Encarta Encyclopedia* for some of their research on slavery, the Civil War, and emancipation. Useful articles include "African American History," "Civil War, American," and "Texas, History."

- **3.** Ask your class: When was slavery abolished in the United States? Write their guesses on the board. Then ask: When and how might slaves in different parts of the country have heard that they were free? How might they have reacted?
- **4.** Tell students that they are about to discover a special day celebrated by people across the America to commemorate freedom from slavery.

The Emancipation Proclamation By the President of the United States of America: A Proclamation

"...That on the first day of January, in the year of our Lord one thousand eight hundred and sixty-three, all persons held as slaves within any State or designated part of a State, the people whereof shall then be in rebellion against the United States, shall be then, thenceforward, and forever free..."

-- From "The Emancipation Proclamation"

Use Microsoft Encarta Africana to research important milestones in slavery and freedom in the U.S.

DESCRIPTION

Imagine how you might feel if, after a lifetime of being held against your will, you were set free—and you might come close to understanding the origins of Juneteenth, also known as the African American Independence Day. In this project, you'll study the history of Juneteenth, explore how it's celebrated today, and then help spread the word about this important holiday.

STEP A

From Slavery to Freedom

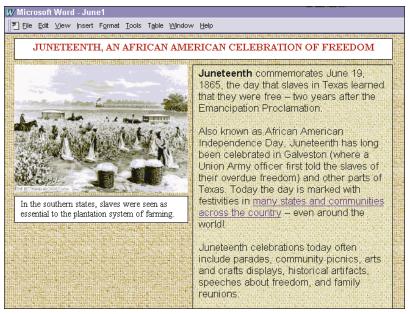
SOFTWARE: Microsoft Encarta Africana, Microsoft Word 98/2000

what to Do: The history of slavery in the United States and its eventual abolition is complex. Your first task is to explore the chronology of these events surrounding slavery: the secession of slaveholding states (including Texas) from the Union; the unfolding of the Civil War; President Abraham Lincoln's Emancipation Proclamation, which freed slaves in the Confederate states; and the Thirteenth Amendment to the Constitution, which abolished slavery in the reconstituted United States.

- **1.** Launch *Encarta Africana*. (Note: If you are not using *Encarta Africana*, your teacher will help you find much of the following information in *Encarta Encyclopedia*.)
- ♦ On the opening screen of Encarta Africana, choose **Timeline**.
- ♦ Click on "Exploring Africa, Exporting Africans, 1500–1799."
- ♦ As the timeline scrolls by, select "Transatlantic Slave Trade (1510–1867)" and read the article about the deployment of slave labor in the New World.
- ♦ In the Related Articles box, select "Slavery in the United States."
- ♦ Begin selecting key dates for your own chronology of slavery and freedom. Open a new

Word document to copy and paste these dates into, along with any relevant graphics.

- **2.** Next, scroll ahead in the *Encarta Africana* timeline to "Abolition and Emancipation, 1800–1899." Search for key dates and images to complete your chronology. Pay particular attention to the timing of Civil War events and the Emancipation Proclamation.
- **3.** In your *Word* document, go to **View** > **Toolbar** > **Drawing**, and use the drawing tools to organize your dates, facts, and graphics into a visual chronology. The **Autoshapes** > **Flowchart** function might prove especially helpful, along with the arrow tool.
- **4.** Insert the date June 19, 1865 into your chronology. This is the date when slaves in Texas first heard (from Union Army officials landing in the port of Galveston) that they were free. How does this date relate to the Emancipation Proclamation and the end of the Civil War? What are some reasons you can think of for the gaps among these dates?



Write your own encyclopedia article about Juneteenth festivities.

STEP B

Juneteenth, Then and Now

SOFTWARE: Microsoft Internet Explorer 4.5/5.0, Microsoft Word 98/2000, Microsoft Encarta Africana

WHAT TO DO: According to legend, slaves in Texas marked their belated emancipation on June 19, 1865, with a celebration that has come to be known as Juneteenth. Now

JUNETEENTH RESOURCES

Juneteenth.com Worldwide

Celebration (http://www.juneteenth.com): Background information, state/international celebrations, and more

The National Juneteenth Museum (http://www.x-change.com/juneteenth/info.html): History and art

Juneteenth – Freedom Day by Muriel Miller Branch (Cobblehill, 1998)

Juneteenth by Ralph Ellison and John F. Callahan (Random House, forthcoming June 1999)

- you'll find out more about this unique "Independence Day" celebration.
- **1.** Seek out the books and Web sites listed in the box on this page. Read about the history of Juneteenth and follow the Web links to discover how it's celebrated across the country.
- **2.** Open your *Word* document from Step A, and add the notes, Web addresses, and graphics you'll find on the Web and in print resources related to Juneteenth.

STEP C

Rounding Out The Record

SOFTWARE: Microsoft Encarta Africana, Microsoft Internet Explorer 4.5/5.0, Microsoft Word 98/2000

WHAT TO DO:

1. Open *Encarta Africana*, click on Articles, go to **Find**, and use the PinPointer tool to locate the article entitled

- "Festivals in the United States." Read about the celebrations held by free African Americans and white abolitionists before the Civil War to promote emancipation throughout the Americas.
- **2.** Print the "Festivals in the United States" article. Use it as a model for your own encyclopedia entry about Juneteenth.
- **3.** Open a new *Word* document, and set it up to resemble the *Encarta Africana* format:
- ♦ Go to Insert > Text Box. Click on the box and drag it to cover most of the page. Go to Format > Text Box, choose Fill, and select a fill color and/or texture that suits your subject.
- ♦ Go to **Insert > Text Box**, and add a box that covers the right side of the page, as the text does in *Encarta Africana*. Add a complementary light color, pattern, and/or texture.
- ♦ Write an encyclopedia entry describing Juneteenth, using the notes you took in Step B.
- ♦ Where appropriate, insert hyperlinks to connect your article to relevant Web sites you've found.
- ♦ Add graphics to the left side of your page (including your visual chronology from Step A) by copying and pasting from your original *Word* document. Be certain to cite your sources!
- **4.** When your Juneteenth article is complete, print it out and proofread it carefully. Then:
- ♦ Display it on a bulletin board in your classroom.
- ◆ Save it as an HTML file to post on your school intranet.



REQUIRED SOFTWARE

- ♦ MICROSOFT® INTERNET EXPLORER 4.5/5.0
- ♦ MICROSOFT® WORD 98/2000
- ♦ MICROSOFT® FRONTPAGE® 98/2000

NEWS AND ETHICS IN THE DIGITAL AGE

Teacher Guide

SUMMARY

Thanks to technology, we live in era of instant, constant access to the news-much of it of the tabloid, sensationalistic variety. How do the media affect the message? Do journalists have special responsibilities in a digital age? With this lesson, students will explore some of the ethical issues facing today's journalists and compare and contrast the ethics of publishing on paper versus cyberspace. Then they'll try their hand at creating an online publication.

OBJECTIVES

- ♦ To understand and evaluate the ethical foundations of modern journalism.
- ♦ To use tools such as the Internet, e-mail and print to gather information.
- ♦ To develop news stories that follow ethical standards.

PREREQUISITE SKILLS

- ♦ Ability to write and edit using *Microsoft Word 98/2000*.
- Basic use of the Internet.



Journalists face new challenges and new opportunities on the Internet.

♦ Introduction to Web page design using *Microsoft FrontPage 98/2000*.

TIME ALLOTTED

8 class periods

HOW TO BEGIN

- **1.** Assign your student to working groups of 4–6 students each. Be sure that each group includes at least one student who has the language skills and computer expertise to guide others in creating an online news publication.
- **2.** As a class, discuss how your students perceive the news media and the profession of journalism. Do students usually

- believe what they read in the newspaper or see on TV news? Why or why not? Do they trust some sources more than others? Why? How important is it that America has a free press?
- **3.** Ask your students: What are your biggest complaints about the news media today? If you were addressing a convention of journalists from all over the world, what three things would you tell them to do differently?
- **4.** Tell students that they will now have the opportunity to explore the ethical dilemmas that journalists face in today's world, and then gain hands-on practice at journalism in the digital age.

DESCRIPTION

Journalism involves more than simply finding facts and writing them down. Reporters face difficult ethical questions every day: How do I balance one person's privacy against the public's need to know? Can I trust this source? How do I know when "the facts" are solid enough to publish? In this activity, you'll explore all those questions and more.

STEP A

What Are News Ethics?

SOFTWARE: Microsoft Internet Explorer 4.5/5.0, Microsoft Word 98/2000

WHAT TO DO: Here's where you and your working group get up to speed on the principles that reporters are supposed to be guided by.

- **1.** Gather in your team as assigned by your teacher. Launch *Explorer* and go to **http://csep.iit.edu/codes/media.html** to find the "Statement of Principles" of the American Society of Newspaper Editors posted there.
- **2.** As a group, discuss the following questions:
- ♦ Since the First Amendment protects freedom of expression, should newspapers or other forms of news media be able to print anything they want? Why or why not?
- ♦ Have you ever read in a newspaper, seen on TV, or heard on radio, news which

W Microsoft Word - Group 1

Tile Edit View Insert Format Tools Table Window Help

Group 1: Michael, Shelly, Susan, and Matt

OUR JOURNALISTIC ETHICS STATEMENT

We agree with the American Society of Newspaper Editors on these points:

1. Responsibility

The primary purpose of gathering and distributing news and opinion is to serve the general welfare by informing the people and enabling them to make judgments on the issues of the time...

The American press was made free not just to inform or just to serve as a forum for debate but also to bring an independent scrutiny to bear on the forces of power in the society, including the conduct of official power at all levels of government.¹

We add:

As electronic media make the gathering and distributing of news a dynamic, round-the-clock activity, these responsibilities must be met even more vigilantly. Journalists must ever more carefully guard against the urge to sensationalize, cut corners, or tell only one side of the story.

Use Microsoft Word to craft a code of ethics for today's journalists.

you felt should not have been made public? Give some examples and explain why.

- ♦ How might newspapermen and women abuse their power?
- ♦ How does the American press serve to keep a watch on public services such as schools, businesses, stores, and government agencies?
- ♦ How might a journalist compromise his/her integrity?
- **3.** Open a new *Word* document and compose written answers to the questions you discussed above. Title this document "Journalistic Ethics Statement," followed by the names of the students in your group. Print out your document, or display it on the computer screen, so the other groups can review your thinking while you do the same with theirs. Do all the groups generally agree or dis-

agree? Why? Discuss the questions as a class.

STEP B

Digital Ethics

SOFTWARE: Microsoft Internet Explorer 4.5/5.0, Microsoft Word 98/2000

what to do: How have computers, satellites, and the Internet have changed the journalism business? Are "new media" outlets such as Webbased magazines and e-mail news services governed by the same ethics that govern traditional journalists? Your group will grapple with these questions now.

- **1.** As a group, check out a variety of Internet-based news sites, including those listed in the box on the next page.
- **2.** Discuss the differences

between reading about a news event online, reading about it in a newspaper, and watching a TV news report.

- **3.** Go to the article, "Online Journalism Ethics: A New Frontier" from the American Society of Newspaper Editors, at http://www.asne.org/kiosk/editor/november/byrd.htm.

 The writer raises thought-provoking questions for your group to discuss.
- **4.** Open your group's "Journalistic Ethics Statement" *Word* document, and add to or revise the guidelines you've developed to include technology-based new media as well.
- **5.** Finalize your ethics statement to reflect all you've learned in Steps A and B, and save it as a separate *Word* document. Print the document and provide a copy to each student in your group.

STEP C

Ethics International

SOFTWARE: Microsoft Internet Explorer 4.5/5.0, Microsoft Word 98/2000

WHAT TO DO:

- **1.** Launch *Explorer* and go back to the **http://csep.iit.edu/ codes/media.html** site you visited in Step A. In consultation with your teacher, choose one of many statements of news ethics listed here from countries around the world.
- **2.** With your group, discuss the similarities and differences you see between the American Society of Newspaper Journalism's "Statement of

Principles" and the ethics position of the country you're focusing on.

- **3.** Open your group's "Journalistic Ethics Statement" *Word* document and insert a page break. Write a paragraph or two on a new page comparing and contrasting the two nations' news ethics guidelines. Title this page "International Perspectives." Save your document, and print out or display for other groups to read.
- **4.** Read other groups' "International Perspectives" pages, and discuss as a class. What surprised you most? Why?

STEP D

Case Studies

SOFTWARE: Microsoft Internet Explorer 4.5/5.0, Microsoft Word 98/2000

WHAT TO DO:

- **1.** As a group, develop a list of the top ten news stories from the past year or so. These can be international, national, or local, just as long as they got your attention.
- **2.** Meet as a class and combine lists. Each group should then choose a different story to explore as a case study.
- **3.** For your case study, collect as many different versions of your story as you can find. Use the Internet as your starting point: check out the Web sites of the relevant newspapers and magazines (including some international ones) and see if the TV news sites provide coverage. Also look for other Web sites that followed the story as unofficial news outlets; these might range from widely read online

JOURNALISM SITES

CODES OF ETHICS

Illinois Institute of Technology/
Codes of Ethics Online: Media
(http://csep.iit.edu/codes/media.html)
Choose from an index of more than
30 countries and many large U.S.
newspapers.

NEWS OUTLETS

The Wire -- News from the Associated Press (http://wire.ap.org) Top stories from the leading news service.

MSNBC (http://www.msnbc.com) Round the clock cable news and Web coverage.

The Drudge Report

(http://www.drudgereport.com)
Online news and gossip, with lots of links to conventional media.

newsletters like the Drudge Report to gossip sites on hot news topics. Choose three versions of your story from three of these "news outlets" to compare and contrast.

- **4.** Open a new *Word* document, go to **Table**, and select **Insert Table**. Make your table three columns by four rows (you may insert additional rows later). Label each column for one of the news outlet you chose. Label the rows Tone, Key Facts, Major Sources, Other, and Ethics Grade.
- **5.** As your group analyzes the different versions of your news story, begin filling in the cells with your observations about how each news outlet handled the story. Look for ways that the ethical standards you explored in Steps A and B were or were not applied by the

journalists covering the story. Think in particular about situations in which the speed and power of the electronic media – such as the Internet or television – played a role in the ethical dilemma.

- **6.** If possible, contact either the news outlets or the reporters who covered the story to do "behind the scenes" interviews. Use e-mail to ask such questions as: Why was this story important? Do you feel the public got all the facts? How did you choose what to include and what to leave out?
- **7.** When your analysis is complete, give each of your news outlets an "Ethics Grade" of A to F based on the your group's ethics statement.
- **8.** Print out your comparison table, and display it with the different versions of your case study news story. Circulate around the classroom and read the other groups' case studies.

STEP E

Make Your Own News

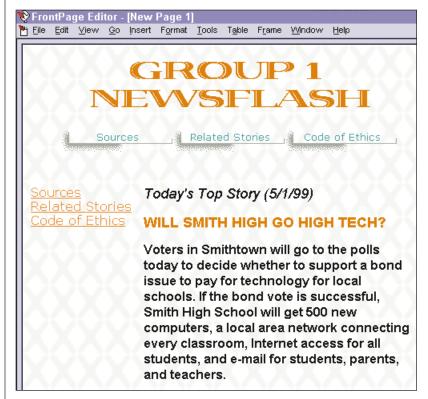
SOFTWARE: Microsoft Word 98/2000, Microsoft FrontPage 98/2000, Microsoft Internet Explorer 4.5/5.0

WHAT TO DO: Now's your chance to apply your ethics statement to the real world of journalism by publishing your own online news reports.

1. Designate one of your group members as managing editor. In addition to keeping your group's work organized, this student should have or develop skills in creating Web pages using *FrontPage*.

- **2.** Meet as a group to propose several school-based or local story ideas for the publication. Each student should then choose one story to pursue (or you can work in pairs, if your group is large enough).
- **3.** As you research and write your story, keep your group's ethics statement in mind.
- **4.** When you have a rough draft, trade with another reporter for feedback. Fine tune and revise as needed.
- **5.** When all of the second drafts are complete, meet as a group to discuss how well they meet the standards set in your ethics statement. Revise as needed.
- **6.** Next, meet as a group to discuss a basic layout for your Web page, including the order in which stories appear, photos and clip art, if appropriate.

- Discuss some of the online features suggested in the "Online Journalism Ethics" story you read in Step B, such as bulletin boards for readers to post their own views, links directly to your sources (with their permission) and sidebars that give additional background information or varying viewpoints. Decide where and how your group's ethics statement should appear on your Web site.
- **7.** Together with your group's managing editor, create your Web site in *FrontPage*. Open a document, choose a template, create your home page, import your story texts, add art and photos, and create links.
- **8.** Invite the other groups and your teacher to "test drive" your Web site before it is posted to your school's intranet or to the Internet.



Microsoft FrontPage lets you create your own online news site.

REQUIRED SOFTWARE

- ♦ MICROSOFT® WORD 98/2000
- ♦ MICROSOFT® ENCARTA® DELUXE ENCYCLOPEDIA 99
- ♦ FOILSIM WIND TUNNEL SIMULATOR (FREEWARE)

FASTBALL PHYSICS

Teacher Guide

SUMMARY

In the spring, many students' thoughts turn to... baseball. This lesson uses baseball to teach the fundamentals of aerodynamics in a way that every student will enjoy. By experimenting with wind tunnel simulation software, students will learn about the forces that give airplanes their lift and curveballs their curve. A curveball contest will let students put their aerodynamic insight to the test.

OBJECTIVES

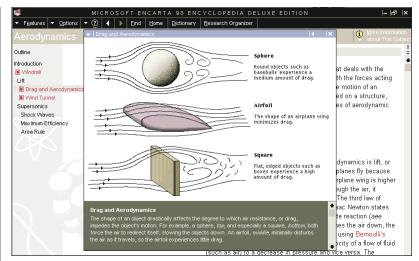
- ♦ To provide an introduction to principles of aerodynamics.
- ♦ To let students experiment with the variables that affect lift and see instant results.
- ♦ To make aerodynamics fun by applying it to an activity every student can relate to.

PREREQUISITE SKILLS

- Research skills using Microsoft Encarta Deluxe Encyclopedia 99.
- ♦ Practice at creating spreadsheets in *Microsoft Excel* 98/2000.

TIME ALLOTTED

2-3 class periods



Microsoft Encarta provides a thorough introduction to aerodynamics.

HOW TO BEGIN

- 1. Before the first class, download the FoilSim program from http://www.lerc.nasa.gov/
 Other_Groups/K-12/aerosim and install it on the students' computers. Consult the FoilSim Readme file if you need help with installation. FoilSim is freeware, as described in the copyright notice on the site. See the inside front cover of this workbook for author credits.
- **2.** Create a template for the worksheet that will guide the students as they explore FoilSim. Launch *Microsoft Word*, open a new document, create tables and text fields (as shown in the example on the next page), print out a hard

- copy, and save the *Word* document as a template. Make copies that the students can use to collect answers. They can use the template to fill out and turn in final worksheets saved under their team names.
- **3.** On the first day of this activity, divide the class into teams of three to five students. Hand out the Student Activity pages and worksheets.
- **4.** After the worksheets are complete, review the answers with the class. Then launch the Curveball Competition to see who can throw the fastest, curviest strikes with the greatest consistency using FoilSim. Have each team record their results in an *Excel* spreadsheet.
- **5.** Discuss the results in class.

DESCRIPTION

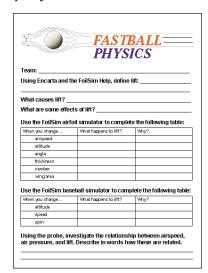
Ever wonder what keeps a plane in the air? Would you be surprised to know that it's the same force that keeps baseball players swinging and missing? This lesson gives a simple introduction to the complex concept of aerodynamic lift. And it might just help you develop a wicked curveball as well!

STEP A

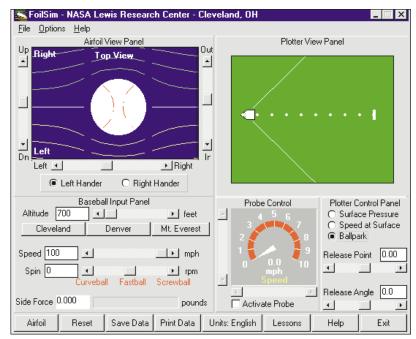
Flight Factors

SOFTWARE: Microsoft Encarta Deluxe Encyclopedia 99, FoilSim program, Word 98/2000

WHAT TO DO: Your teacher will distribute a worksheet that asks general questions about aerodynamics as well as specific questions based on the FoilSim program. Answer questions as you progress through the steps. Later you can compile your final answers and



Your teacher will provide a worksheet to quide your study of lift.



The Great American Pastime would be not so great without the modest aerodymamics of the baseball.

submit a single completed worksheet for the team.

- **1.** With your teammates, review the *Encarta Encyclopedia* articles on aerodynamics and lift. You'll find additional information in the FoilSim Help files.
- **2.** Launch the FoilSim program. FoilSim allows you to study the aerodynamics of two basic cross sections: an airfoil and a baseball. Experiment with the factors that affect lift generated by the airfoil.
- **3.** Click the **Activate Probe** check box beneath the Probe Control "speedometer." Use the slider buttons to position the probe in the slipstream above and below the airfoil, and note the airspeed and pressure at different values of lift.
- **4.** Discuss the following issues within your team and be prepared to offer explanations to the rest of the class:

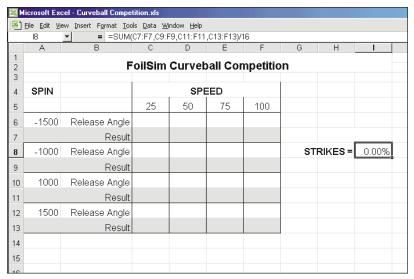
- ♦ What is lift? How does it relate to—but differ from—Bernoulli's Principle?
- ♦ When you first launch FoilSim or after you click the reset button, the value of lift is zero. Why?
- ◆ What is drag? How would it affect the airfoil behavior if it was modeled in FoilSim?
- ♦ What happens when an airfoil "stalls?" Can you make the FoilSim airfoil stall? Why or why not?

STEP B

Fly Ball

SOFTWARE: Microsoft Encarta Deluxe Encyclopedia 99, FoilSim program, Microsoft Word 98/2000

WHAT TO DO: Now that you've experimented with an



A *Microsoft Excel* table makes it easy to organize your data and to automatically calculate your percentage of strikes.

airfoil, click the **Play Ball** button at the bottom of the FoilSim window to investigate the flight qualities of a baseball. Fill in your worksheet as you go. You may have to refer to the FoilSim Help or *Encarta Encyclopedia* to answer some of the following questions.

- **1.** Notice that the side force, which makes the ball curve in flight, is always zero unless the ball is spinning. Apply some spin to the ball. What happens to the side force? Now apply spin in the other direction. What happens?
- **2.** What causes the side force? Use the probe to measure airspeed and pressure around the spinning ball. How does side force relate to the lift generated by an airfoil? Does the ball curve in the same direction as the spin or in the opposite direction?
- **3.** If FoilSim simulated drag, how would the flight of the ball be affected? Which would

be more affected by drag, a streamlined airfoil or a sphere?

4. Based on what you know from FoilSim about baseball spin and curve, can you speculate on how you might throw a rising fastball, a sinker, and a knuckleball?

STEP C

Batter Up!

SOFTWARE: FoilSim program, Microsoft Excel 98/2000

WHAT TO DO: It's time to give your aerodynamics knowledge a workout. Can you put your curveballs over the plate?

- **1.** In FoilSim, click the **Play Ball** button to display the baseball flight simulator. Select Ballpark in the Plotter Control Panel to display an aerial view of the baseball diamond.
- **2.** Set up an *Excel* spreadsheet like the one shown above. You'll be throwing 16

pitches with various combinations of speed and spin. In the Result cell for each pitch you will enter a 1 for a strike or a 0 for a ball. Format the Strikes cell to automatically calculate your percentage of strikes by dividing the sum of your results cells by 16 (as shown in the figure). Display your strikes as a percentage on your *Excel* table by selecting the cell and going to **Format** on the menu bar, choosing Cells, clicking the Number tab, and selecting Percentage in the Category window.

- **3.** In FoilSim, before you start pitching, select Right Hander and Denver (for altitude). The Release Point should be zero.
- **4.** Now you're ready to play ball! Before each pitch, set speed and spin to the values specified in the table. Estimate the release angle you will need to compensate for the curve, and type this value into the Release Angle box. Also record this value in the corresponding cell in your table. Now press the ENTER key and let your pitch fly! No fair changing the angle and pitching again. Just record the results (1 or 0) and move on to the next combination of speed and spin.
- **5.** When done pitching, compare your strike percentage with the other teams and discuss the results. Do you have a future in the big leagues?
- **6.** Using your recorded Release Angles, try pitching at higher or lower altitudes, or with a left-handed spin. Can you explain the results in terms of aerodynamics?







HIGH SCHOOL

REQUIRED SOFTWARE

- ♦ MICROSOFT® WORD 98/2000
- ♦ MICROSOFT® ENCARTA® DELUXE **ENCYCLOPEDIA 99**
- ♦ MICROSOFT® INTERNET EXPLORER 4.5/5.0
- ♦ MICROSOFT® ACCESS 2000 (WINDOWS® ONLY)

GIANTS OF THE CENTURY

Teacher Guide

SUMMARY

The last 100 years has been a period of unparalleled achievements in science, medicine, human rights, and more. In this activity, students will identify key figures in 20th century progress and then document the life and times of each in a searchable database.

OBJECTIVES

- ♦ To expose students to 20th century history and to the people who shaped it.
- ◆ To introduce database tools and organizing techniques.

PREREQUISITE SKILLS

- Basic experience with Microsoft Word 98/2000 and Microsoft Access 2000.
- ♦ Basic research skills using Microsoft Encarta Deluxe Encyclopedia 99 and Microsoft Internet Explorer 4.5/5.0.

TIME ALLOTTED

♦ 4-6 class periods

HOW TO BEGIN

1. Launch *Access*. In the opening dialog window, select Create a new database using blank Access database. When the File New Database window appears, name your database

- "Giants of the Century" and save it to a location accessible to all your students.
- **2.** When the Database window opens, double-click on **Create** table in Design view.
- **3.** Create fields for Name, Nationality, Area of Infuence, Decade, Contribution, Picture, and Sources.
- **4.** Click in the Data Type cell for the Picture field. Click the drop-down button and select **OLE Object** from the list.
- **5.** Click in the Data Type cell for the Name field. Click the drop-down button and select Hyperlink. Do the same for the Decade field. The students will connect these links to their proper destinations later.
- 6. By default, text fields hold only 50 characters, but you'll want more room than this for the Contribution and Sources fields. To increase field size, click on the field to display Field Properties, and select the General tab. Increase the Field Size value to 255.
- 7. Close the table. You'll be prompted to assign a primary key, but you don't need to because the database will contain only one table.
- 8. Now design a form for entering information into the table. In the Database window, click

- **Forms** in the Objects column, then double-click on Create form by using wizard.
- **9.** In the sequence of Form Wizard dialog boxes, select all available fields in your table, then choose columnar layout and a style for your form.
- **10.** In the final Form Wizard dialog box, confirm a title for your form, select **Modify the** form's design, then click **Finish**. The form will appear in Design view.
- **11.** To prevent images you import into the database from being clipped or distorted, select the Picture field by clicking on it, then select **Properties** from the View menu. Select the All tab. click in the Size Mode field, and select **Zoom** from the dropdown list. Close the Properties window.
- **12.** Make any other changes you like to the form in Design view, either by selecting and dragging objects to different locations or by editing properties as in step 11.
- 13. Close and save the database. Now students can create records (like the sample shown on page 35) for the individuals they've chosen and link them to biographical and historical information as described in the Student Activity section.

DESCRIPTION

One exciting way to look at history is by studying the people who shaped it. In this activity, you and each of your classmates will choose five individuals who made the world a better place during the 20th century. Then, in a single database, you'll combine information about their lives, accomplishments, and the historical events that influenced their work.

STEP A

Giant Research

SOFTWARE: Microsoft Encarta Deluxe Encyclopedia 99, Microsoft Internet Explorer 4.5/5.0, Microsoft Access 2000

WHAT TO DO:

1. Think about the greatest achievements of the 20th century, in any and all fields of human endeavor. Who made them happen? What names come to mind? Thomas Edison? John Lennon? Mother Teresa? Pick five people whose accomplishments you admire



You can use *Microsoft Access* to collect information about your history makers.

most, or who you'd like to learn more about.

- **2.** Using *Encarta Encyclopedia* and *Internet Explorer*, search for images and information about the men and women you've chosen. The URLs listed below will help you get started on the Web. Request permission to reproduce images if permission is not explicitly given in the source. Cite all sources you use.
- **3.** Use the *Access* form your teacher has created to collect information about each person, including area of influ-

- ence, and the decade and nature of his or her major contribution(s).
- **4.** When you enter information in the Name and Decade fields, it will appear blue and underlined. These are hypertext links, but they won't work properly until you connect them to their appropriate destinations in Step D.
- **5.** Find a picture of each of your chosen history makers, and include it the *Access* record. To insert the image into the form:
- ◆ Click in the Picture frame to select it.
- ◆ Go to the **Insert** menu and choose **Object**.
- ♦ In the **Insert Object** dialog box, select **Create from File**. Then use the **Browse** button to locate the image you have saved so that the path to it appears in the **File** box.
- ♦ Click the Link check box, then click **OK**.

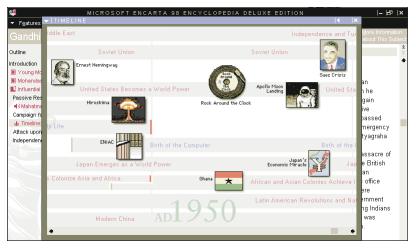
HISTORY ON THE WEB

http://history1900s.miningco.com/ — A well-organized, word searchable site with lots of history links, focusing on politics, art, science, and technology.

http://www.msstate.edu/Archives/History/USA/20th_C./twenty.html — USA history, especially politics and presidents, the economy, and popular culture.

http://www.pbs.org/wgbh/aso/databank/ — Go here to find information about people and events in science, technology and medicine over the last 100 years.

http://www.famouspeople.com/famouspeople.html — Brief biographies of famous people, from Ross Perot to the Spice Girls.



The Microsoft Encarta Encyclopedia Timeline gives you the big picture.

STEP B

Get Personal

SOFTWARE: Microsoft Word 98/2000, Microsoft Encarta Deluxe Encyclopedia 99, Microsoft Internet Explorer 4.5/5.0

WHAT TO DO:

- **1.** As a class, create a list of all the people represented in your database. Your teacher will help you divide the list evenly among all the students in your class.
- **2.** Use *Encarta Encyclopedia* (and Web resources if necessary) to research and write short biographies on the individuals assigned to youno more than a page each. Each biography should be a separate *Word* document.
- **3.** Make sure you use the same margins, font, and other formatting as your classmates so that all your biographies share a common look.
- **4.** Use the subjects' last names for your file names, and save them to a shared directory your teacher will set up.

STEP C

Make History

SOFTWARE: Microsoft Word 98/2000, Microsoft Encarta Deluxe Encyclopedia 99, Microsoft Internet Explorer 4.5/5.0

WHAT TO DO:

- **1.** Your teacher will divide the class into ten teams and assign each a decade to document.
- **2.** Using *Encarta Encyclopedia* and Web resources, research and write a one-page *Word* document highlighting the major events of your assigned decade.
- **3.** Keep in mind that the purpose of this document is to provide a historical context for the achievements of the men and women you and your classmates have chosen. The scope of your history document must be broad enough to encompass events that may have influenced all the "giants of the century" who made their major contributions during your assigned decade.
- ♦ Research tip: *Encarta Encyclopedia* articles about the people you have chosen

include links to related historical information. *Encarta Encyclopedia* also contains a timeline that provides an historical big picture.

4. When you are done with your history document, save it in a shared directory (that your teacher will set up) with the name of the decade it represents, such as 1900-1910.doc.

STEP D

Pull it All Together

SOFTWARE: Microsoft Access 2000

WHAT TO DO: Now you can link your records to the relevant biography and history documents. Here's how:

- **1.** Open the "Giants of the Century" database. In the Database window, click **Forms** in the Object column, then double-click on the form name to open it.
- **2.** Go to each of the records you created in Step A. Click on the person's name, then cancel any dialog boxes that appear. The name will then be highlighted. Go to the **Insert** menu and select **Hyperlink** to open the Insert Hyperlink window. Browse to the location of the biography document for that person and click **OK**.
- **3.** Repeat this procedure with the decade you've entered in the Decade field, but link to the document that contains history for the corresponding period.
- **4.** Your "Giants of the Century" database is complete. Browse the records and discuss in class. What does it tell you about the 20th century?



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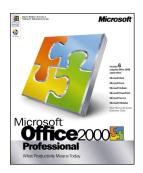
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