Learner Workbook



# SMART Notebook software training for SMART Board™ users

## Level 1

For Windows® operating systems

Extraordinary made simple™ | SMART

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# Getting started

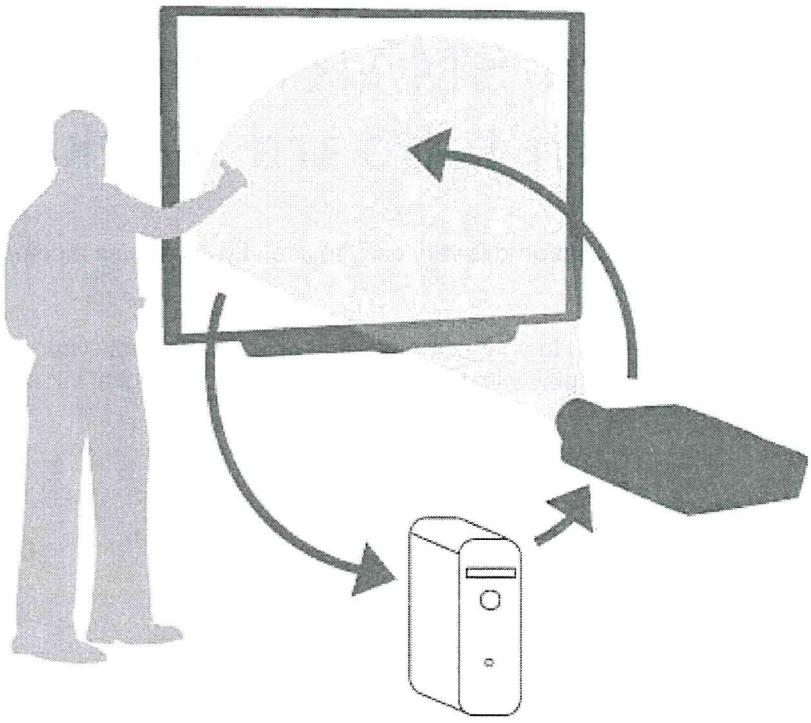
## How does the SMART Board interactive whiteboard work?

The SMART Board™ interactive whiteboard is very easy to use. If you can use a computer, you can use an interactive whiteboard.

The touch-sensitive display connects to your computer and projector to show your computer image. You can control applications from the display with your finger, write notes in digital ink and save your work to share later.

## How does the SMART Board interactive whiteboard work?

The SMART Board interactive whiteboard is touch sensitive and operates as part of a system that includes a computer and a projector.



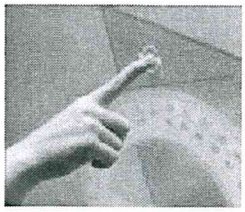
- The computer sends an image of an application to the projector
- The projector casts the image onto the interactive whiteboard
- The interactive whiteboard acts as both the monitor and input device, allowing you to control an application by simply touching the interactive whiteboard

It may help you to think of your interactive whiteboard the same way you think of your mouse or keyboard – it is an input device that enables you to control applications on your computer.

### Safety tips

- You and your students should never look directly at the light beam from the projector. You (and your students) should always take a step (or even two) sideways before turning to face the class.
- Tell your students not to touch the projector, as it can become extremely hot during normal operation
- Don't use a chair to increase a student's reach. If your students can't reach the top of the interactive whiteboard, lower it. You may need to remount a wall-mounted unit to a lower position. If your interactive whiteboard is mounted on a floor stand, lower it with the help of another adult.
- Tell students not to run in the vicinity of the floor stand, as they may trip over the floor stand's feet

## Your finger is your mouse



You can control applications on your computer from the interactive whiteboard. A press with your finger on a SMART Board interactive whiteboard is the same as a click with your mouse. You open an application the same way you do on your desktop computer, but instead of using your mouse to select and open files, just press or double-press the application icon with your finger.

Orienting the interactive whiteboard will ensure the cursor is aligned with your finger press.

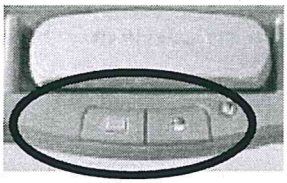
## The SMART Pen Tray

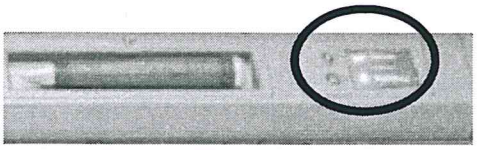
The SMART Pen Tray consists of four color-coded slots for pen tools and one slot for the eraser. Each slot has an optical sensor to identify when the pen tools and eraser have been picked up. You can write with the pen tool or with your finger, as long as a pen slot is empty. The technology in the pen tray is smart enough to know which tool was removed from its slot most recently. If you remove the eraser from its slot while you are still holding a pen tool, the pen tray will assume you want to erase. The lights above the tool slots indicate which tool was removed last.



### The pen-tray buttons

The pen tray has at least two pen-tray buttons. One button is used to launch the On-Screen Keyboard. The second button is used to make your next touch on the interactive whiteboard a right-click. Some interactive whiteboards have a third button. The third button is used to access the Help Center quickly.





*Pen-tray buttons*

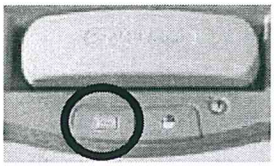
### The pen tools

The SMART Board interactive whiteboard comes with four pen tools, which are black, red, green and blue, and one eraser. Although you do not need to use the pen tools to write on your interactive whiteboard, they do make writing more intuitive. Pick up a pen tool from the SMART Pen Tray and begin writing. To erase your digital ink, remove the eraser from the pen tray and move it in a smooth motion over your notes. The notes will disappear.

## The On-Screen Keyboard

This on-screen, virtual keyboard eliminates the need for an attached physical keyboard, as you can use its many views to enter typed text. There are several available keyboard views, including the Classic, Write, Simple, Simple Capitals, Number Pad and Shortcut view.

To open the keyboard, press the **SMART Board** icon in the notification area and select **Keyboard**. Alternatively, press the **Keyboard** button on your SMART Board interactive whiteboard pen tray.

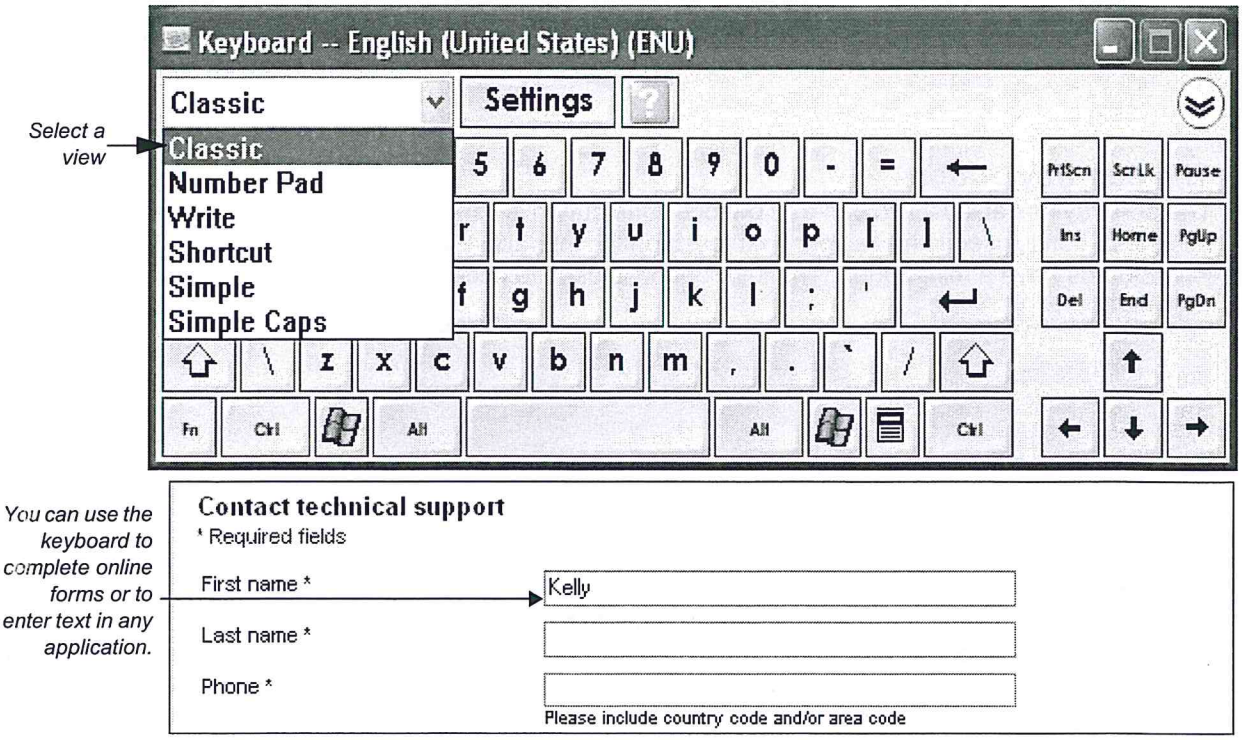


Type or edit text in any application without leaving the interactive whiteboard.

Press the **Keyboard** button on the pen tray to launch the On-Screen Keyboard.

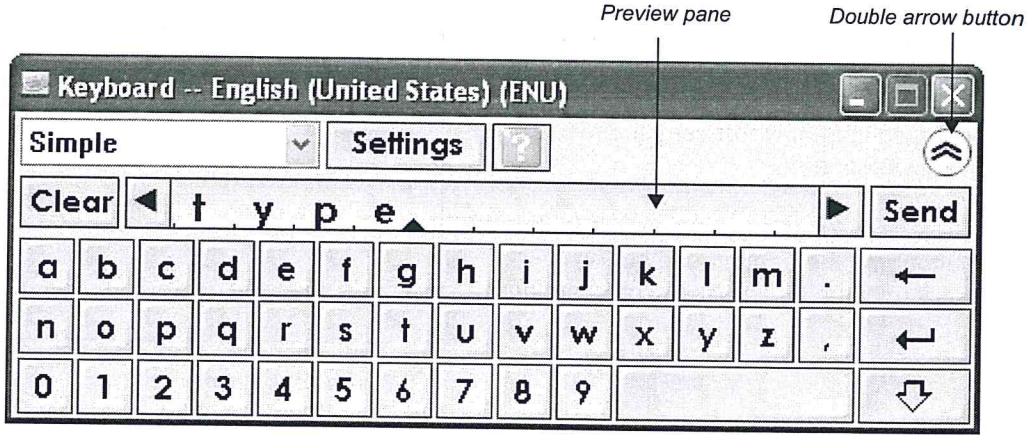
### Classic view

Press the virtual keys to type text, then press the **Send** button to place the text into the active dialog box or application. You can type into any application, whether it's Ink Aware or not.



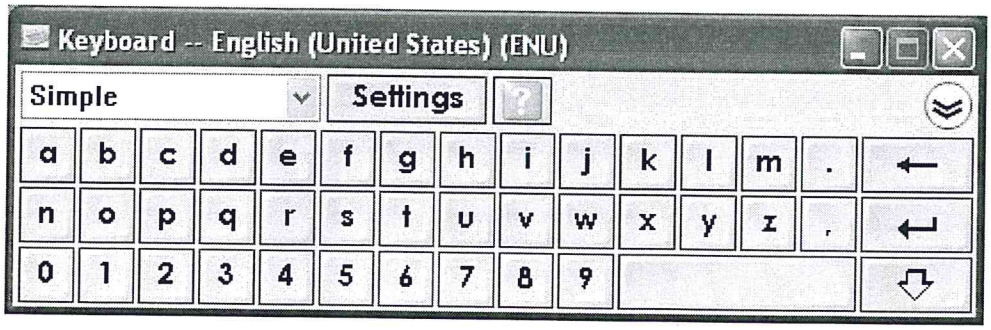
## Preview pane

Press the double-arrow button to open the preview pane. When the preview pane is open, you can type an entire word or sentence before sending any information to an application. When you are finished typing, pressing the **Send** button will send your text to the active application.

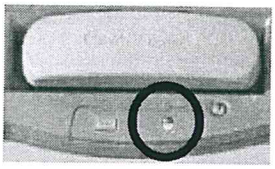



## Simple views

Teachers who are teaching students who are just learning the alphabet, or who are not yet familiar with a standard keyboard layout, will appreciate the two simple views available – Simple and Simple Caps. In both of these views, the letters are arranged in alphabetical order, followed by digits 0 through 9.




## The right mouse button



Press the right mouse button on the pen tray to have your next press on the screen recognized as a right-click.

A graphic in the bottom right of your screen will appear to remind you that your next press will be registered as a right-click.

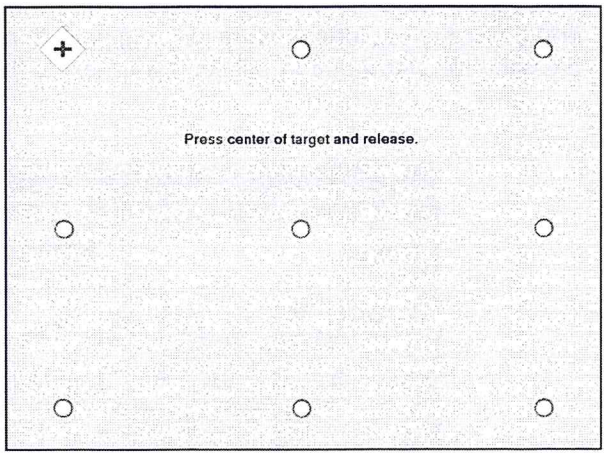
**TIP:** Instead of pressing the right mouse button, press and hold on the area of the screen where you would like to make a right-click. After a few seconds of pressing and holding the area, the right-click menu will appear.

## Orienting your SMART Board interactive whiteboard

Orientation ensures your touch is registered accurately when you are using the interactive whiteboard.

If you are touching an icon and your cursor appears somewhere other than where you are pressing, try orienting the interactive whiteboard. After orientation, your cursor should appear wherever you are touching the interactive whiteboard.

To launch the Orient function, press and hold the keyboard button and the right mouse button simultaneously until the Orientation screen appears.

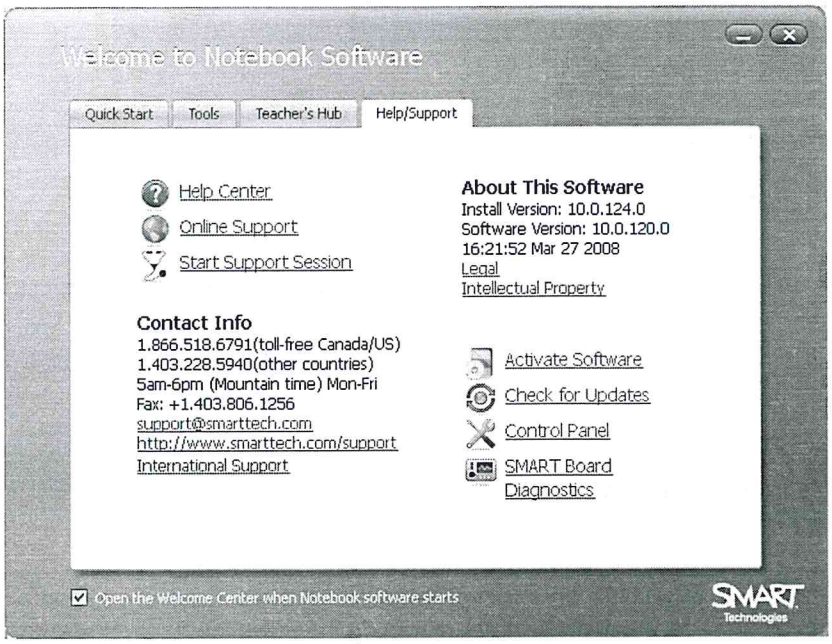



*The Orientation screen*

## The Help button

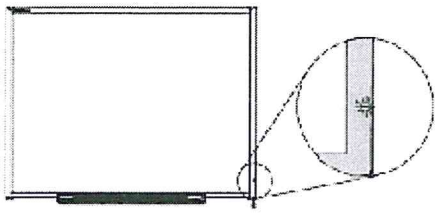
If the pen tray features a help button, press it to launch the *Help and Support for Your SMART Board Interactive Whiteboard* dialog box. The dialog box provides one-touch access to information that will help you answer almost any question relating to your SMART product.





## The Ready Light

Your SMART Board interactive whiteboard includes a Ready Light that indicates the status of your interactive whiteboard.



| Color of Ready Light | Status |
|---|---|
| Not lit | • The interactive whiteboard does not have power<br>• Check the USB cable connections |
| Solid green | • The interactive whiteboard is successfully communicating with the SMART Board software on the computer |
| Flashing green | • The SMART Board driver isn't installed. Or if it's installed, it isn't running. Verify that the driver is installed, and if it isn't, install it.<br>• If the Ready Light continues to flash green, you may want to contact your support representative for assistance |
| Solid red | • The interactive whiteboard has power, but it is not communicating with the computer<br>• During the initial powering up or power reset, you will see the Ready Light turn red for a moment<br>• This *brief* red illumination is normal |
| Flashing amber | • Occurs only when you are updating firmware using SMART's Firmware Flashing Wizard<br>• This is normal |
| Solid amber | • Problem state<br>• Try resetting the interactive whiteboard by disconnecting and then reconnecting the USB cable at the interactive whiteboard end |

## Writing notes

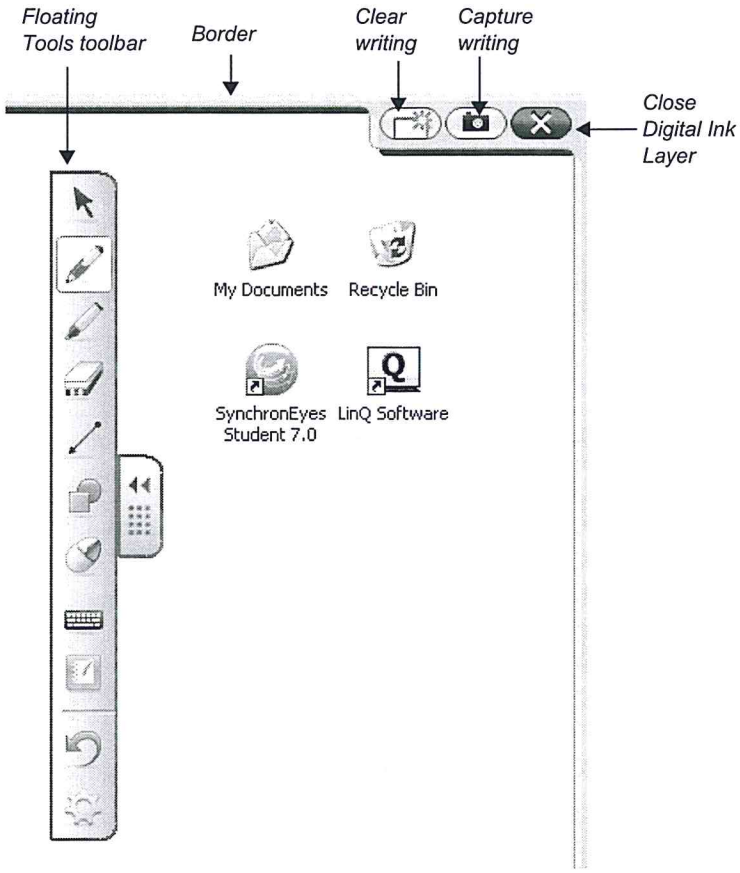
Make notes or drawings by removing a pen tool from the pen tray and writing on the surface of the interactive whiteboard.

### The Digital Ink Layer

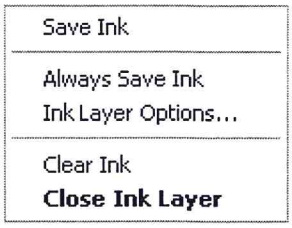


When you remove a pen tool from the pen tray, a border appears around your desktop, and the Floating Tools toolbar launches. If it does not launch immediately, press the SMART Board™ icon located in the Windows Notification Area at the bottom right of your screen. Choose **Show Floating Tools...** from the menu.

The border indicates the Digital Ink Layer is in place, and you can write on the desktop just as you would write on a transparent sheet. The Digital Ink Layer and its visible border remain in place until all pen tools and the eraser have been returned to the pen tray and you touch the board.




Your first touch on the board, after returning all the pen tray tools, will bring up a menu with options for capturing your writing. If you wish to hide this menu in the future, click **Ink Layer Options...** and select the **Close ink layer with pointer** checkbox.



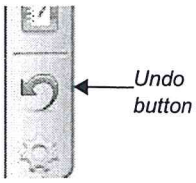

To save an image of the screen on which you were writing into a new Notebook page, choose **Save Ink**. To clear the writing but keep the Digital Ink Layer in place, choose **Clear Ink**. To remove the Digital Ink Layer and clear the writing, choose **Close Ink Layer**.

## Restoring your notes and drawings

If you accidentally clear your ink, you can restore your notes and drawings by pressing the **Click here to restore ink** icon, located in the lower right of the screen. You can then use the **Capture writing** button to save your notes.

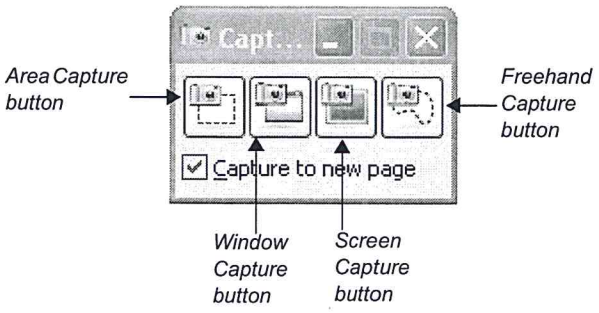


If you do not see the **Click here to restore ink** message or don't reach it before it disappears, press the **Undo** button in the Floating Tools toolbar to restore your notes and drawings.




## Advanced feature – Capturing your notes and drawings

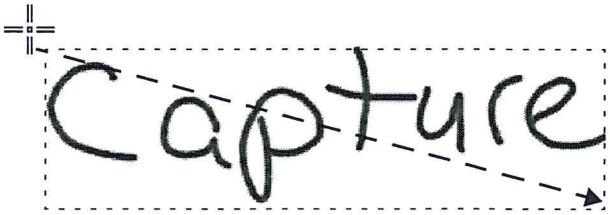
If you wish to capture a specific area of your screen, press the SMART Board icon located in the Windows Notification Area at the bottom right of your screen. Choose **Other SMART Tools > Screen Capture Toolbar...** from the menu to launch the Screen Capture Toolbar.




To capture an area of your desktop, follow these steps:

1 Press the **Area Capture** button on the Floating Tools toolbar. The Area Capture tool will appear.

2 Press on any corner of the area you wish to capture and, continuing to press, drag the selection box until it surrounds the entire area



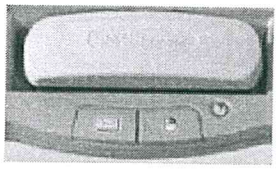

3 Release your press and your selection will be captured as a graphic into Notebook software. If Notebook software is not already open, it will open automatically when you capture a portion of your screen. Save your Notebook file by selecting **File > Save**.

## Review questions: Getting started

1 Name the three components required to operate a SMART Board interactive whiteboard.

2 How do you know when the interactive whiteboard is ready to be used?

3 Circle the pen-tray button that launches the On-Screen Keyboard.



4 Describe one way to begin the orientation process.

5 How do you right-click on the interactive whiteboard?

6 Name two ways to restore writing that was cleared when you closed the Digital Ink Layer.

## Review answers: Getting started

**1** Name the three components required to operate a SMART Board interactive whiteboard.

Interactive whiteboard
Computer
Projector

**2** How do you know when the interactive whiteboard is ready to be used?

The Ready Light is a steady green.

**3** Circle the pen-tray button that launches the On-Screen Keyboard.

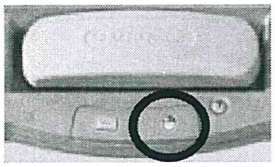


**4** Describe one way to begin the orientation process.

Press and hold the keyboard button and the right-mouse button on the pen tray simultaneously.

**5** How do you right-click on the interactive whiteboard?

Press the right mouse button on the pen tray to have your next press on the interactive whiteboard recognized as a right-click.



**6** Name two ways to restore writing that was cleared when you closed the Digital Ink Layer.

Press the Undo button on the Floating Tools toolbar.
Press the Click here to restore ink icon in the lower right of the screen.

# Hands-on practice: Basic functionality

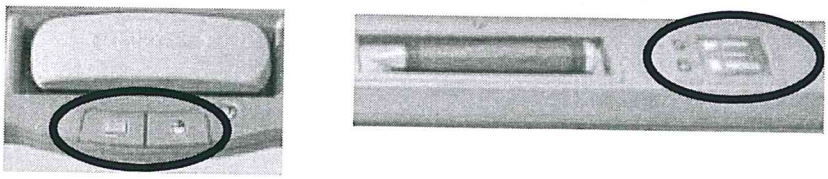
Your school or company has just moved one of your SMART Board interactive whiteboards into a new room because you were unable to access the Internet from the old location. You will be the first person to use it in the new environment and will be showing everyone how to use it and the Internet together.

You have learned through experience that whenever a piece of technology gets moved, it's a good idea to test it before you deliver a lesson or presentation. The computer, interactive whiteboard and projector appear to be working properly when you turn everything on. However, when you double-press the Internet browser icon on your desktop, your cursor appears a few inches away from your finger press.

## Orienting your SMART Board interactive whiteboard

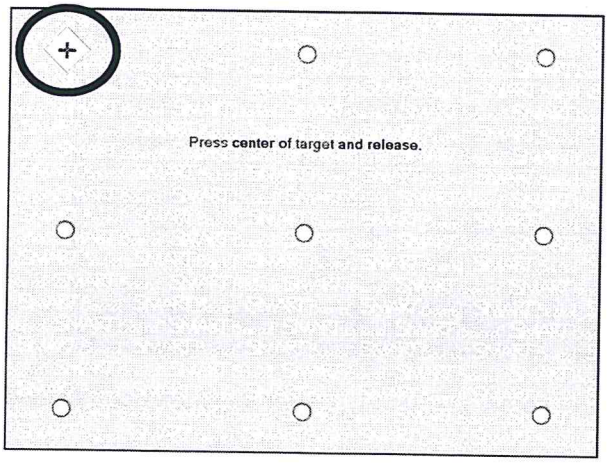
You remember that when the projector or interactive whiteboard moves location, you should orient the board. This action will tell the computer where the image of the desktop is being displayed on the surface of the interactive whiteboard.

1 To orient the interactive whiteboard, press and hold the **keyboard** button and the **right mouse** button simultaneously until the Orientation screen appears



*Pen-tray buttons*

2 Begin the orientation process at the upper-left corner of the Orientation screen. Press your finger or pen tool firmly on the center of each cross in the order indicated by the white, diamond-shaped graphic.




*The Orientation screen*

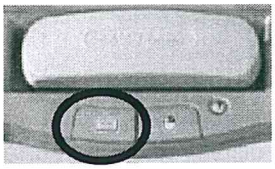
**NOTE**: The point is registered when you remove your finger, not when you first touch the Orientation screen.

## Testing basic functionality

It's a good idea to test the basic functionality of your interactive whiteboard to ensure all the applications you will be using to deliver your lesson or presentation are working properly.

1 Using your finger, double-press on the Internet browser icon (e.g., Internet Explorer®) to launch the Internet

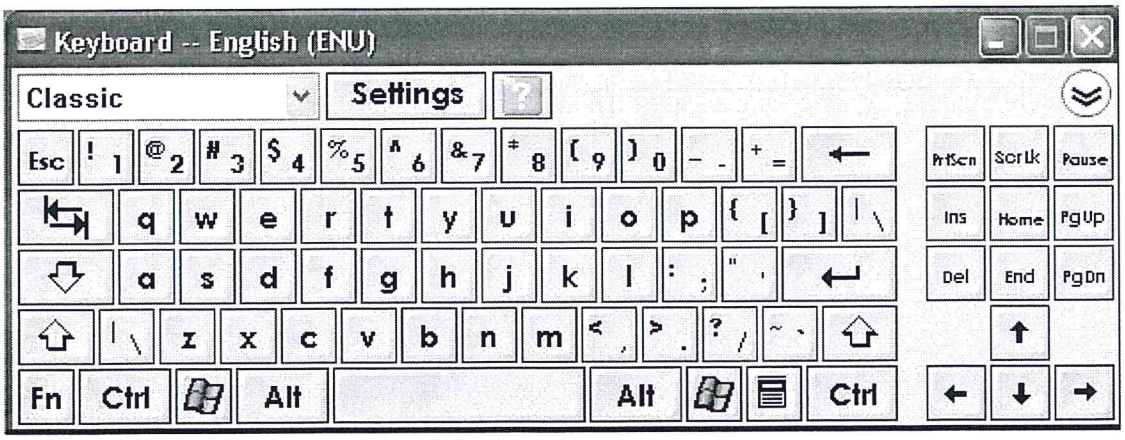
2 Press the **On-Screen Keyboard** button on the SMART Pen Tray



3 Press once inside your Internet browser's address bar to select the website address




4 Using the On-Screen Keyboard, type *www.google.com*




**NOTE**: The On-Screen Keyboard is a single point of contact. Touch-typing or keystroke combinations are not possible.

5 Press the **Go** button beside your Internet browser's address bar



6 Pick up a pen tool from the pen tray. The Digital Ink Layer will appear, as shown by a visible border around the desktop. The border indicates you can write on the desktop, and it remains in place until you close it or navigate to a different application.




7 Using a pen tool, circle the browser's Back button

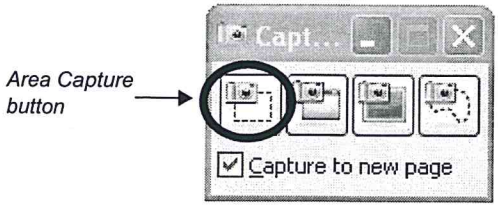
8 Return the pen tool to the pen tray, and touch the interactive whiteboard once. Choose **Clear ink** from the menu to erase your ink. Press the **Click here to restore ink** icon at the bottom right of the screen to bring the circle back.




You have now confirmed that you can clear your notes by touching the interactive whiteboard, then restore your notes by pressing the **Clear here to restore ink** icon.

9 To ensure you will be able to capture and save important information for a future lesson or presentation, launch the Screen Capture toolbar by pressing the SMART Board icon located in the Windows Notification Area at the bottom right of your screen. Choose **Other SMART Tools... > Screen Capture Toolbar...** from the menu.

10 Press the **Area Capture** button



**11** Press the interactive whiteboard and, without releasing pressure, drag the selection box using your finger to outline the circle around your browser's Back button. Release your press to capture the image to Notebook software.




**NOTE:** Notebook software will open automatically, and your notes and background will be saved to a new Notebook page.

**12** Clear the circle from your browser's Back button

**13** Select the unsaved Notebook file from the taskbar to view your captured image in Notebook software. Select **File > Save** to save your notes for future reference.



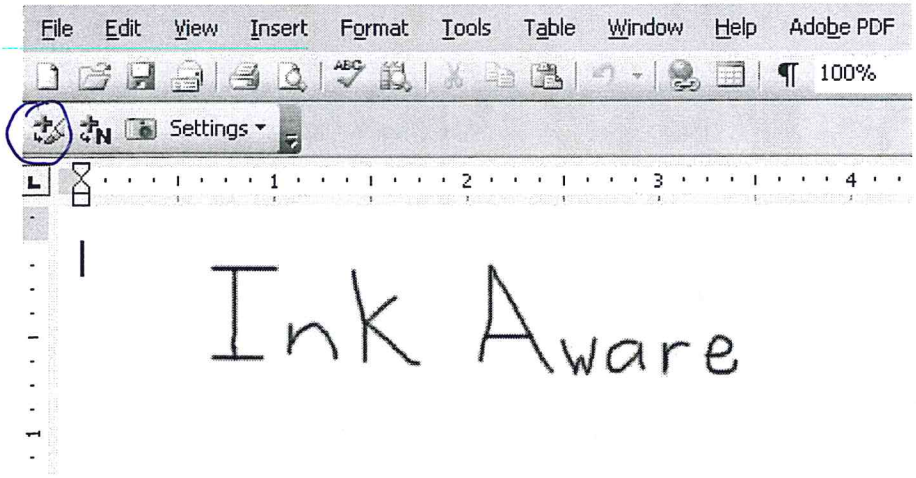
# Working with Ink Aware applications

## What is Ink Aware?

When software is Ink Aware, you can write and draw directly into the active file. For example, if you write a note or draw something while using Microsoft® Word software, you can save your Word file and your notes will be visible the next time you open it.

## How do Ink Aware applications work?

Ink Aware applications recognize which area of the software is the active work area and which area is used for buttons and toolbars.




## Which applications are Ink Aware?

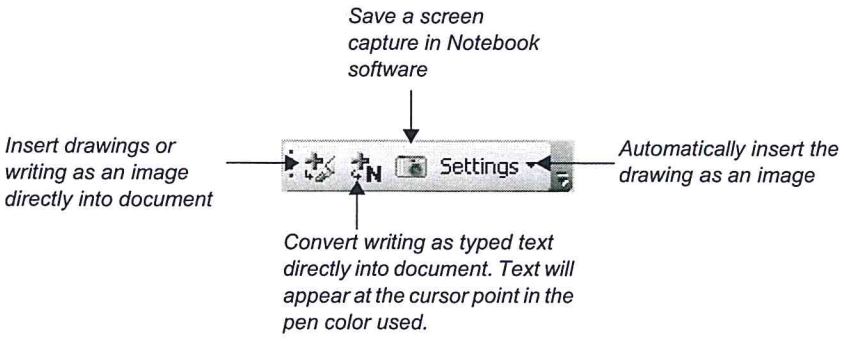
| | |
|---|---|
| **Microsoft Office** | Microsoft Word, Microsoft Excel®, OpenOffice Calc, OpenOffice Writer |
| **Graphic applications** | CorelDRAW®, OpenOffice DRAW, Microsoft Imaging, Corel® Grafigo™ 2, Microsoft Paint®, ArcView, Autodesk® DWF Composer 2.0, Volo® View Express |
| **Presentation applications** | Microsoft PowerPoint®, Corel Presentations™, Microsoft Office Live Meeting, Microsoft NetMeeting® 2.0/2.1/3, OpenOffice Impress |
| **Other applications** | AutoCAD®, AutoVue™ Professional, Microsoft Windows® Journal, Microsoft Office OneNote®, Microsoft Visio®, Adobe® Acrobat® Professional 6.0/7.0/8.0 |

This section will focus on the most commonly used applications – Microsoft Word, Excel and PowerPoint.

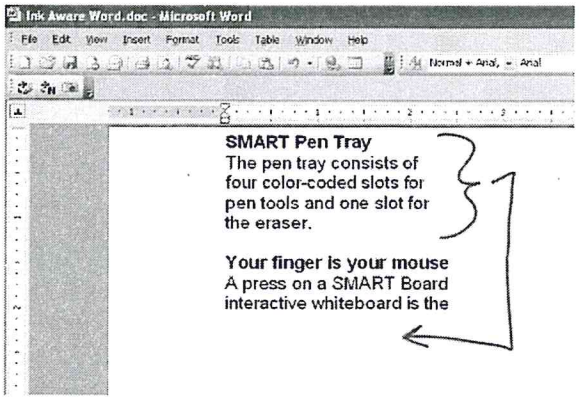
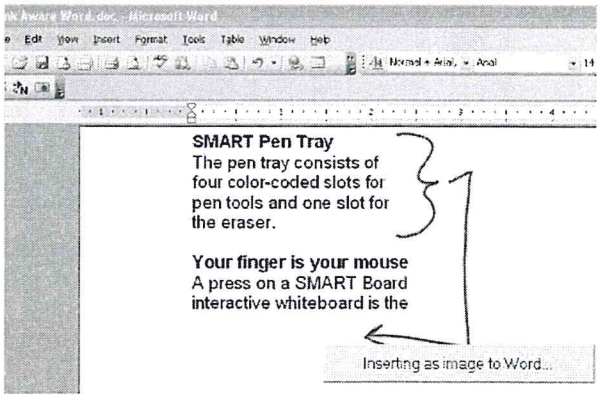
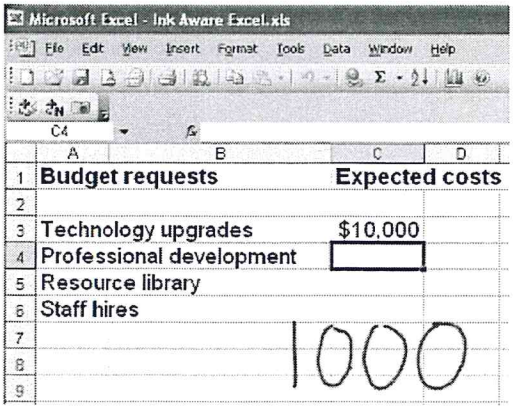
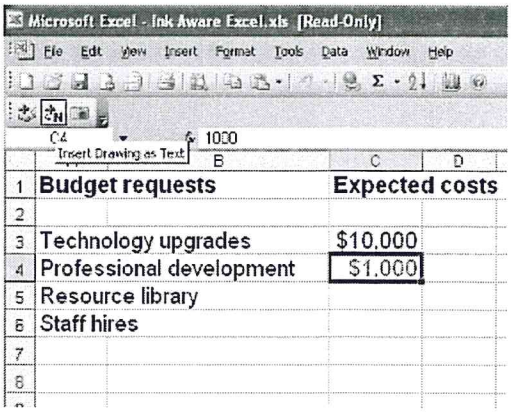
① Write large
② Write horizontally

# Microsoft Word and Excel software

When using Word or Excel software with your SMART Board™ interactive whiteboard, you will notice four buttons. They may be integrated with the application toolbar or separated as a floating toolbar.



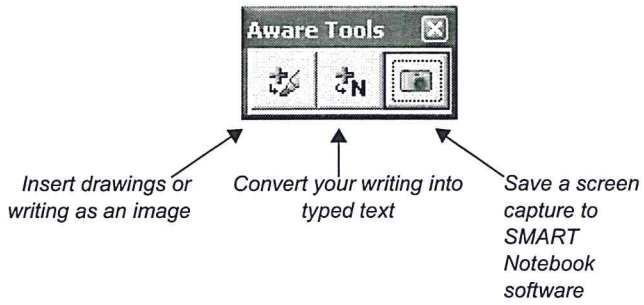

If you do not see this toolbar, select **View > Toolbars > SMART Aware Toolbar**.

| Word example: Pressing the **Insert as Image** button | |
|---|---|
| Before you press the button, the image is not part of the Microsoft Word document. It can only be seen on the interactive whiteboard. | Press the button and the image becomes part of the Microsoft Word document. |
|  |  |
| **Excel example: Pressing the Insert as Text button** | |
| Before you press the button, the image is not part of the Excel software file. It can only be seen on the interactive whiteboard. | Press the button and the text becomes part of the Excel software file. |
|  |  |

## Microsoft PowerPoint software

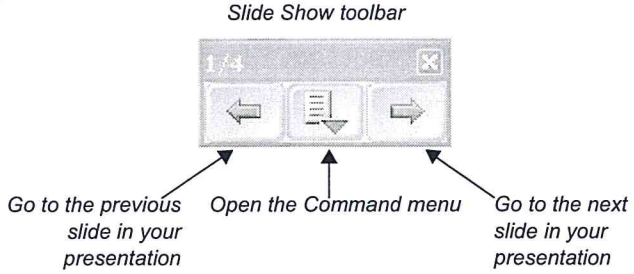
When you work with PowerPoint software in Normal view on an interactive whiteboard, you can save your hand-written notes as images or text and save screen captures to SMART Notebook software, just as you can when using Microsoft Word or Excel software. Ink Aware features can be accessed through the Aware Floating Tools, which launches when you pick up a pen tool to write notes or make drawings. Note that you will only see this toolbar when you are in Normal view.

*Aware Floating Tools*




When you present with PowerPoint software on an interactive whiteboard, you can also save your notes as images and save screen captures to SMART Notebook software. Ink Aware applications can be accessed through the Slide Show toolbar, which launches when you enter Slide Show view. Note that you will only see this toolbar when you are in Slide Show view.

*Slide Show toolbar*




**TIP:** You can go to the next slide of a PowerPoint software presentation by pressing twice on the interactive whiteboard, making the second press to the right of the first. To go to the previous slide, make the second press to the left of the first.

## The Command menu

Press the center button on the Slide Show toolbar to launch the Command menu.



*Capture an image of the current slide to SMART Notebook software* → Capture to Notebook

Insert Drawing as Image ← *Save your notes directly into your PowerPoint presentation file*

*Delete your notes from the page* → Clear Drawing

Add Blank Slide ← *Add an additional slide to your presentation*

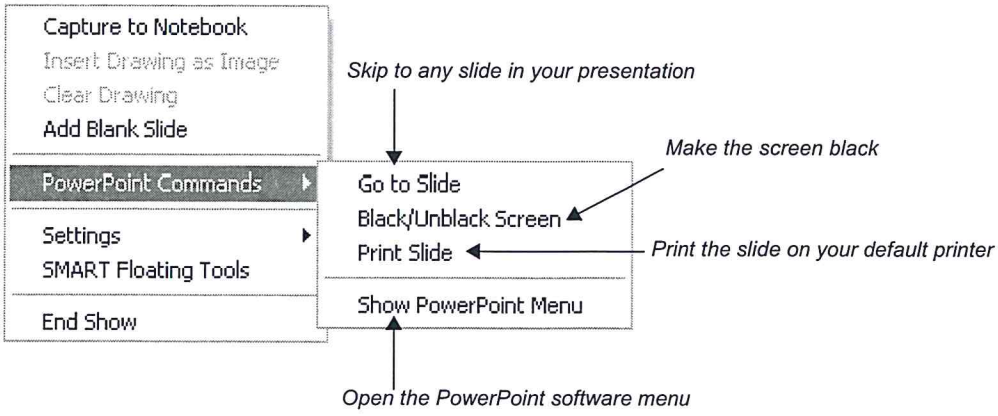
*Launch the PowerPoint Commands submenu* → PowerPoint Commands

Settings ← *Launch the Settings submenu*

*Launch the Floating Tools toolbar* → SMART Floating Tools

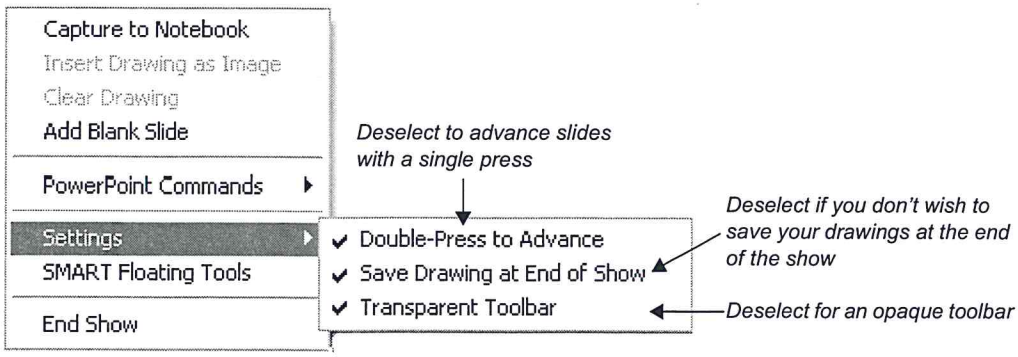
End Show ← *End the slide show*

## PowerPoint Commands submenu



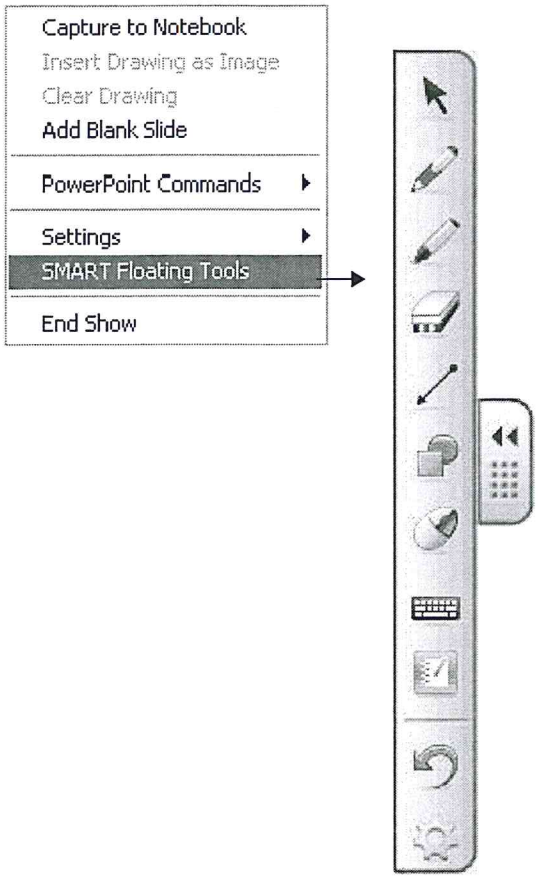

**TIP:** Use the **Black/Unblack Screen** command when you would like to draw the attention of your class or audience away from the screen and to the presenter. Press twice in rapid succession anywhere on the screen to resume your slide show exactly where you left off.

## Settings submenu



## SMART Floating Tools toolbar

The Windows Operating System taskbar and notification area are hidden when you are presenting a PowerPoint software slide show. You can still launch the Floating Tools toolbar by selecting **SMART Floating Tools** from the Command menu.




**TIPS:**

1. Use the Ink Aware toolbar buttons to convert your notes directly in Microsoft Word and Excel software
2. The Slide Show toolbar in PowerPoint software allows you to control a PowerPoint software presentation while you are at your SMART Board interactive whiteboard
3. You can launch the Floating Tools toolbar during a PowerPoint software slide show by selecting **Slide Show Toolbar > Command Menu > SMART Floating Tools**

## Review questions: Ink Aware

1 Describe the function of each of the buttons on the Ink Aware toolbar that appears in Microsoft Word software.

2 Describe how to insert digital ink as text into a selected cell of an Excel software spreadsheet.

3 Describe how to save writing on a PowerPoint slide into SMART Notebook software when in Slide Show view.

4 Describe how you would save your notes and drawings to PowerPoint software files.

## Review answers: Ink Aware

**1** Describe the function of each of the buttons on the Ink Aware toolbar that appears in Microsoft Word software.

- Insert as Image: Inserts notes as an image into the document or spreadsheet
- Insert as Text: Converts notes into typed text and inserts them into the document or spreadsheet
- Capture to SMART Notebook: Captures the visible active work area into SMART Notebook software
- Settings allows drawings to be automatically inserted into the document as an image

**2** Describe how to insert digital ink as text into a selected cell of an Excel software spreadsheet.

To save digital ink as text, press the **Insert as Text** button on the Ink Aware toolbar

**3** Describe how to save writing on a PowerPoint slide into SMART Notebook software.

Press the center button on the three-button Slide Show toolbar and select **Capture to Notebook**. Both the slide and the notes will be captured as an image to SMART Notebook software.

**4** Describe how you would save your notes and drawings to PowerPoint software files.

Press the center button on the three-button Slide Show toolbar and select **Insert Drawing as Image**.

If you do not save your notes and move forward to the next slide, you will be prompted to save your notes when you end the slide show. This option can be deselected in the Settings submenu.

# Hands-on practice:
# Ink Aware and Microsoft Word software in the classroom

## Before you start

Before you begin your class, ensure that your computer is turned on and the SMART Board interactive whiteboard is connected and oriented.

This hands-on practice assumes you have a basic understanding of the Microsoft Windows operating system.

## Preparation

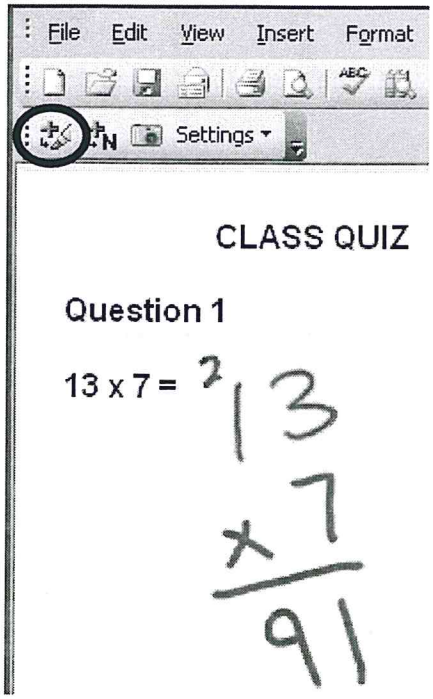
Create a short, two-question quiz. In a real-world example, you would open a quiz prepared in advance.

1. Open a blank document in Word
2. Type a mathematical equation using your computer's keyboard – for example, *13 x 7 =*. Press the **Enter** key several times to give your students space to show their work.
3. Type *Complete the following sentence with either "quick" or "quickly."* Press the **Enter** key twice, then type *When excited, she spoke very*

## Using Ink Aware in the classroom

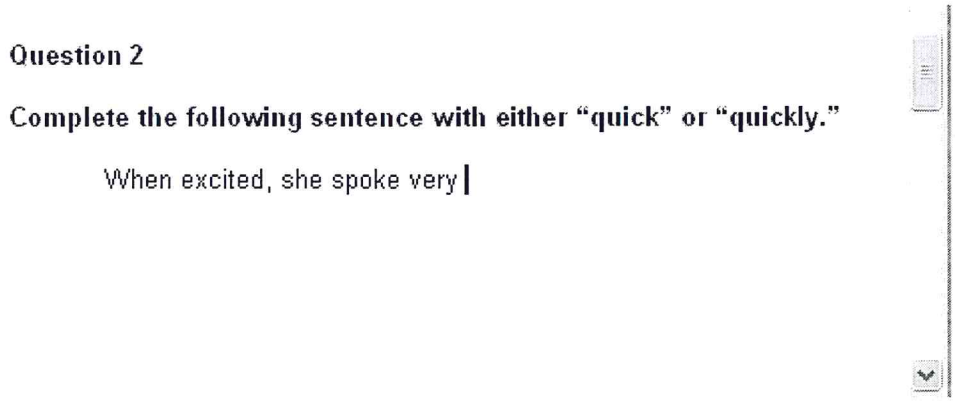
Your class has just completed the quiz you created in Word. Now you would like to review the answers as a group.

1. Use a pen tool from the SMART Pen Tray to demonstrate how to arrive at the correct answer on the interactive whiteboard. Put the pen tool back in the pen tray, and press the **Insert as Image** button to add the answer to your Word file.

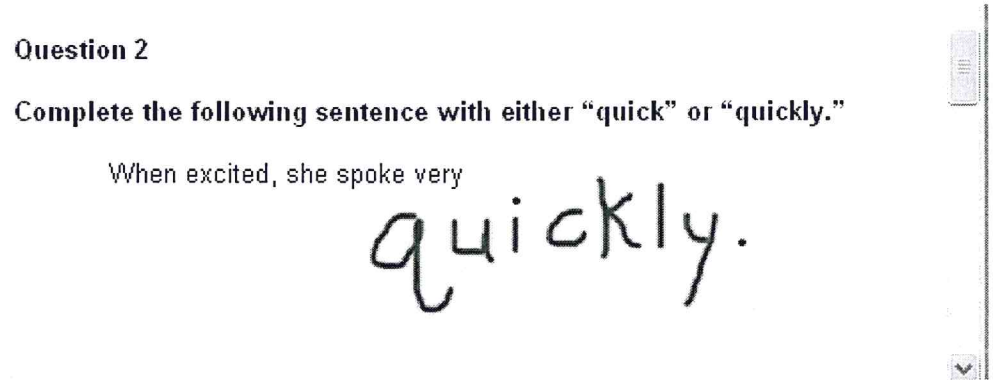


2 Move to the next quiz question. Discuss with your class when to use the word *quick* versus *quickly* in the sentence.

3 Touch the interactive whiteboard to place the cursor at the end of the sentence

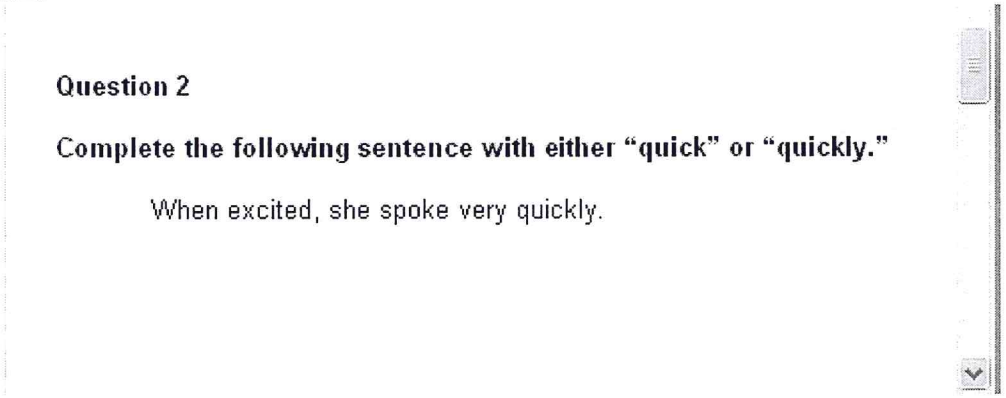



4 Use a pen tool from the pen tray to write the correct answer on the interactive whiteboard




5 Press the **Insert as Text** button to convert the correct answer to text. The text will appear at the cursor point in the pen color used.




6 Save your document in Word. Now you can e-mail or print copies and distribute the answers to your students.

# Hands-on practice:
# Ink Aware and Microsoft Excel software in the office

## Before you start

Before you begin your class, ensure that your computer is turned on and the SMART Board interactive whiteboard is connected and oriented.

This hands-on practice assumes you have a basic understanding of the Microsoft Windows operating system.

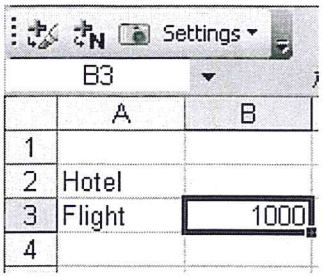
## Preparation

1 Open a blank spreadsheet in Excel software

2 Type *Hotel* in cell A2 on your computer's keyboard

3 Type *Flight* in cell A3

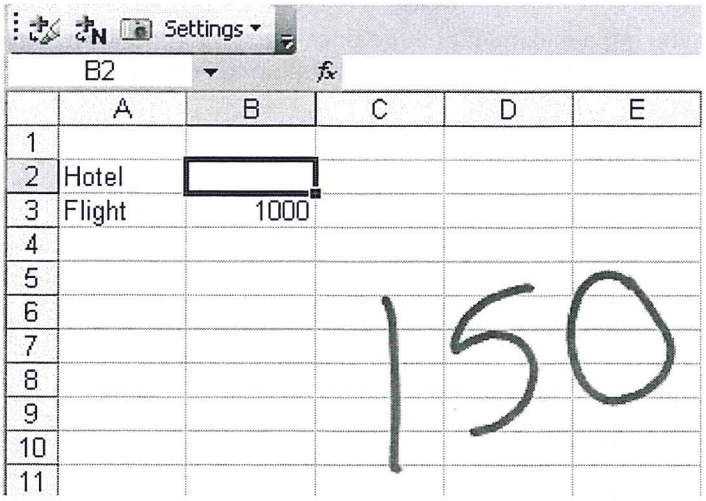
4 Type *1000* in cell B3



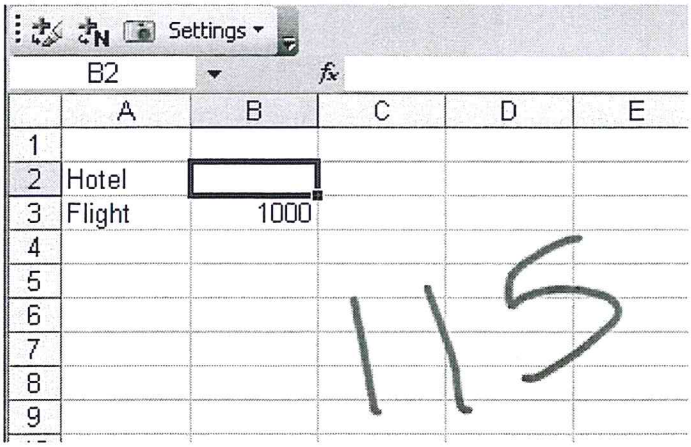

## Using Ink Aware in the office

Assume you and your colleagues are attending a conference in the near future. As a group, you prepared a travel request outlining the anticipated expenses. This request will be presented to the accounting department for approval.

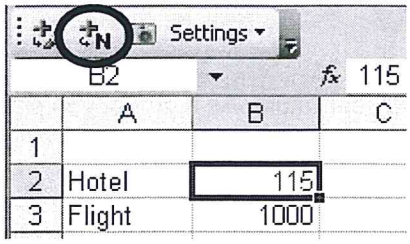
1 One group member states the hotel will cost $150 per night. Press the cell in the spreadsheet to highlight the cell in which the cost will be placed. Pick up a pen tool from the SMART Pen Tray and write *150* on the interactive whiteboard.



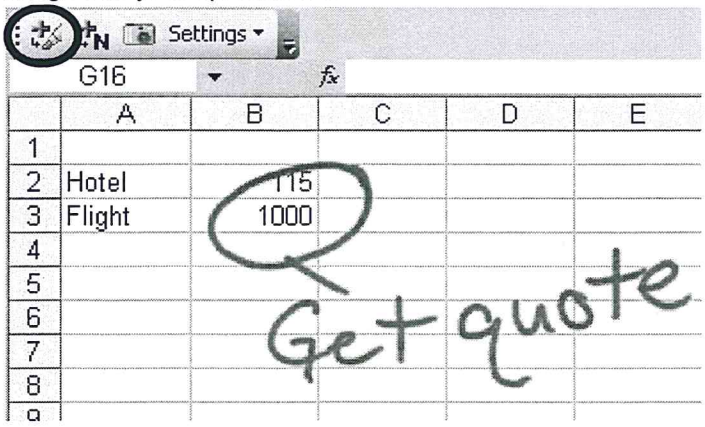
**2** Another group member declares the corporate rate for the hotel is only $115 per night. Put the pen tool back in the pen tray and press once on the interactive board to remove *150*. Then, press the cell in the spreadsheet into which the new cost will be placed. Write *115.*




**3** Press the **Insert as Text** button to add the hotel rate into the highlighted cell. Your text is inserted into the spreadsheet and will appear in the pen color used.




**4** Finally, your team lead suggests that you get a minimum of three price quotes for the flight. Circle the flight cost in cell B3 and write *Get quote*. Press the **Insert as Image** button to insert your note as an image into your spreadsheet.




**5** Save your spreadsheet as an Excel software file. Now you can update the travel request with your group's notes and e-mail it to the accounting department for approval.

# Hands-on practice: Using Microsoft PowerPoint software on a SMART Board interactive whiteboard

## Before you start

Before you begin, ensure that your computer is turned on and the SMART Board interactive whiteboard is connected and oriented.

This hands-on practice assumes you have a basic understanding of the Microsoft Windows operating system.

## Preparation

Assume your supervisor has requested a brief presentation on the topic of productivity in the office. The preliminary work on your presentation requires you to incorporate feedback and suggestions from your colleagues. The final presentation will be presented to your supervisor.

A sample PowerPoint software file is available at www.smarttech.com/media/trainingcenter/samplepresentation.ppt for this lesson. If this file opens in your Web browser, save it to your desktop and then reopen it.

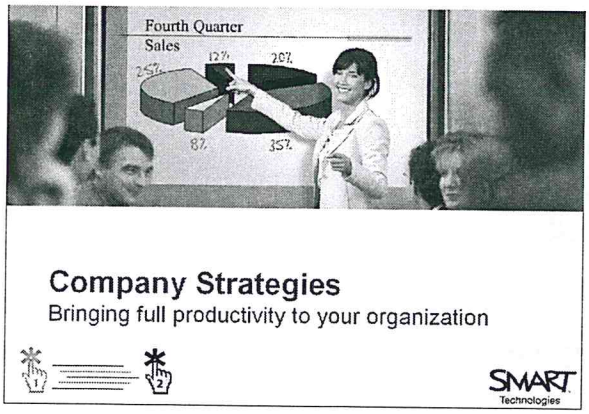
Alternatively, open an existing PowerPoint software presentation saved on your computer. The steps in this hands-on practice will still be applicable to you when using your own presentation with an interactive whiteboard.

## Presenting on an interactive whiteboard

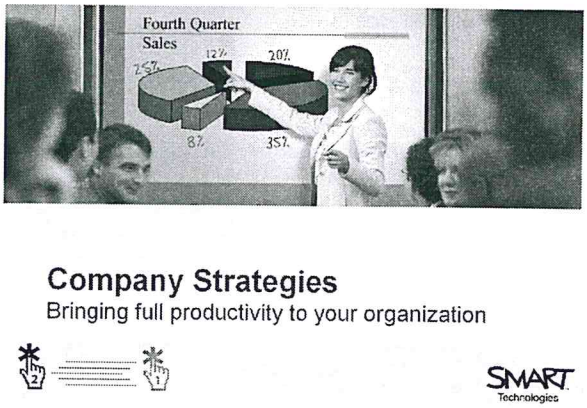
1 Select **View > Slide Show** to begin your presentation. The Slide Show toolbar automatically appears so you can navigate between slides.

2 Press the **Next Slide** button on the Slide Show toolbar to move forward one slide. Then press the **Previous Slide** button to move back one slide.

**TIP:** You can go to the next slide of a PowerPoint software presentation by pressing twice on the interactive whiteboard, making the second press to the right of the first. To go to the previous slide, make the second press to the left of the first.



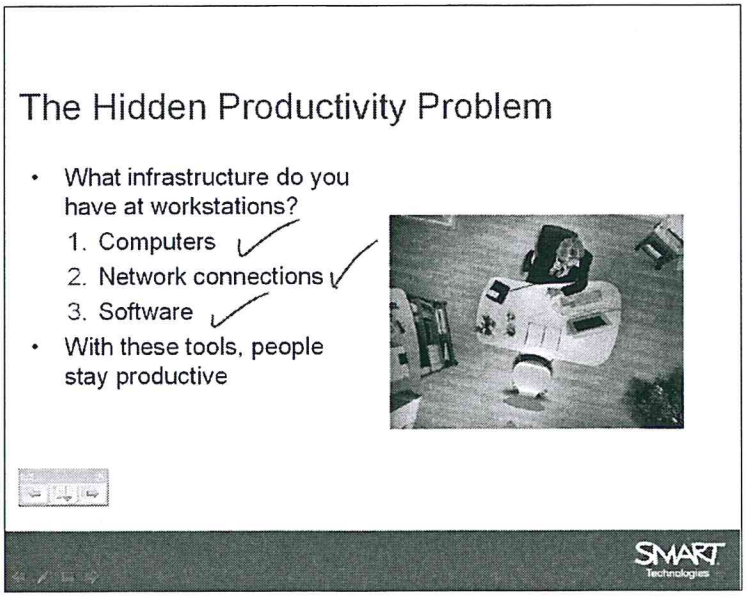

*Press twice. A second press to the right will move to the next slide.*




*Press twice. A second press to the left will move to the previous slide.*

3 Advance the slide show by pressing twice on the interactive whiteboard, remembering to make the second press to the right of the first

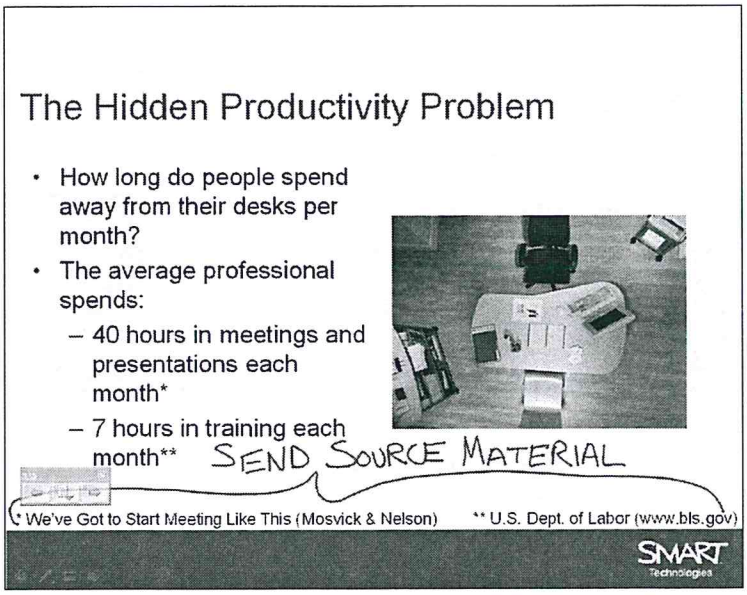
4 For emphasis, you want to draw your audience's attention to the items listed on your PowerPoint slide. Pick up a pen tool from the SMART Pen Tray and place a check mark beside each point as you discuss it with your colleagues.




5 After the discussion, you decide to remove the check marks. Return the pen tool to the pen tray and touch the interactive whiteboard once with your finger to clear your notes.

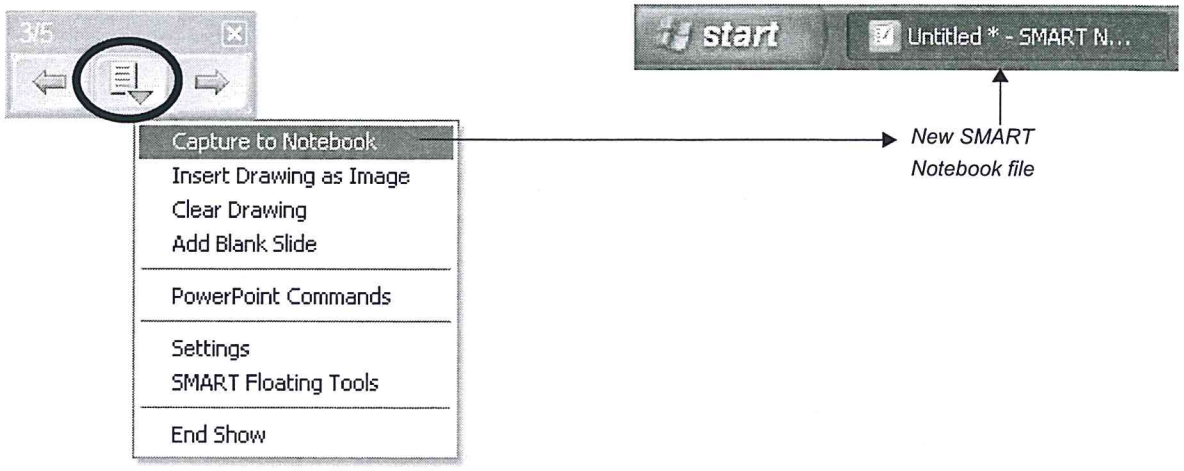
6 Use the Slide Show toolbar, or press twice on the interactive whiteboard to advance to the next slide

7 Your colleagues take an interest in the statistics you referenced on your PowerPoint slide and ask you to send them the source material. Record their request as a note to remind yourself to get back to them later. Pick up a pen tool from the pen tray and write *send source material*.



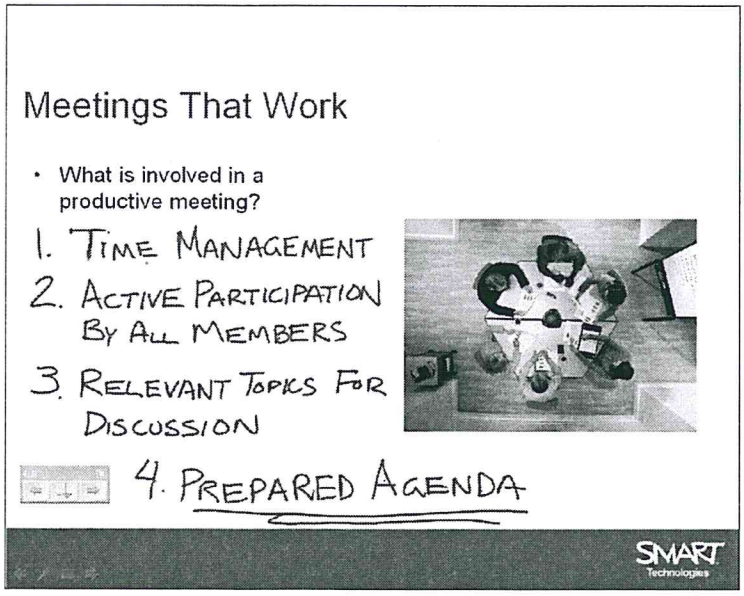

8 Return the pen tool to the pen tray

**9** Since you want to follow up on your note, but you don't want to save it as a permanent part of your presentation, press the **Menu** button on the Slide Show toolbar and select **Capture to Notebook** from the drop-down menu. SMART Notebook software will open automatically and an image of your PowerPoint slide with your written reminder will be inserted into a new SMART Notebook file.



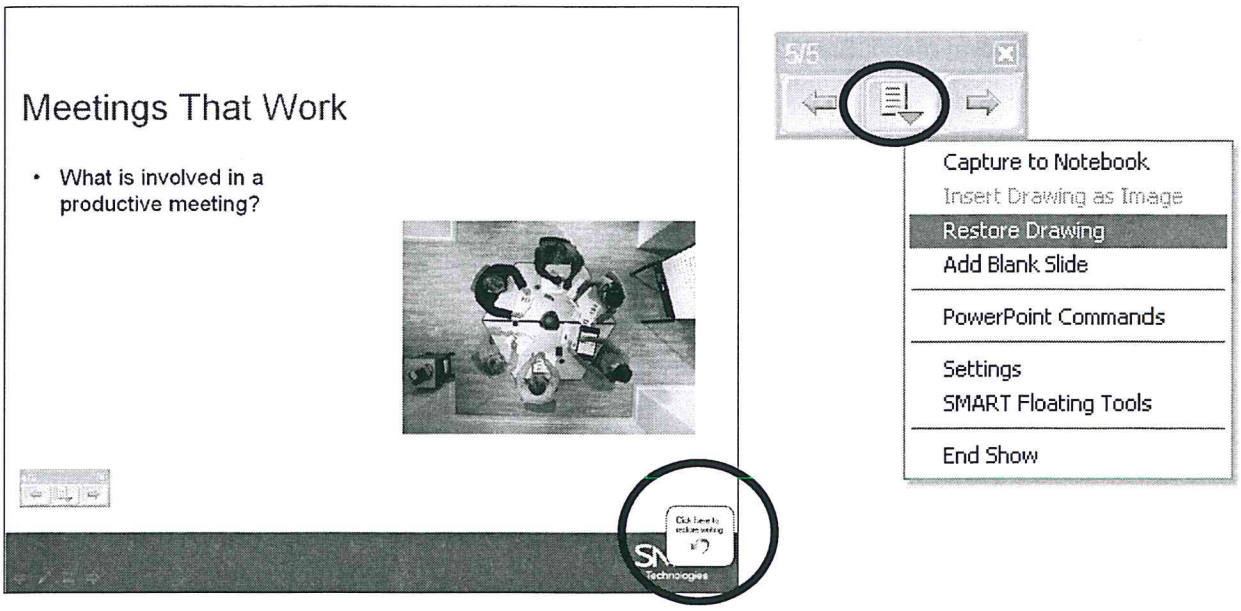

**10** Now that your reminder has been captured to SMART Notebook software, press once on the interactive whiteboard to erase your note from your PowerPoint software presentation. Advance to the next slide.

**11** The next slide in your presentation requires feedback from your colleagues. Pick up a pen tool from the pen tray, and record their suggestions.




**12** Oops! After putting the pen tool back in the pen tray, you accidentally erased your notes. What if you had wanted to save that information?

Before you pick up the pen tool again, press the **Click here to restore writing** icon that appears in the bottom-right corner of the screen. Your notes will reappear on the slide.




**TIP**: If the **Click here to restore writing** icon disappears from the interactive whiteboard, don't worry. Click the **Menu** button on the Slide Show toolbar and select **Restore Drawing.**

**13** You are ready to end your presentation. Press the **Menu** button on the Slide Show toolbar and select **End Show** from the drop-down menu. Select **Yes** in the SMART Aware message box to add your notes to your PowerPoint software presentation.

**14** Select **File > Save** to save your notes into your original presentation, or select **File > Save As** to save to a new PowerPoint software file. Close your presentation.

**15** Now select the unsaved SMART Notebook file created earlier in the lesson. Select **File > Save** to save your notes for future reference.



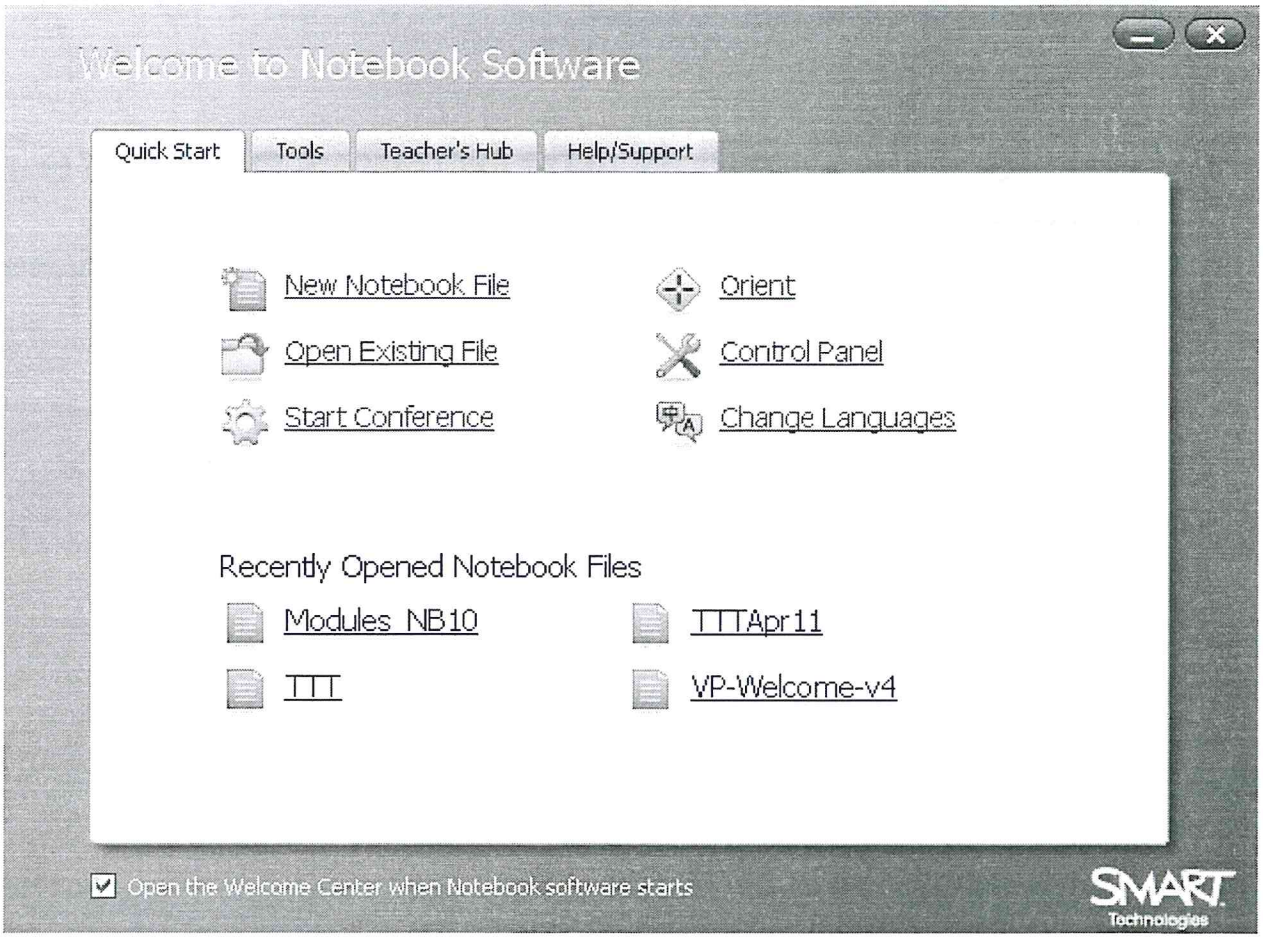
# Basics for SMART Notebook software

## What is SMART Notebook software?

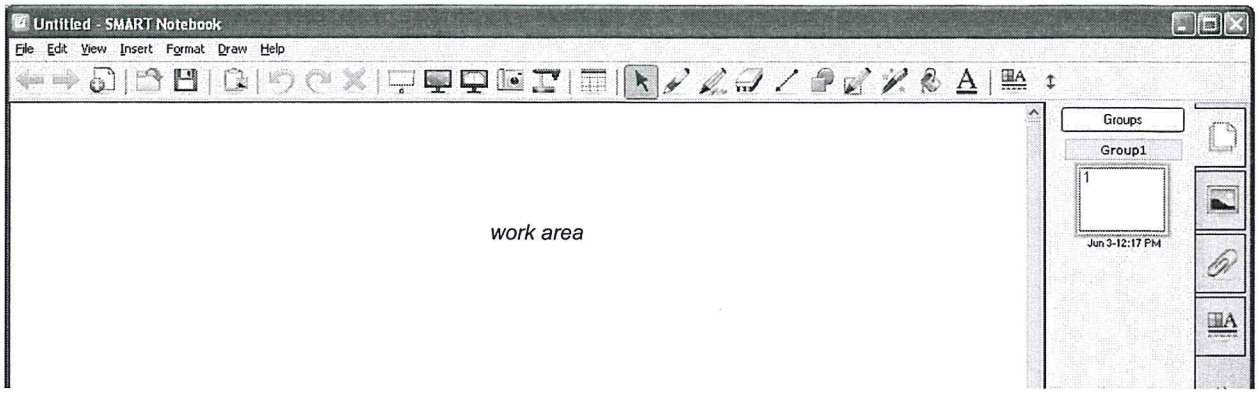
SMART Notebook software is SMART's interactive whiteboard software. Use it in the classroom to create engaging and interactive lesson activities.

## Using Notebook software for the first time

To launch Notebook software, double-click the SMART Notebook icon on the desktop. Or, click the **Start** button in the bottom left of your screen, and select **Programs > SMART Board Software > SMART Notebook**. The *Welcome to Notebook Software* screen will appear.




When you click *New Notebook File*, a new file will open. Each new SMART Notebook file contains a work area that can be filled with objects. You can add handwritten notes, typed text, graphics, clip art and Flash® files to a SMART Notebook file. A key feature of SMART Notebook software is the ability to add as many pages as you need to capture or display information.



## SMART Notebook software menu bar

The SMART Notebook software menu bar provides access to many of the same tools and features found on the SMART Notebook software toolbar, and some additional tools. Click on the menu item you wish to access.




| Menu item | Functions |
|---|---|
| File | • Open new or existing files<br>• Save a file<br>• Save As – save a file for the very first time, save a file with a new name or save the file in a new location<br>• Save the current page as a Gallery item<br>• Import a variety of file formats<br>• Export content to a variety of file formats<br>• Print files or modify print settings<br>• Send a file to a mail recipient as a Notebook file or a PDF<br>• Timed Saves – select how often you want your file to be automatically saved (it is a good idea to set this to 15 minutes)<br>• See a list of recently opened files |
| Edit | • Undo or redo previous actions<br>• Clone, cut, copy, paste or delete selected objects or all objects on the page<br>• Edit a text object<br>• Select all unlocked or all locked objects on the page<br>• Clear or delete the current page |
| View | • Change the current side tab view (Page Sorter, Gallery, Attachments)<br>• Move to the next or previous page<br>• Launch the Screen Capture or Screen Shade tool<br>• Hide the side scrollbar<br>• Customize the toolbar<br>• Change the view to full screen<br>• Zoom to magnify or reduce your view of page contents<br>• Show All Links<br>• Select the language SMART Notebook software displays |
| Insert | • Add a blank page, a picture, a graphics file, a Flash file, a Flash video file or a Gallery item. Add a link, a sound file or a table. |

| Menu item | Functions |
|---|---|
| Format | • Change font styles (bold, underline, italic)<br>• Set object properties (color, line width, line style, fill, transparency)<br>• Lock object properties and position<br>• Infinitely clone a selected object<br>• Change the background color of a page<br>• Create or set page themes<br>• Set alignment guide defaults |
| Draw | • Group, ungroup, flip or order objects<br>• Select objects<br>• Access Pen, Creative Pen and Eraser tools<br>• Create shapes and lines text<br>• Select the fill tool<br>• Select a default font face, size and color |
| Help | • Access the SMART Notebook software Help file<br>• Check for software updates<br>• Participate in the Customer Experience Program<br>• Access information about SMART Notebook software |

**TIP:** You can also access the SMARTNotebook software menu bar drop-down menus by holding down *Alt* or *Ctrl* and tapping the underlined letter in the menu item (e.g., Edit is *Alt* + *e* and Save is *Ctrl* + *s*).

## SMART Notebook software toolbar

The SMART Notebook software toolbar provides access to a number of tools to help you work with your Notebook file. By default, the toolbar appears at the top of the SMART Notebook page.



| Button | Use this tool to | Button | Use this tool to |
|---|---|---|---|
| | Display the previous SMART Notebook page | | Insert a table |
| | Display the next SMART Notebook page | | Select any object on the page with your finger or mouse |
| | Insert a blank SMART Notebook page directly after the active page | | Write or draw on the SMART Notebook page with the pen tool |
| | Open an existing SMART Notebook file | | Write or draw on the SMART Notebook page with the Creative Pen tool |
| | Save your SMART Notebook file | | Erase digital ink on the SMART Notebook page |
| | Paste copied object(s) into a SMART Notebook file | | Draw a line |
| | Undo the last action you performed | | Create a shape |
| | Redo the action you performed | | Draw a shape on the SMART Notebook page with the Shape Pen |
| | Delete any selected object | | Use the Magic Pen to zoom and spotlight, or write in disappearing ink |
| | Show/hide the Screen Shade on the current SMART Notebook page | | Use the current fill effect to fill an object |
| | Open Full Screen view | | Create a text-entry box for typing |
| | Launch Dual Page Display | | Modify properties of a selected object |
| | Launch the Screen Capture toolbar | | Move the toolbar to the bottom of the SMART Notebook page |
| | Activate the SMART Document Camera | | |

By default, the toolbar appears at the top of the SMART Notebook page. If you prefer, it may be more convenient to move the toolbar to the bottom of the page. To do this, click the double-ended, vertical arrow on the far right of the toolbar.

*Move toolbar tool*

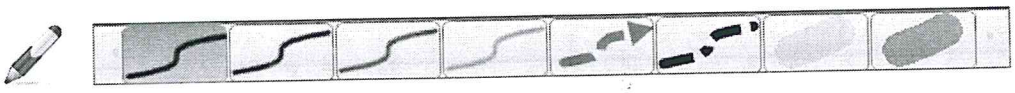


① Creative pens cannot turn to text.

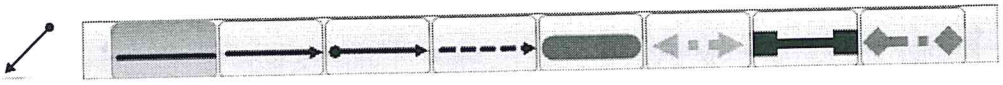
## More toolbar choices

When you click on some toolbar buttons, you are offered more options for creating SMART Notebook objects.

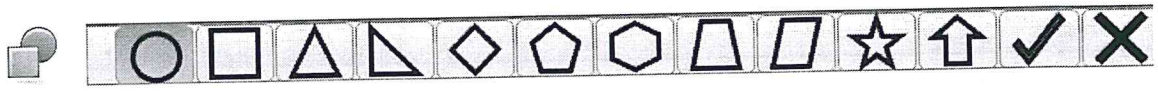
*Pen tool*



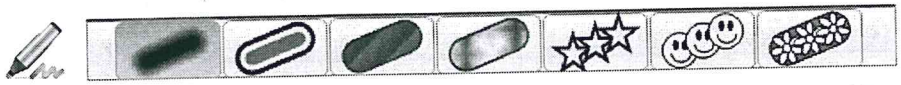
*Line tool*



*Shape tool*



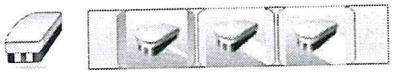
*Creative pen tool*



*Text tool*

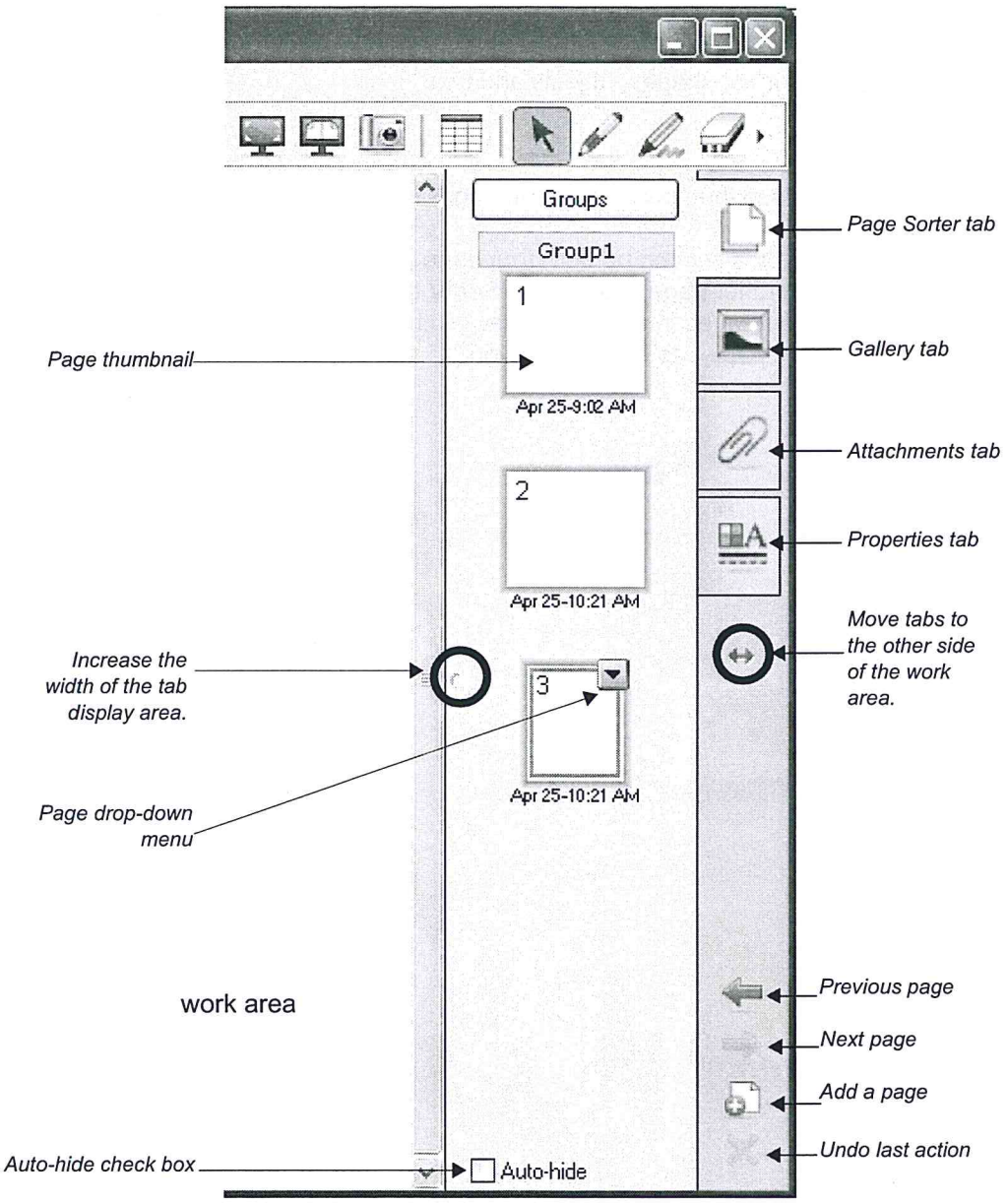



*Eraser tool*



## Side tabs

There are four tabs on the side of the SMART Notebook interface, which are shown below on the right-hand side of the work area. Click the double-ended horizontal arrow to move the tabs from one side of the work area to the other. You can hide the side tabs from view when you have finished working with them by selecting the **Auto-hide** check box.



Click the **Page Sorter** tab to see a thumbnail image of each page in the SMART Notebook file, navigate to a different page or reorder the pages.

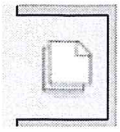
Click the **Gallery** tab to access collections of SMART's custom pages, clip art, Flash animations and video you can add to the SMART Notebook file.

Click the **Attachments** tab to add hyperlinks to or attachments from other software applications to the file.

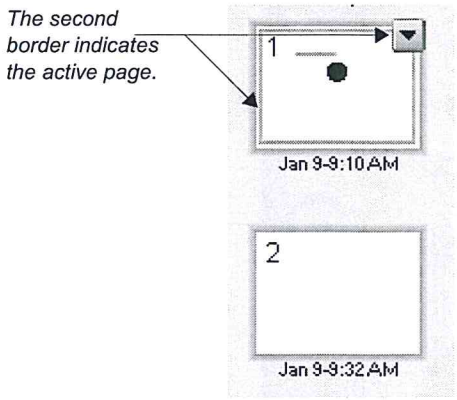
Click the **Properties** tab to format shapes, objects and text.

## Page Sorter tab

Click the **Page Sorter** tab to see thumbnails of all the pages in the SMART Notebook file.

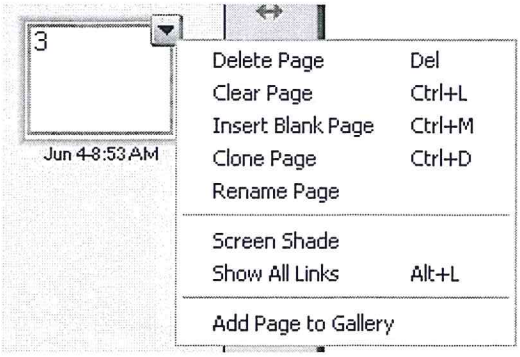


The active page is indicated by a second border around the thumbnail image and a drop-down menu. Clicking another page in the Page Sorter tab area makes that page active, and its contents are displayed in the work area. To change the page order, drag and drop the thumbnail of the page into its new location.



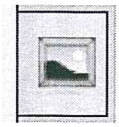
## Page Sorter drop-down menu

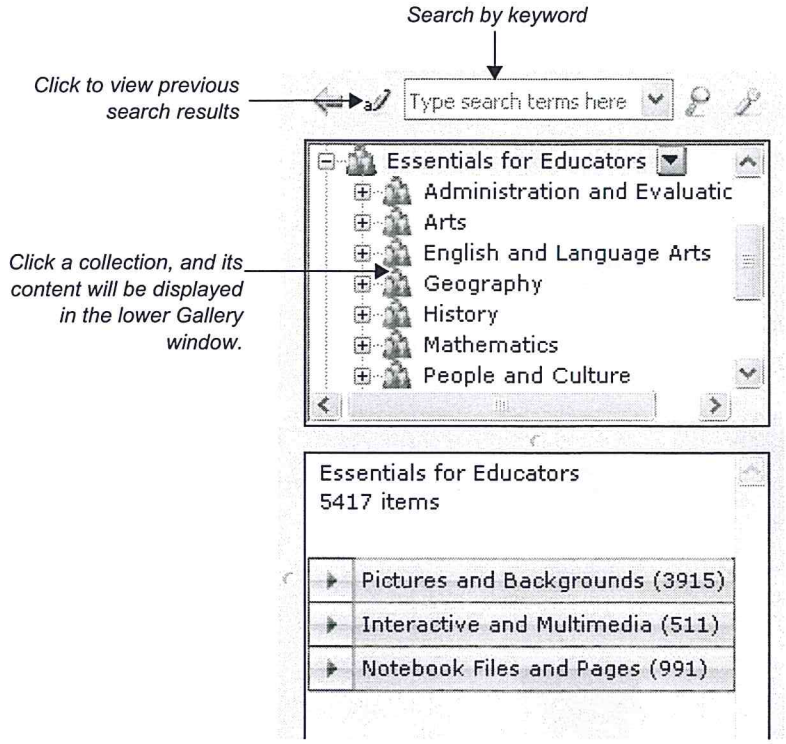
Clicking the drop-down menu on the active page presents you with eight options.




## Gallery tab

The Gallery in SMART Notebook software helps you quickly develop and deliver lessons in rich graphic detail. Thousands of images, pages, videos, Flash files and entire SMART Notebook files are organized into searchable collections that will allow you to create attractive, reusable lessons.



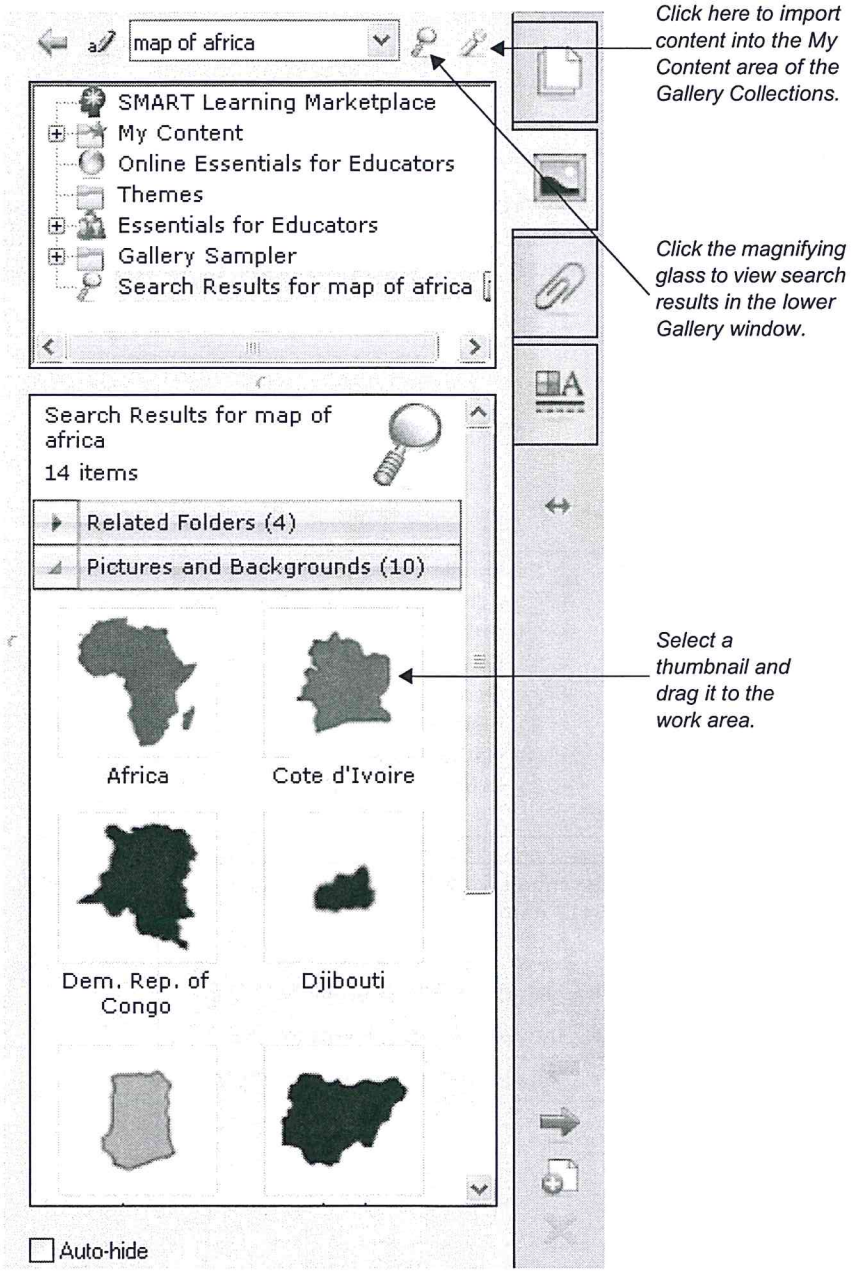


## Finding Gallery content

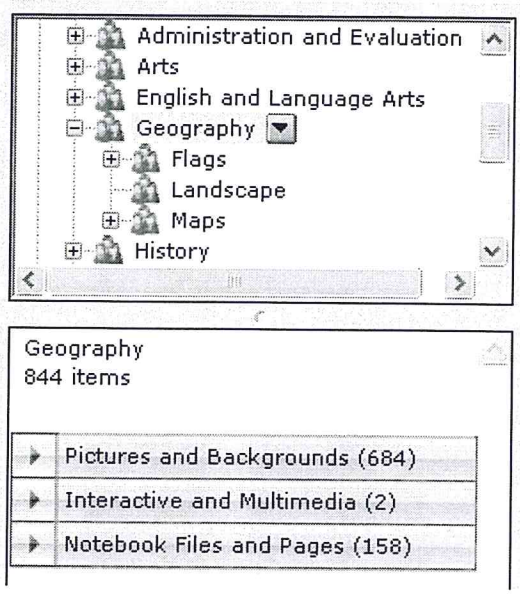
There are two ways to find content in the Gallery. The search field at the top of the Gallery tab allows you to search by keyword – much like using an Internet search engine. You can then browse the Gallery collections by selecting a folder.

To search for objects in the Gallery using the search field, follow these steps:

1. Click inside the search field
2. Type a keyword related to the type of object(s) you are looking for
3. Click the search button to display your results



Alternatively, you could browse through individual collections if you were looking for all the objects related to a general topic, such as *Geography*.




**TIP:** Search singular rather than plural terms for better search results.

## Objects in the Gallery

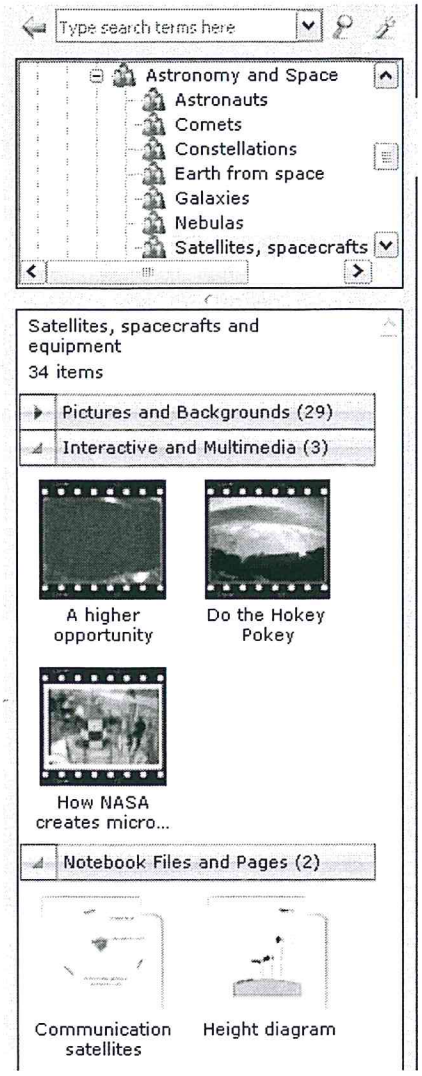
Objects are organized in the bottom area of the Gallery by Pictures and Backgrounds, Interactive and Multimedia, SMART Notebook Files and Pages, and Related Folders.

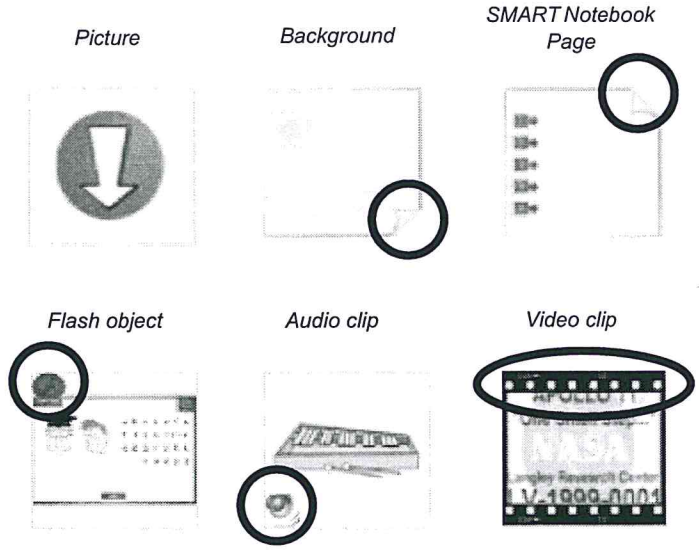
Double-clicking a folder thumbnail in the **Related Folders** area will show all the objects contained within that folder.

**Pictures and Backgrounds** contains backgrounds and objects such as graphics, photographs or text. You can drag an object to the work area to use as part of a lesson or to modify its properties. Drag a background to your SMART Notebook to change the color and design of the page. Backgrounds are recognizable by the folded edge in the bottom-right corner and will always be inserted behind all the objects already on the SMART Notebook page.

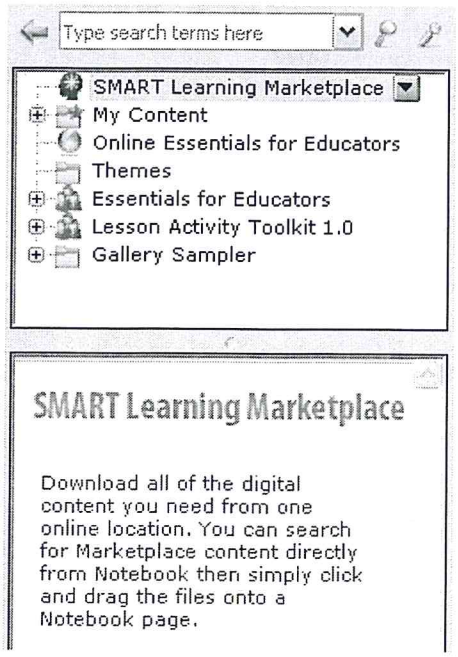
**Interactive and Multimedia** contains Flash objects, video files and objects with sound attached. Objects from this folder are used to add rich media content to a lesson or presentation.

Additional files and pages can be found in the **Notebook Files and Pages** sections of the Gallery. SMART Notebook page thumbnails are identified by the folded edge in the top-right corner. SMART Notebook files are recognizable by the coil binding on the left of their thumbnail images. Dragging a page or SMART Notebook file to the work area will insert a new Notebook page or series of pages directly after the active page.



## Online resources




Click the **SMART Learning Marketplace** or **Online Essentials for Educators** to access additional Gallery content and open education resources from the Internet.

These online resources require an active Internet connection and a Web browser.

The SMART Learning Marketplace is available by subscription.

## My Content

The My Content area is a Gallery collection reserved specifically for objects you have imported, captured or created. It is a good place to store objects that you will use in multiple presentations. To add an item to the My Content area, drag an item from the work area to the My Content area.

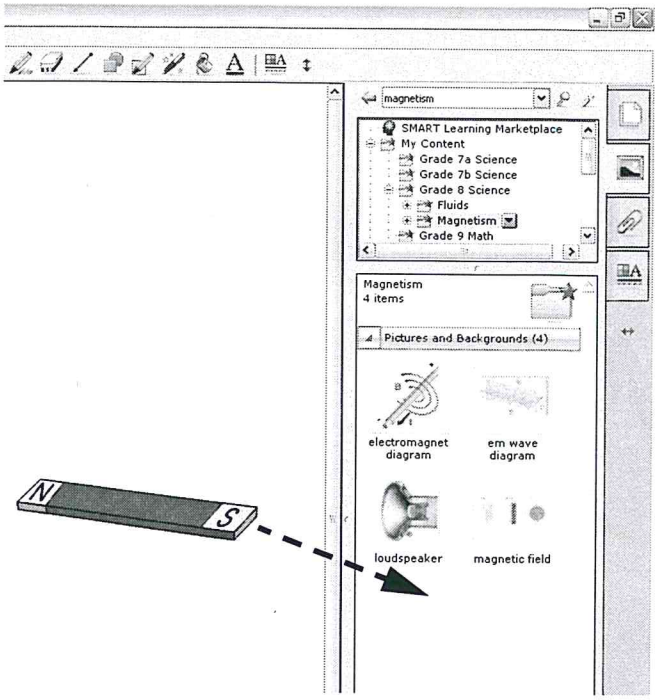
If you often use a particular page layout, you can store a SMART Notebook page as a thumbnail in the My Content area. All the objects associated with the stored page retain their properties. To reuse the stored page, drag its thumbnail from the My Content area to the work area.

You can also store an entire SMART Notebook file in the My Content area. You might do this if you want to give a presentation multiple times. To launch a SMART Notebook file from the My Content area of the Gallery, drag it to the work area.

To import other SMART Notebook files from your computer, follow these steps:

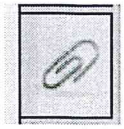
1. Click **My Content** and click the page drop-down menu arrow
2. From the drop-down menu, click **Add to My Content** to launch the *Add to My Content* dialog box
3. Browse to the file you would like to add
4. Click the file you would like to add
5. Click the **Open** button

Your file will appear as a thumbnail in the My Content area of the Gallery.

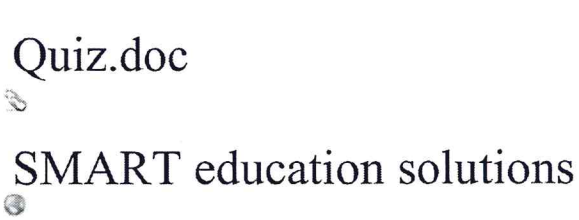


## Attachments tab

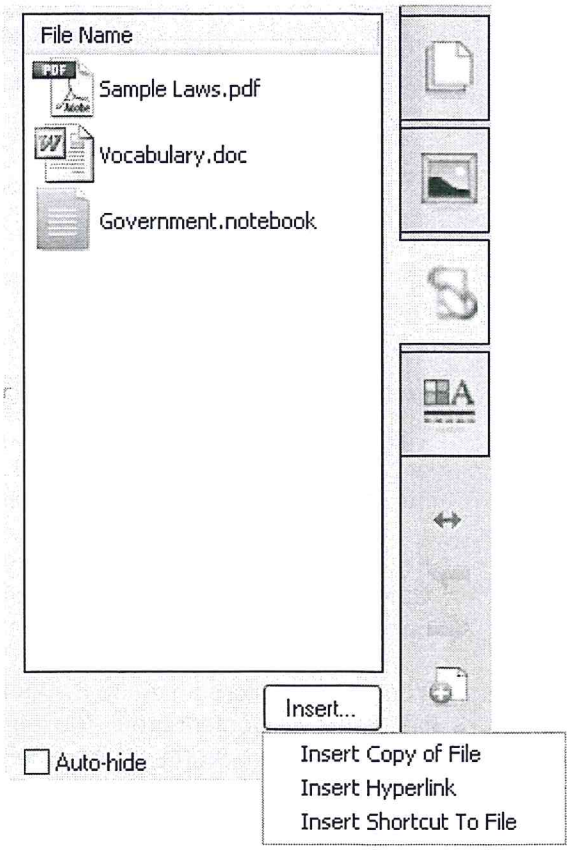
Make your presentations and lessons more cohesive. The Attachments tab allows you to link to supporting documents, software and webpages directly from your SMART Notebook software file. The Attachments tab is also a good way to store documents or websites in your SMART Notebook software presentation that you might want to use in your lesson.

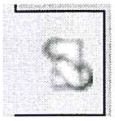


To insert a copy of a file, click the **Insert** button at the bottom of the Attachments tab, select **Insert Copy of File**, and browse to the file location. Click on the file and click **Open**. If you drag a copy of file attachment to your page, it will become an object with a paper clip icon in the bottom-left corner.



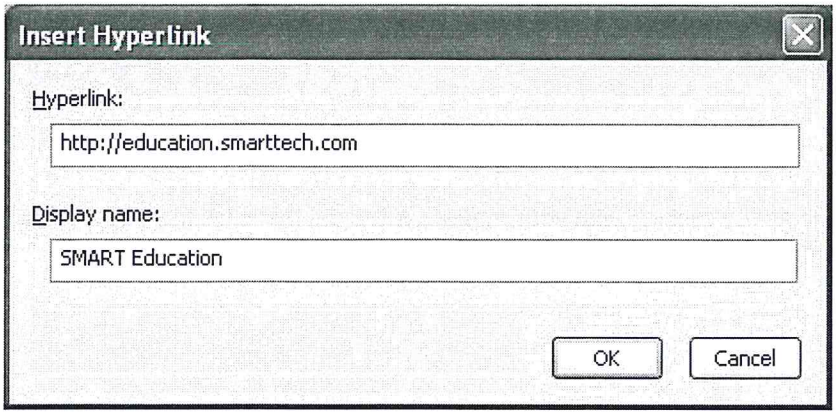

*A file icon and a hyperlink icon as they would appear on the work area*



When you have an attachment associated with your presentation, the appearance of the Attachments tab changes to remind you the attachment is there.

To enter an Internet address, click **Insert Hyperlink**, type the Internet address you would like to add and a name to display on the SMART Notebook page. Click **OK**.

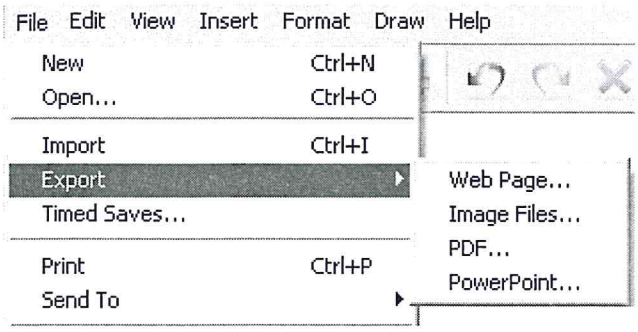



There are also occasions where you may want to open a different software application, such as Microsoft® Word or Excel® spreadsheet software, while remaining in SMART Notebook software. At these times, you will want to insert a shortcut to a file. These files will usually be "executable," that is, they end in **.exe**.

## Sharing your SMART Notebook file

There are several ways you can share your SMART Notebook file with colleagues who are using SMART Notebook software. The easiest way is to save your SMART Notebook file by selecting **File > Save** and allowing others to browse to it.

You can also share your valuable content by selecting **File > Export** and save it as a webpage for Internet users or anyone who does not have SMART Notebook software installed. The content can also be exported as a series of image files or a PDF. Export your SMART Notebook file as a PowerPoint® presentation file if you want to add transitions to your slides.



## The Properties tab

To change the characteristics of an object, click the Properties tab. The properties shown depend upon on the type of object you are working with at the time. The following section details what can be altered in each property setting.

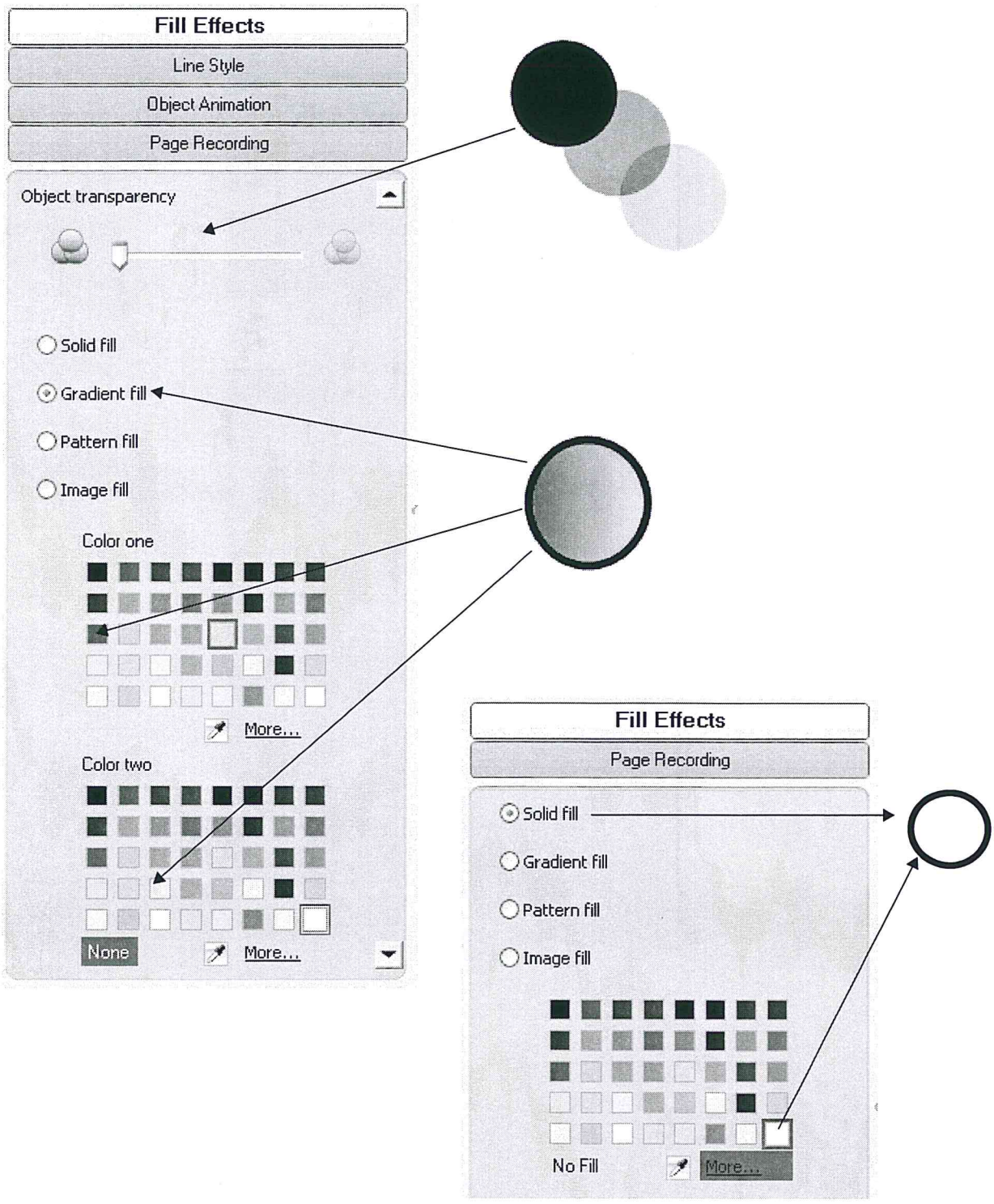




Remember, to select any object by clicking with your mouse, you must first click the **Select** toolbar button.

## Change Fill Effects

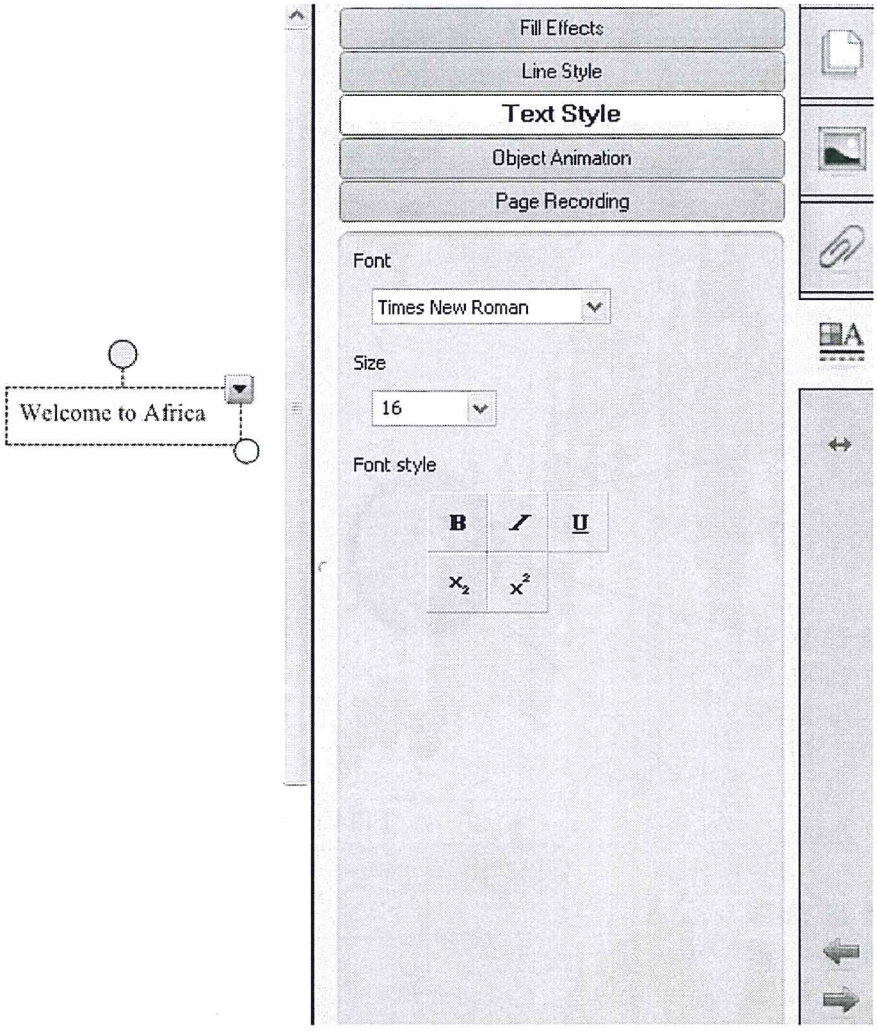
You have many options when you change the fill color of an object. Two are shown below. You can fill an object with a pattern or an image. You can also change the transparency of an object.



## Change Text Style

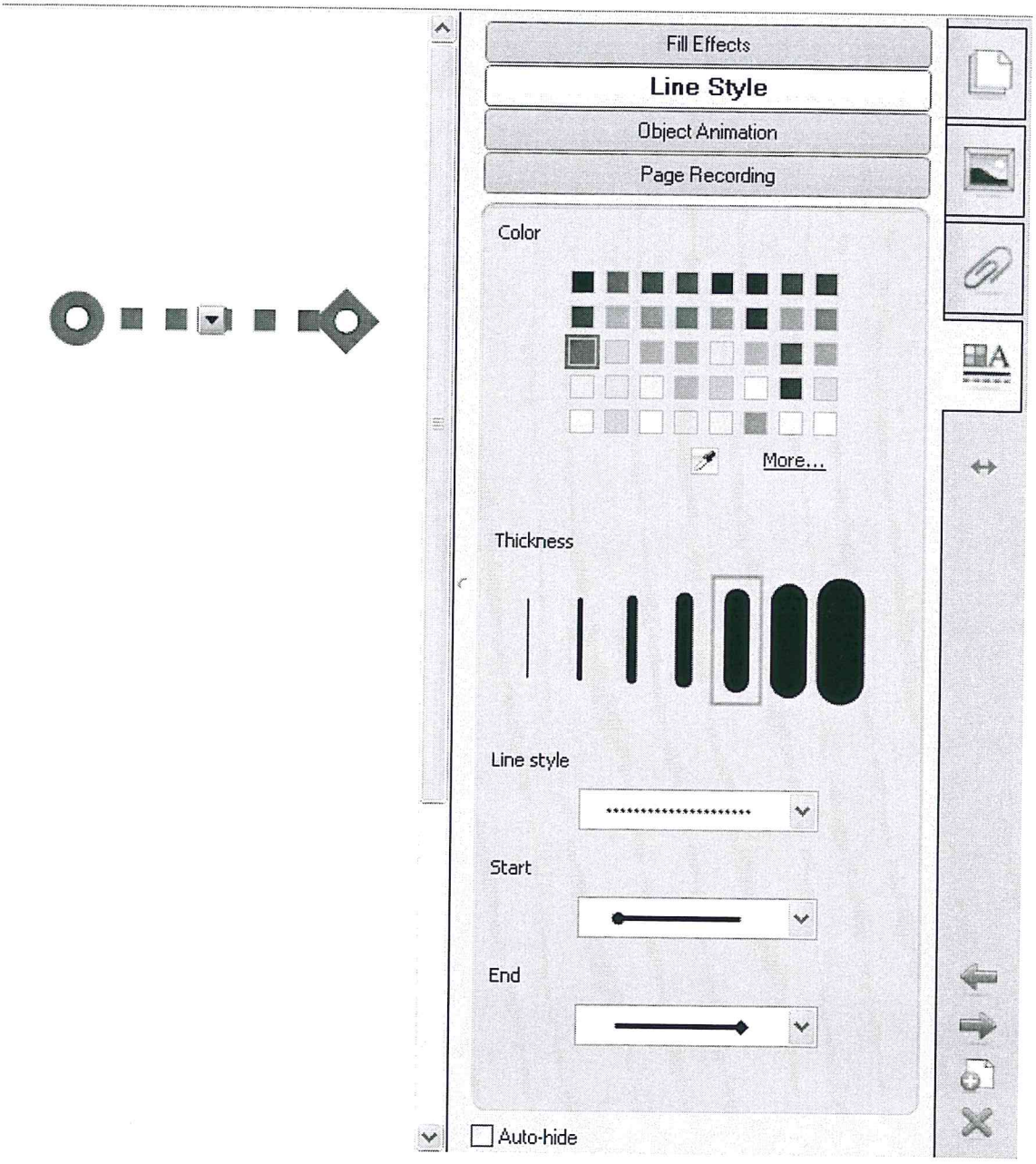
When you click a text object and click the Properties tab, several Text Style options become available. You can select the Font, the Size and the Font Style.

Click the drop-down arrow, or click the bold, italics, underline, superscript or subscript buttons.



## Change Line Style

When a line object is selected and the Properties tab is visible, you can change the color, thickness, style, starting format and ending format of a line.



## Review questions: Basics for SMART Notebook software

1 What are the four tabs in SMART Notebook software?

2 Describe how to move an object from one SMART Notebook page to another.

3 How do I add a blank page to SMART Notebook software?

4 Why would you change the location of the tabs or toolbar located in the SMART Notebook software?

5 Why would you use the Attachments tab?

## Review answers: Basics for SMART Notebook software

**1** What are the four tabs in SMART Notebook software?

Page Sorter, Gallery, Attachments, Properties

**2** Describe how to move an object from one SMART Notebook page to another.

To move an object, drag it from the work area to a thumbnail in the Page Sorter.

**3** How do I add a blank page to SMART Notebook software?

Press the plus sign button on the toolbar, or select the drop-down menu on the Page Sorter tab, and select Insert Blank Page.

**4** Why would you change the location of the tabs or toolbar located in the SMART Notebook software?

Tabs: in the case of team-teaching, or depending on if the user is right or left-handed user
Toolbar: to make it the appropriate height for presenter or participants, or because it offers the ability to see top of the workspace which may be otherwise covered

**5** Why would you use the Attachments tab?

You might use the Attachments tab to link to files and webpages that you would like to reference during a presentation or lesson. If the files or webpages are linked from the Attachments tab, your presentation will be more cohesive because you will not need to spend time searching for the appropriate file or program on your computer.

# Hands-on practice: Basics for SMART Notebook software

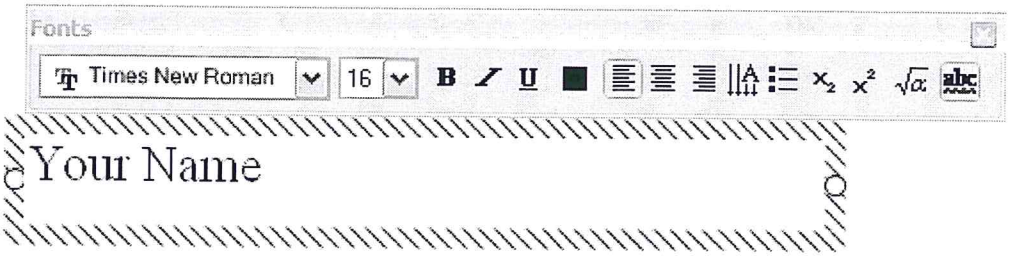
## Launching SMART Notebook software

1 Launch SMART Notebook by double-clicking the SMART Notebook software icon on the desktop

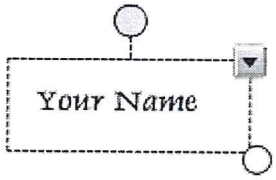
2 If the *Welcome to Notebook Software* window appears, click on **New Notebook File**

## Editing text

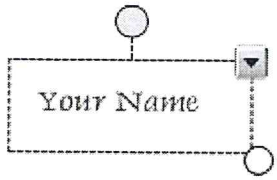
3 Click in the work area, and type your name. Your name appears in Times New Roman font face, plain style, 16 pt and black color.




4 Click the Properties tab and then click your name. On the Properties tab click **Text Style**. Change the font, the size and the font style of your name.



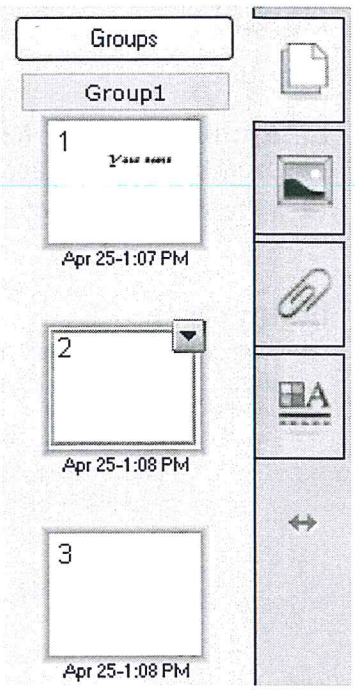

5 Click **Line Style** on the Properties tab. Change the color of your name. Click the **Save** icon on the toolbar. Choose a name for your file, and click **Save**.




6 Double-click the **Add Page** icon on the toolbar to add two more pages to your file



7 Click the **Page Sorter** tab. You will see your two new pages. Page three is now the active page, and it is empty. Your name remains on page one. Click the second page.

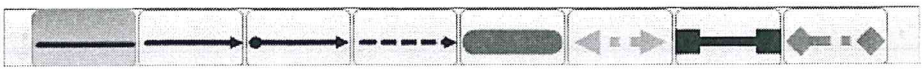


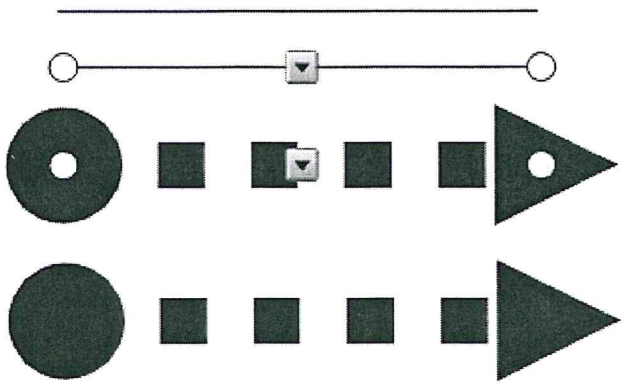

## Creating a line

8 Click the second page and select the **Line** icon on the toolbar. Draw a line in the work area.

9 Click the Properties tab and click the **Select** icon on the toolbar. Select the line you drew in the work area. It is now the active object on the page.

10 Click **Line Style** on the Properties tab. Change the color, thickness, style, start shape and end shape of your line. Click in the work area. Save your SMART Notebook file.





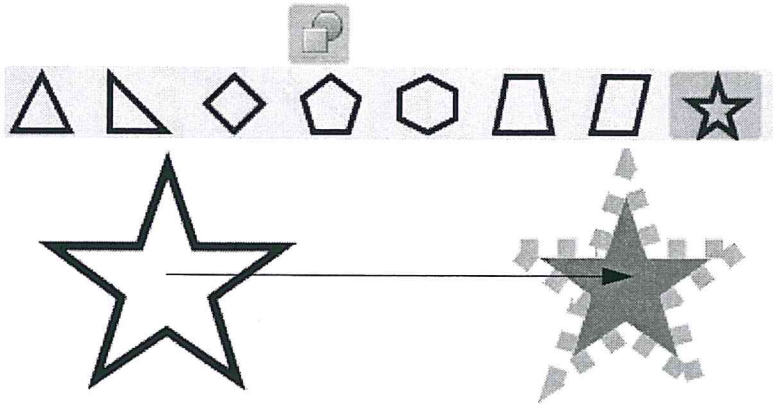
11 Click the Page Sorter tab and select page three.

## Creating a shape

12 Click the **Shape** icon on the toolbar and select the star shape from the subtoolbar. Draw a star in the work area on page three.

13 Click the **Select** icon on the toolbar. Click the Properties tab and select your star. Your star is an active object on the page, and **Fill Effects** are active on the Properties tab. Change the fill color of your star.

14 Click **Line Style** on the Properties tab. Change the color, thickness and style of the line border of your star. Click in the work area. Save your SMART Notebook file.

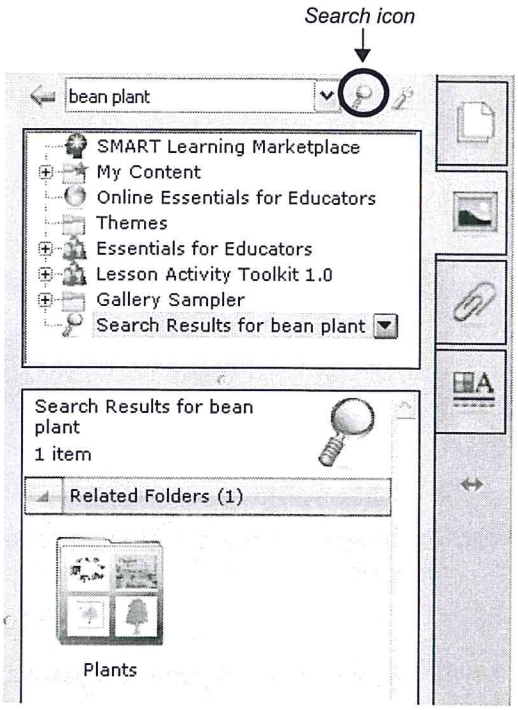


## Adding Gallery content

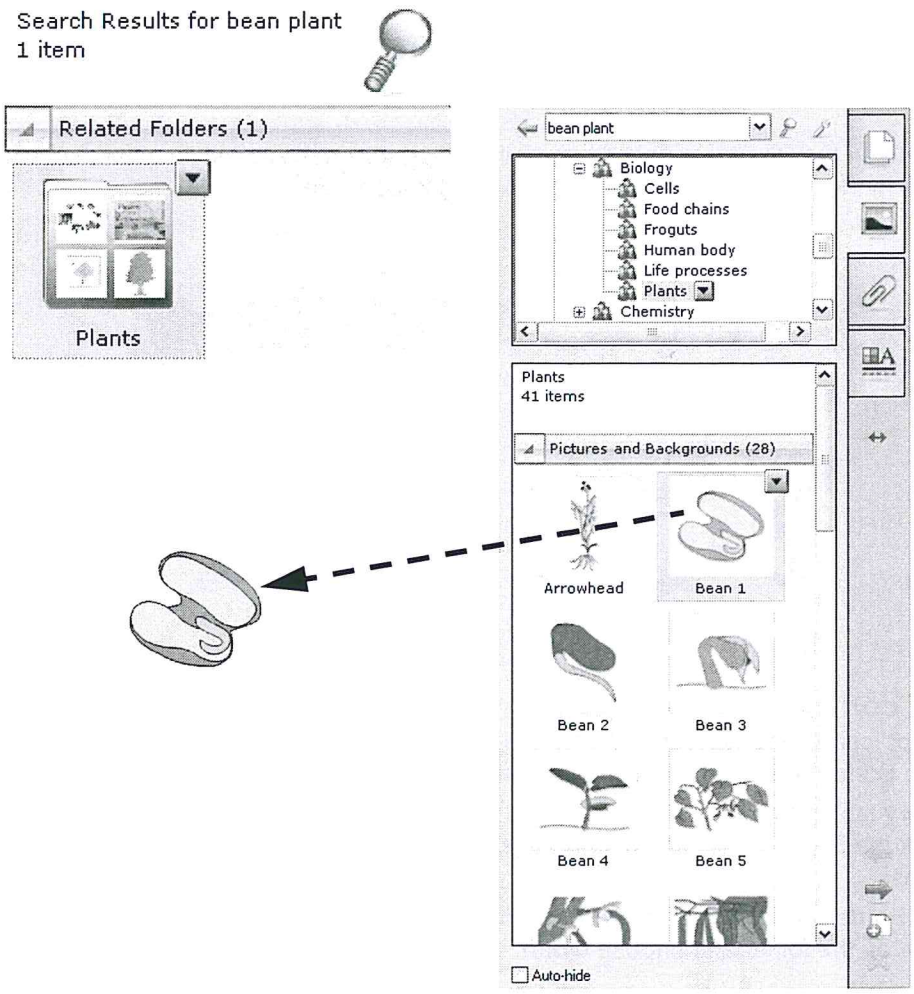
15 Click the **Select** icon on the toolbar and click the **Add Page** icon to add another page to your file. Click the Page Sorter tab. Page four is now the active page.

16 Click the Gallery tab. In the Search window, type *bean plant,* and click the **Search** icon, which looks like a magnifying glass.

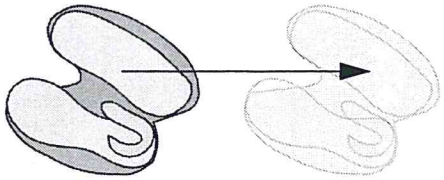
17 Click **Related Folders** and click on the **Plants** folder. Click the arrow on the folder and choose **Open**.



**18** Click **Pictures and Backgrounds**. Choose one of the pictures, and drag it to the work area. Your picture is now an active object.




**19** Click the Properties tab, and change the transparency of the picture. Save your file.



**20** Click the Page Sorter tab. Drag page four so it will appear immediately after page one. Save your file.

**NOTE:** When you drag a page to a new location, a solid bar indicates the new position.

**21** Share your results with your colleagues. Close SMART Notebook software by clicking **File > Exit.**

# Objects in SMART Notebook software

## What is an object?

All text, images, audio, video and multimedia are considered objects in SMART Notebook software. You can change the properties of these objects to make your presentation more effective.

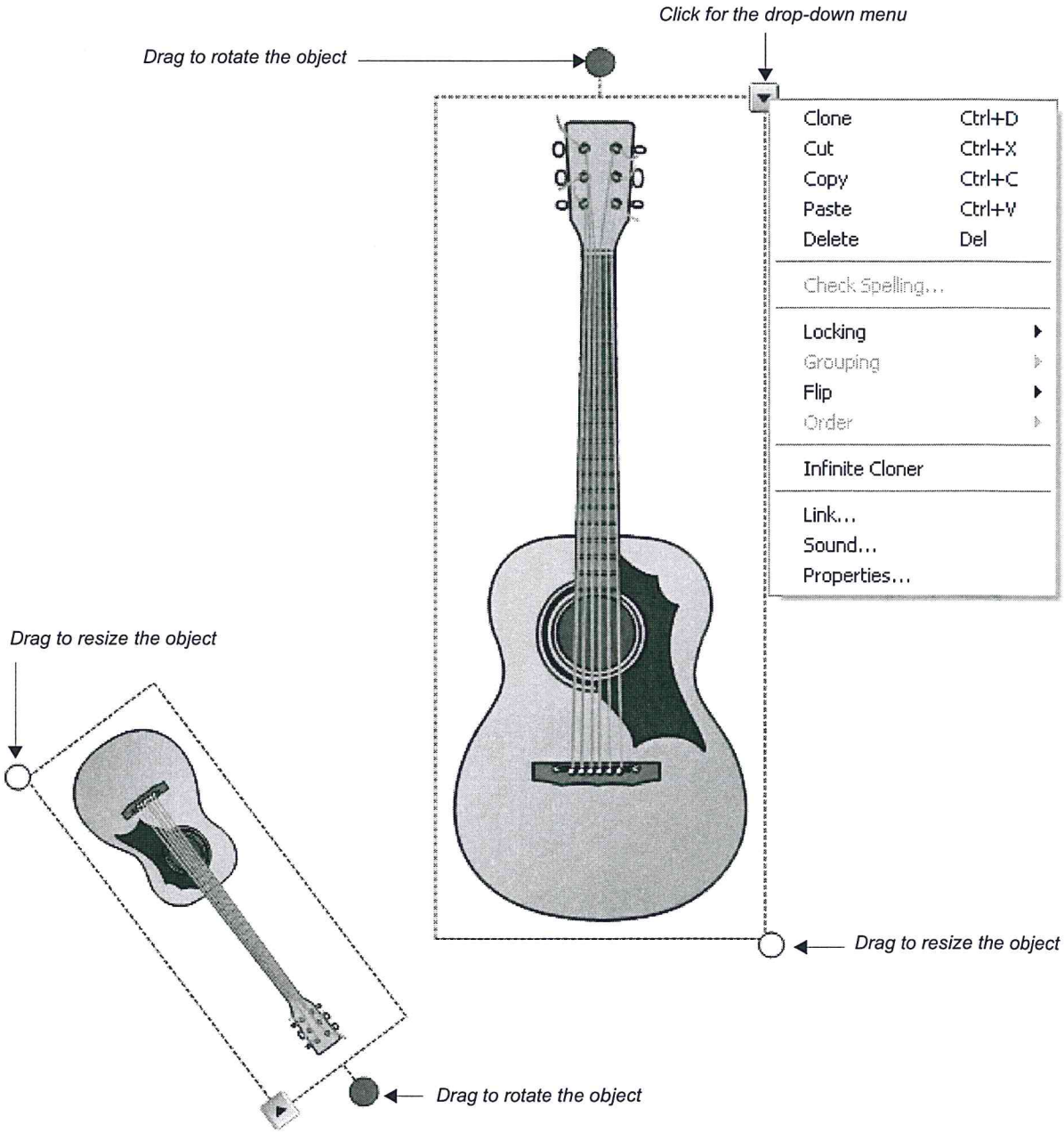
# Manipulating objects in SMART Notebook software

Anything placed inside the work area is considered an object. You can add an object to a SMART Notebook page using any of the following methods:

- Typing text
- Drawing or writing in the work area with a pen tool
- Creating a geometric shape with the SMART Notebook software toolbar drawing tools
- Inserting content from the Gallery, a computer, or the Internet

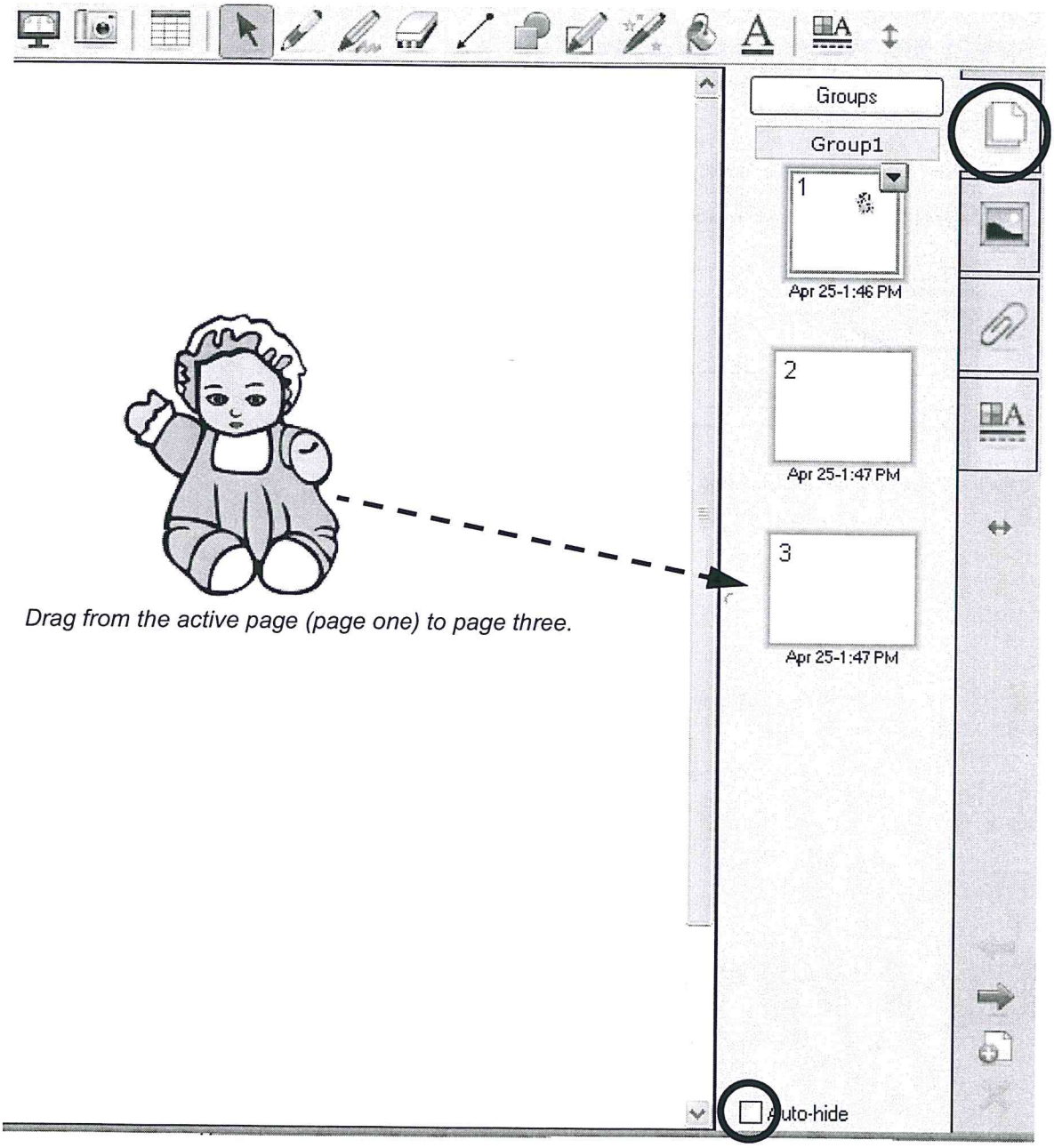
## Modifying objects

Select any object on the SMART Notebook page to change its properties. Selected objects have two handles. Use the solid handle to rotate the object and the clear handle to make it larger or smaller.



## Moving objects

To move an object from one page to another, ensure the Page Sorter tab is active and the Auto-hide check box is not checked. Then click the object you would like to move and drag it to the appropriate page.

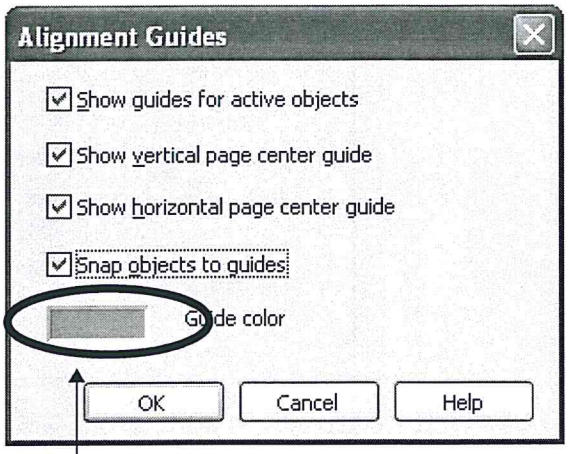



*Drag from the active page (page one) to page three.*

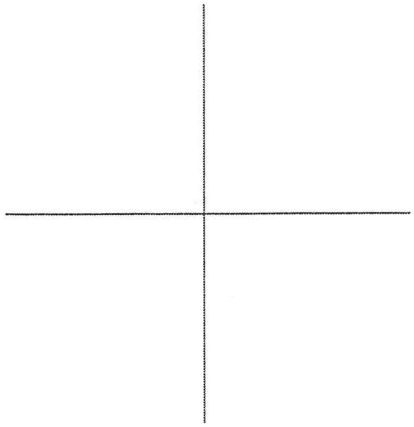
You can also move objects using the Cut and Paste commands from the drop-down menu and the menu bar. Click the object to select it. From the object drop-down menu, click **Copy** if you want to keep the original object, or **Cut** if you want to remove the original object. Click the page on which you want the object to appear. From the drop-down **Edit** menu on the menu bar, click **Paste**.

## The Alignment Guides

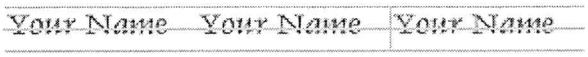
The Alignment Guides allow you to control the placement of objects on your page, so objects can be placed exactly where you want them to be. Click **Format > Alignment** from the menu bar to set the alignment guide defaults.




*Click the Guide color box to change the color of the guide lines.*



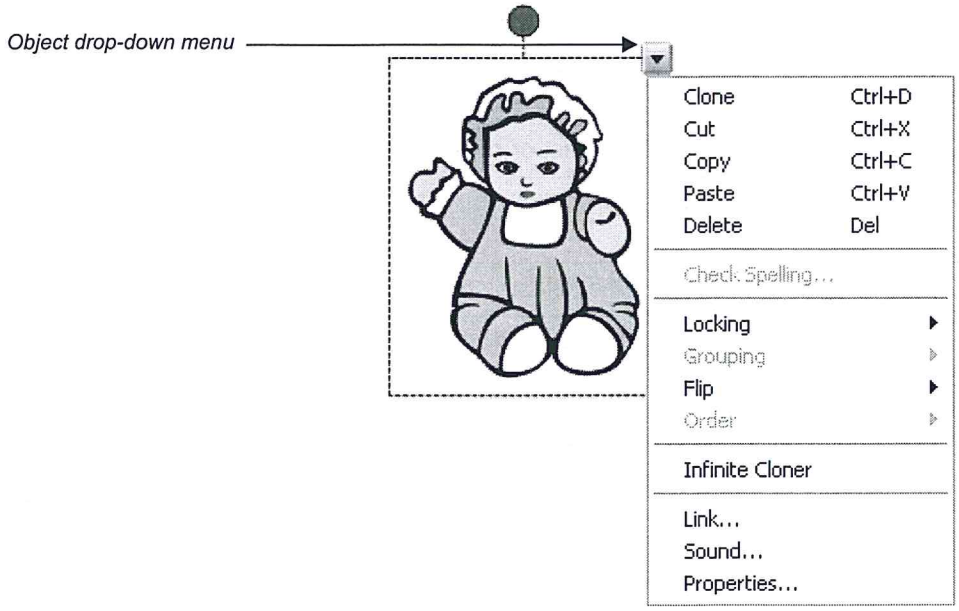
*Lines mark the center of your page*



## Object drop-down menu

The object drop-down menu gives you one-click access to an object's properties.

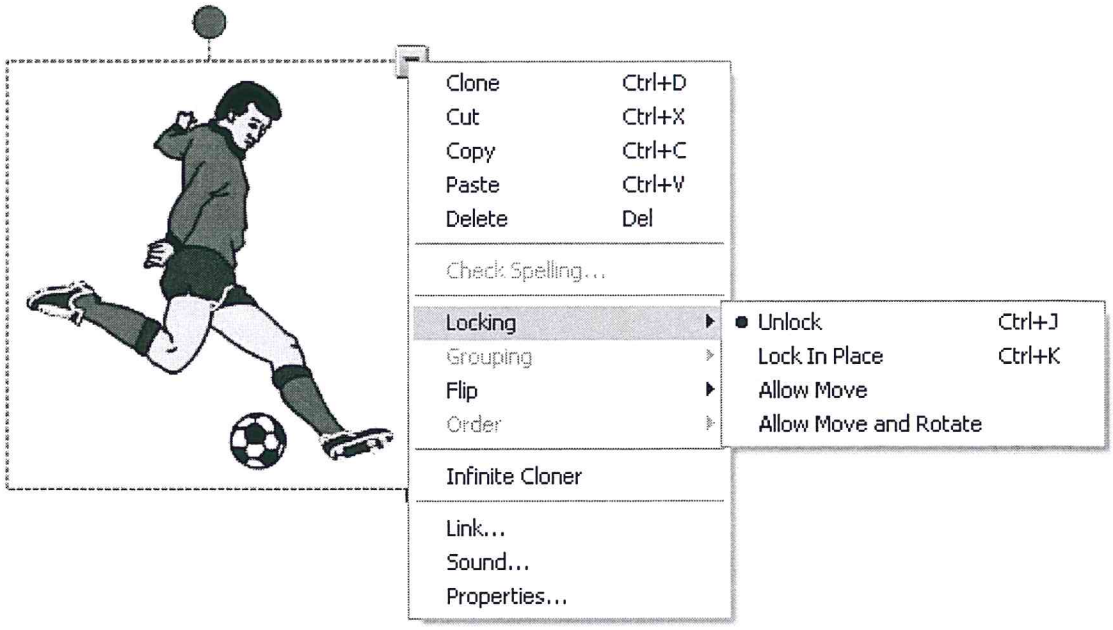
| Item | Description |
|---|---|
| Clone | Creates an exact copy of the object or objects next to the original object |
| Cut | Removes the selected object from the SMART Notebook page and places it on the clipboard |
| Copy | Creates an identical copy of the selected object |
| Paste | Places the object from the clipboard onto the SMART Notebook page |
| Delete | Deletes the selected object |
| Check Spelling | Checks the spelling for the text object(s) selected |
| Locking | Protects an object or an entire group of objects from editing. Choose between Lock In Place, Allow Move, and Allow Move and Rotate. |
| Grouping | Group two or more objects to act as one object. Select, change, move, delete and resize a group as a single unit. To edit or resize the objects individually, ungroup them. |
| Flip | Flip an object either horizontally or vertically |
| Order | Change the order in which objects are layered |
| Infinite Cloner | Make unlimited copies of an object on a SMART Notebook page. Select and drag the object to create as many clones as required. |
| Link | Link an object to a website, another SMART Notebook page, a file on a computer or a file, such as a video clip or other multimedia element, residing in the Attachments tab |
| Sound | Attach a sound file to any object |
| Properties | Change the visual characteristics of any object you've created in SMART Notebook software |




## Locking objects

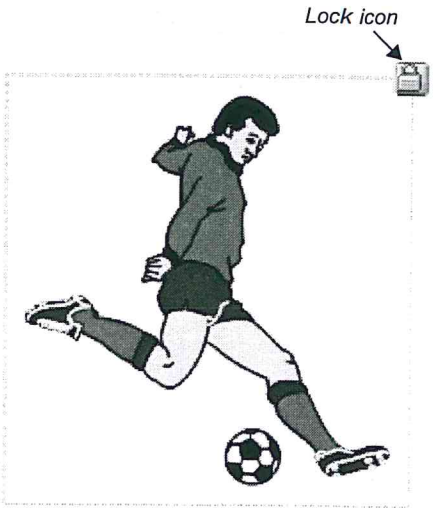
Locking an object allows you to protect the properties you have applied to it. The choices in the Locking submenu allow you to determine the type of lock to use on an object.

.




Click the **Lock In Place** option to ensure the object cannot be altered or moved in any way.

Click **Allow Move** to let you move an object, but not resize, rotate or change any of the object's properties. You might use Allow Move if you were creating a SMART Notebook file that would be used to teach ordering, but wanted to ensure all the objects on the page remain the same size.




Click **Allow Move and Rotate** to let you move and rotate an object, but not resize it. You might use Allow Move and Rotate if you created a SMART Notebook file with a puzzle component and you wanted your students to arrange the puzzle pieces. You can place the puzzle pieces wherever you wish on the SMART Notebook page and rotate them to make the puzzle more challenging – without worrying that participants might resize the piece.

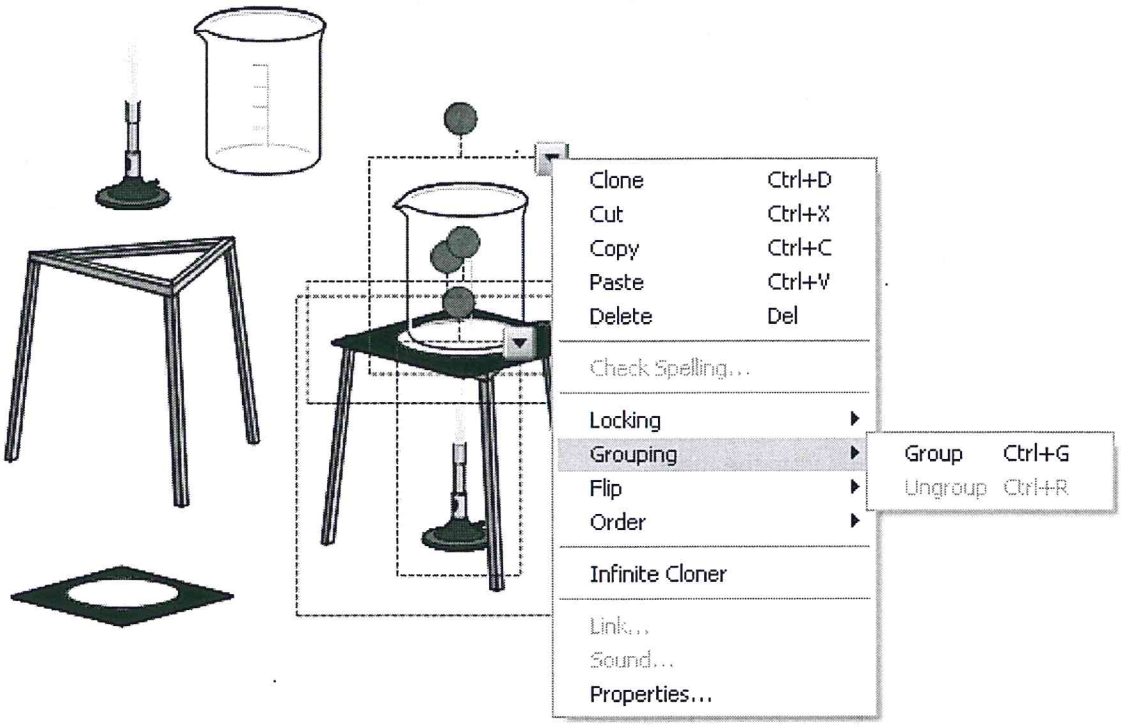
**Unlock** an object by doing the following:

1. From the menu bar, click **Edit > Select All Locked Nodes.** The Lock icon will appear on any objects you have locked.
2. Click the **Lock** icon
3. Click **Unlock** from the menu. Alternatively, right-click an object – the Lock icon will appear with its lock menu. Click **Unlock** from the menu.

## Grouping objects

Select two or more objects by holding down your left mouse button and dragging your mouse diagonally so the objects are surrounded by a selection box. You can also hold the **Shift** key down while you click each of the objects you wish to group.

Click the drop-down menu from any of the objects and choose **Grouping > Group**.



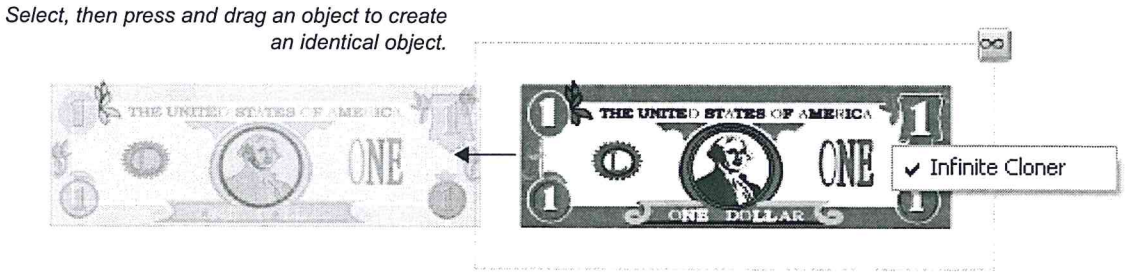

If you want to separate the objects, select the grouped objects again and choose **Grouping > Ungroup**. The Ungroup function will also break handwritten notes into individual pen strokes.

## Infinite Cloner

When you right-click on an object set to clone infinitely, the infinity symbol appears in the top-right corner, and a text box with Infinite Cloner checked appears over the object.

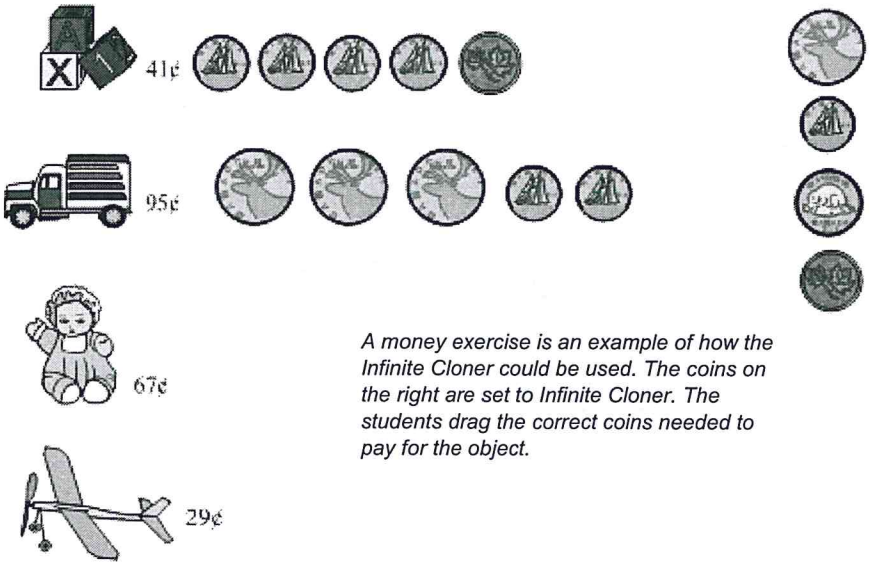



The Infinite Cloner option in the object drop-down menu allows you to reproduce an object an unlimited number of times, without having to click Clone repeatedly from the drop-down menu. You might use the Infinite Cloner to teach counting or to present math problems.




Click **Infinite Cloner** from an object's drop-down menu. Now, when you click and drag an object set to infinitely clone, another identical object is created. You can continue to create clones of the object by dragging it until you deselect Infinite Cloner.

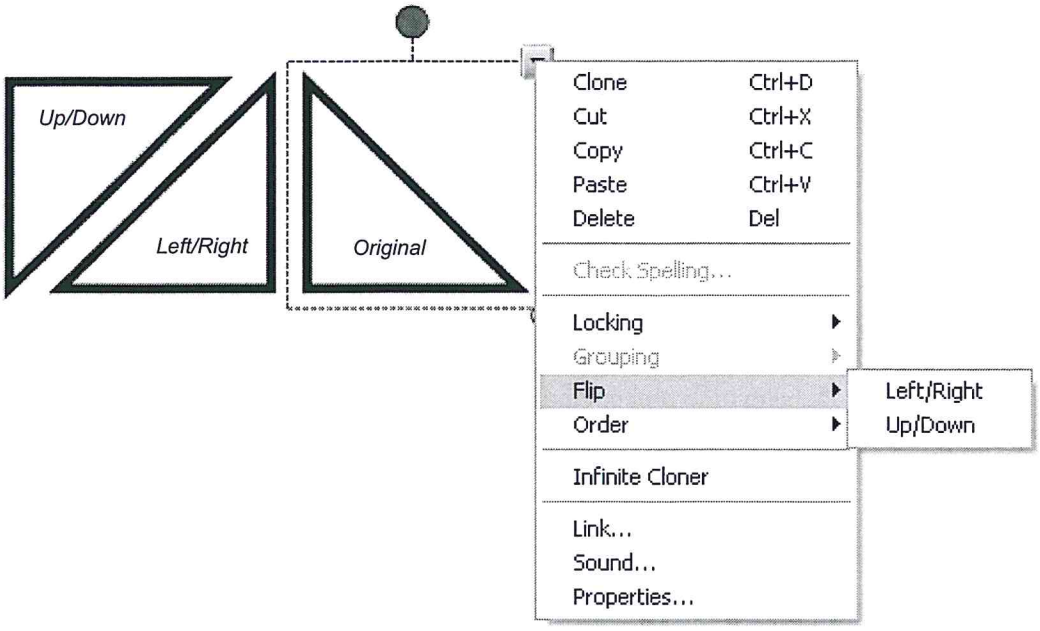
To turn off the Infinite Cloner property, right-click the object, and click the Infinite Cloner box. The check mark will disappear, indicating the Infinite Cloner is off.




*A money exercise is an example of how the Infinite Cloner could be used. The coins on the right are set to Infinite Cloner. The students drag the correct coins needed to pay for the object.*

## Flip objects

Click **Flip** from an object's drop-down menu to flip an object either horizontally or vertically.



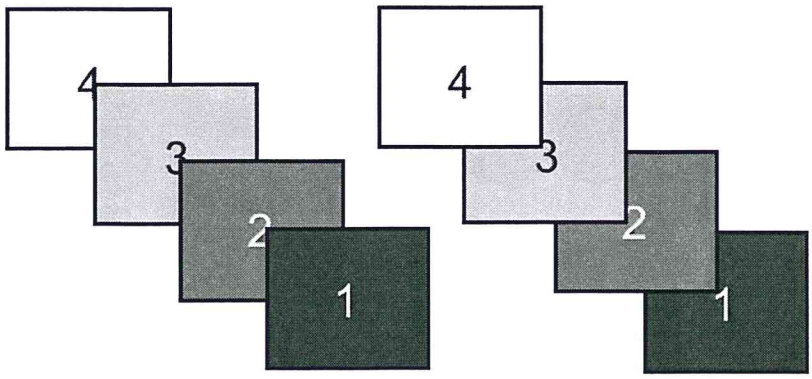

## Order objects

You can change the order in which objects are layered by selecting **Order** from the drop-down menu.

To reorder an object one layer at a time, use the **Bring Forward** command or the **Send Backward** command.

To bring an object directly to the top layer of the page, use the **Bring to Front** command.

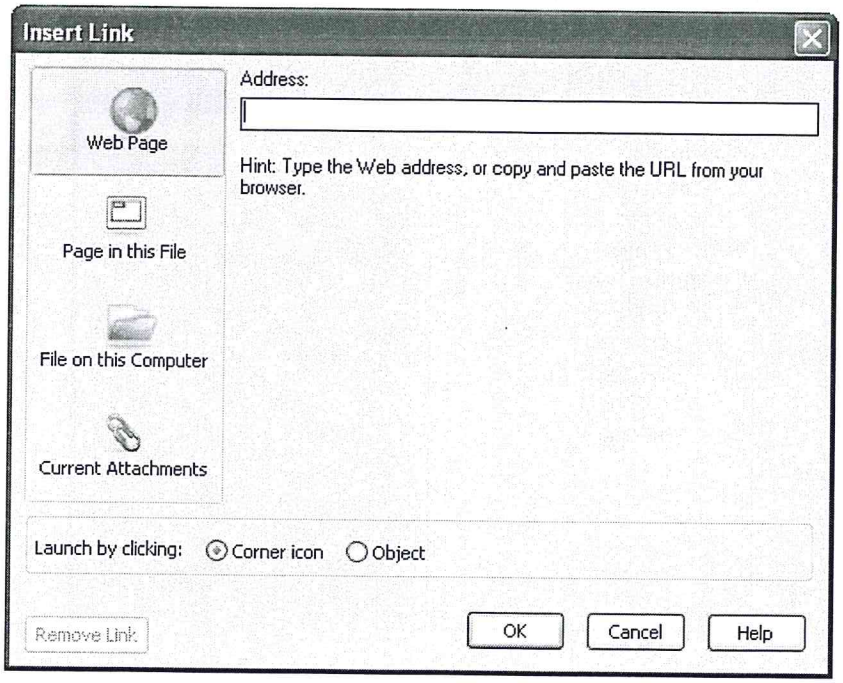
To send an object to the bottom layer of the page, use the **Send to Back** command.




*Four objects layered or ordered in two different ways*

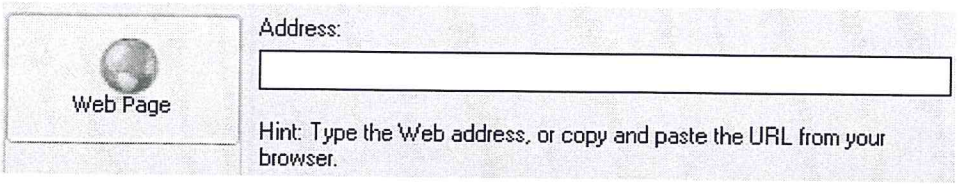
## Adding links to objects

You can link an object to a website, another SMART Notebook page, a file on your computer or a file residing in the Attachments tab. Click **Link** from an object's drop-down menu, and choose the type of link you would like to add to your object from the *Insert Link* dialog box.




You can choose to launch your link by clicking an icon at the side of the object or by clicking on the object itself.

## Link to a Web Page

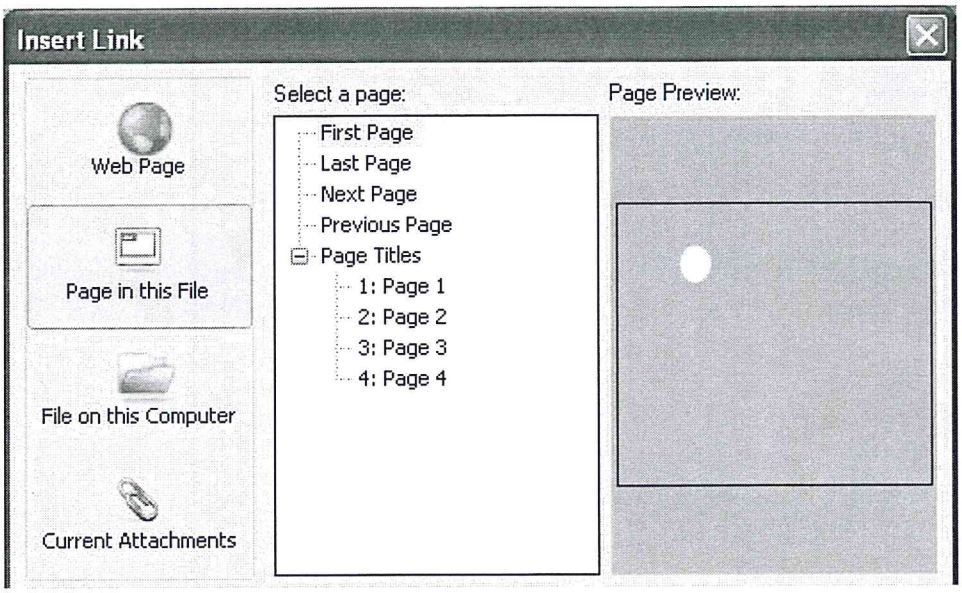



Once the link is attached to the object, every time you click it your Internet browser will launch and display the requested page.

## Link to a Page in this File

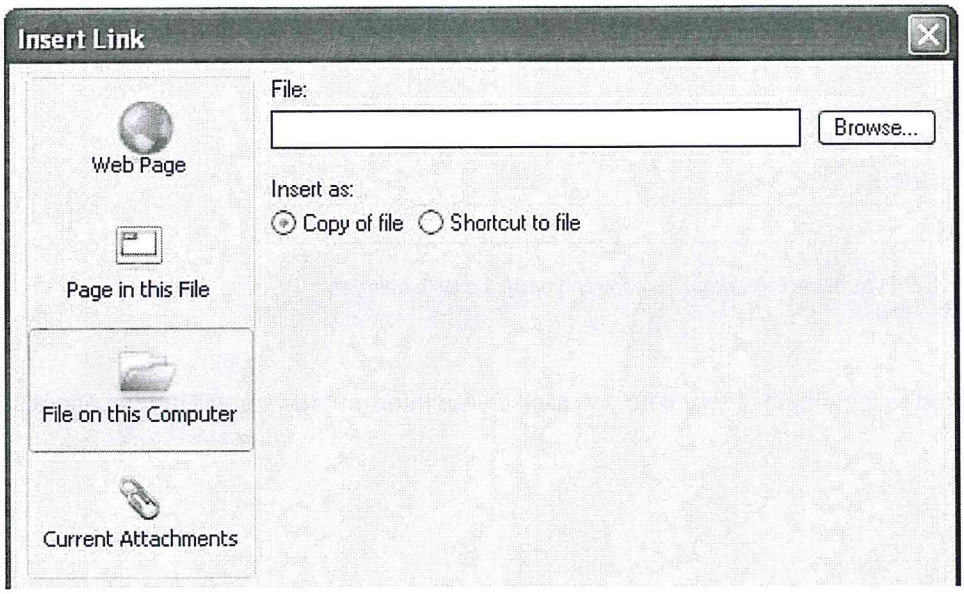
You might use this type of link when presenting a question. For example you could ask a question, then ask a student to select from a set of objects representing potential answers.

The object containing the correct answer could link to a reward screen. The objects containing incorrect answers could link to a page that encourages the student to try again.



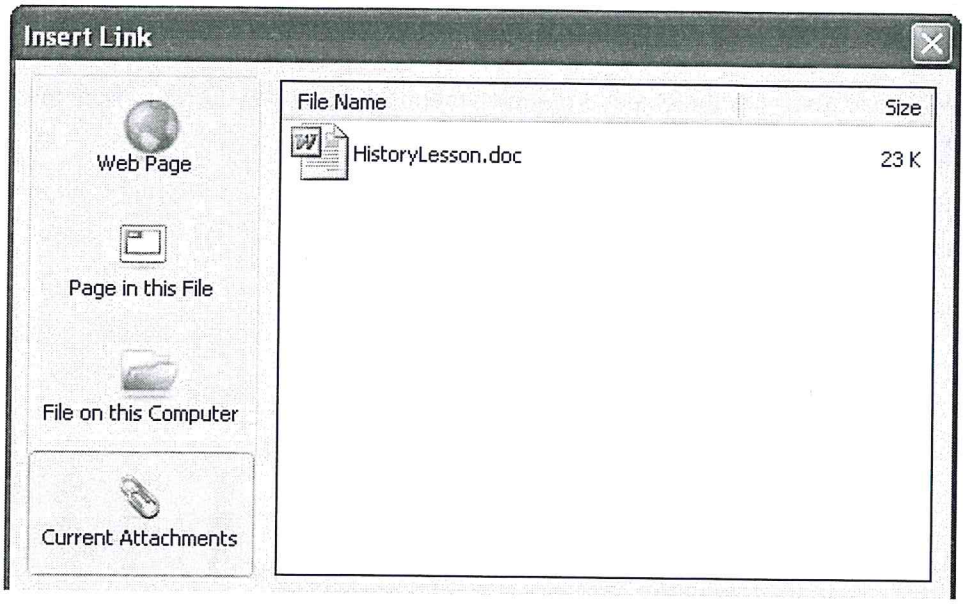

## Link to a File on this Computer

Link to a file stored on your computer that relates to your lesson or presentation. For example, you could link to a Microsoft® Word or Excel® software file that contains information that qualifies a statement in your SMART Notebook file.



## Link to Current Attachments

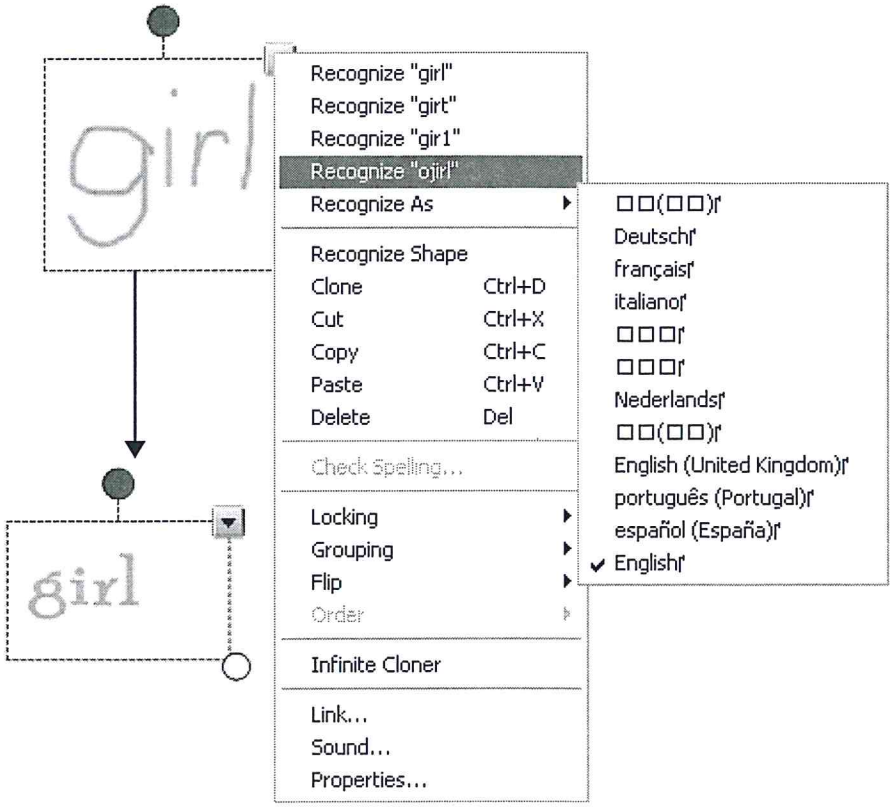
Link to a file you have stored in the Attachments tab.



## Handwriting recognition

If you have written something with a pen tool in SMART Notebook software, you have the option of having your handwriting recognized and converted to text. This tool is primarily used when working on the interactive whiteboard, but does have teaching applications when developing lessons on the computer.

To convert a handwritten word to text, click the object drop-down menu and choose your word from the list.



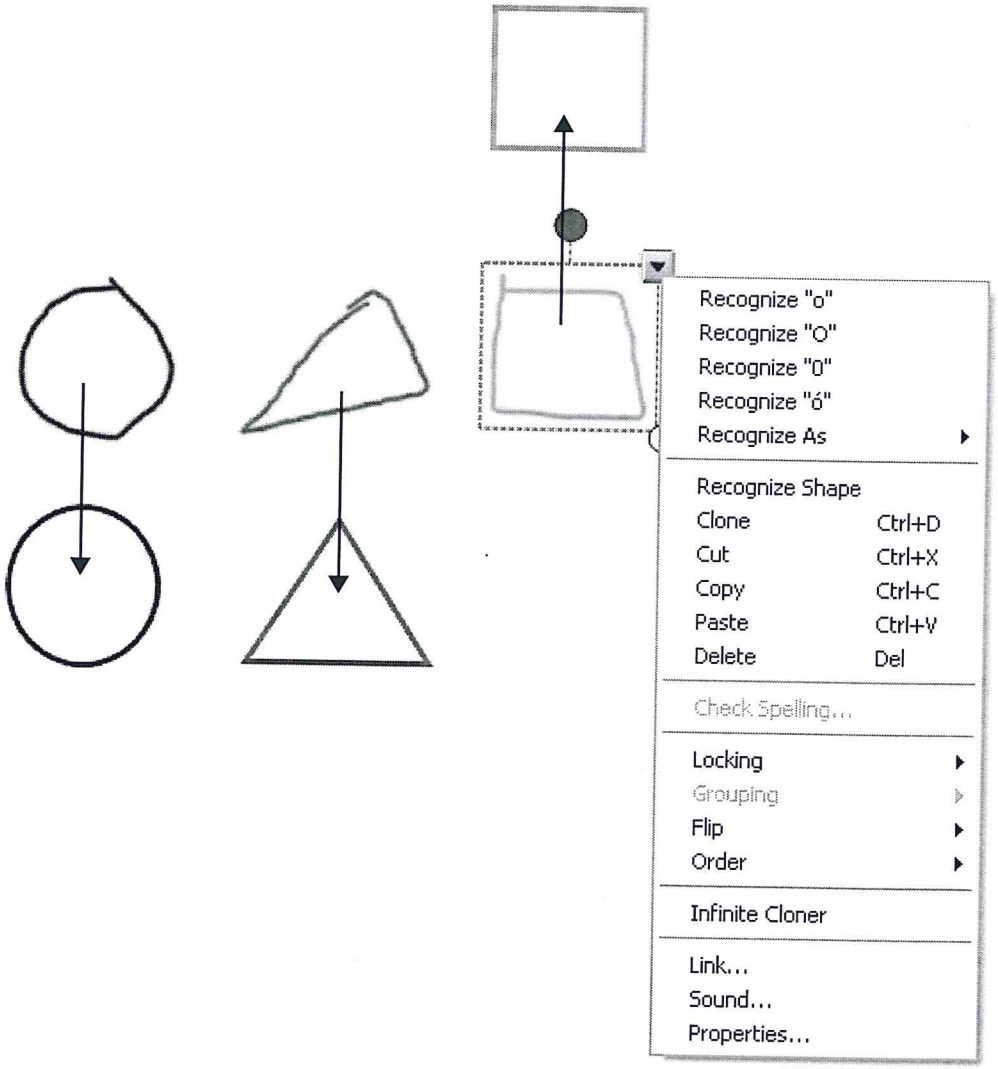

**TIP:** You can recognize words in different languages. Just select a different default language from the list.

## Shape recognition

Shape recognition works in a fashion similar to handwriting recognition. Shapes can also be recognized as letters and numbers.

If you draw a shape with a pen tool, you can go to the drop-down menu when the shape is selected and then select **Recognize Shape** to convert it to a shape. You can also use the Shape Pen from the SMART Notebook software toolbar to draw instant shapes.

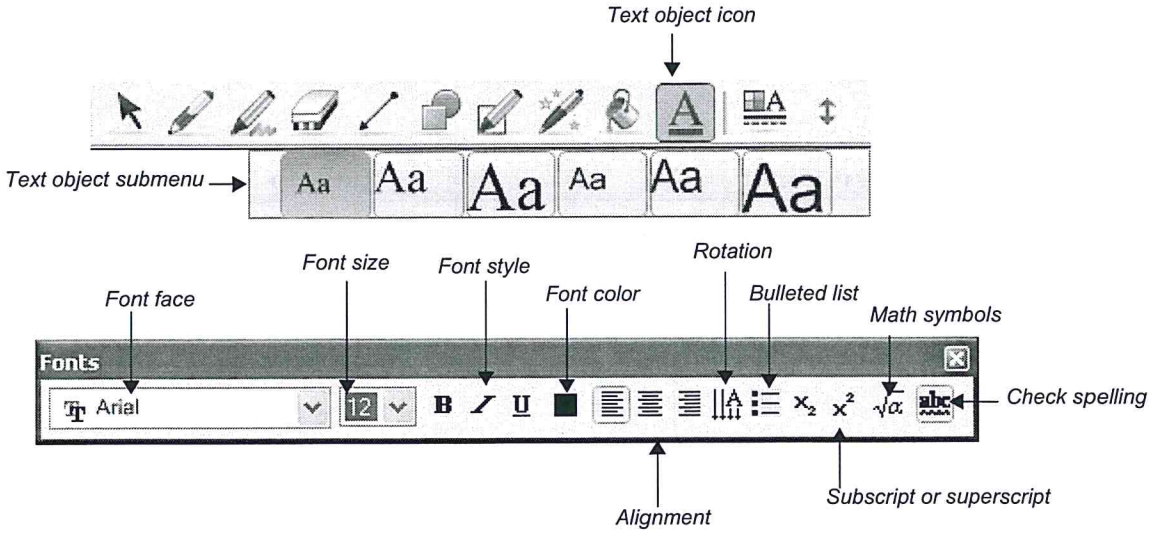


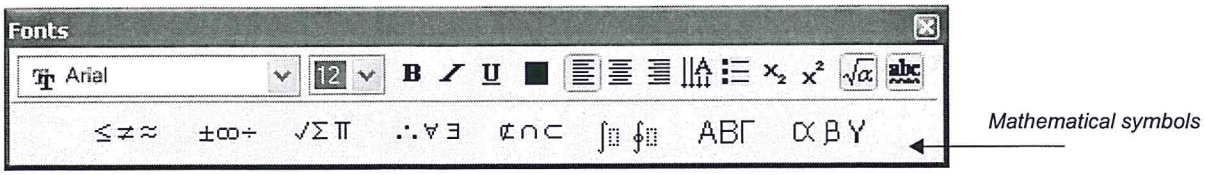


## Typed text

To add typed text as an object to the SMART Notebook file, simply type with a keyboard and press **Enter** when you have finished.

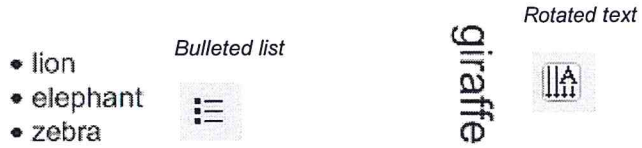
The Fonts toolbar appears while you are typing or after you click the text object icon on the SMART Notebook software toolbar and click on the work area. Use it to format properties, such as font, size, font style, color, alignment, rotation, bulleted list, subscript, superscript, mathematical symbols and spell checker options. You can also quickly change your font by clicking on one of the options in the text object submenu.



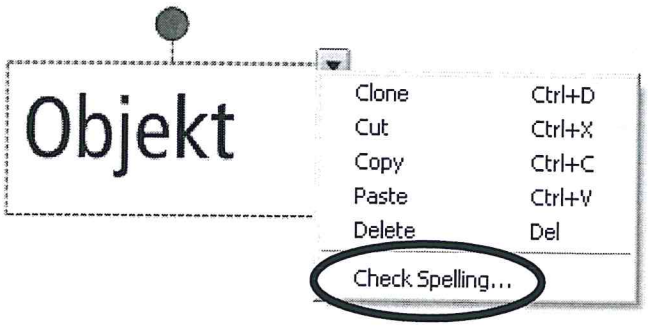




The Sedov equation (simple linear relationship)

$R^5 \alpha Et^2 / \rho$

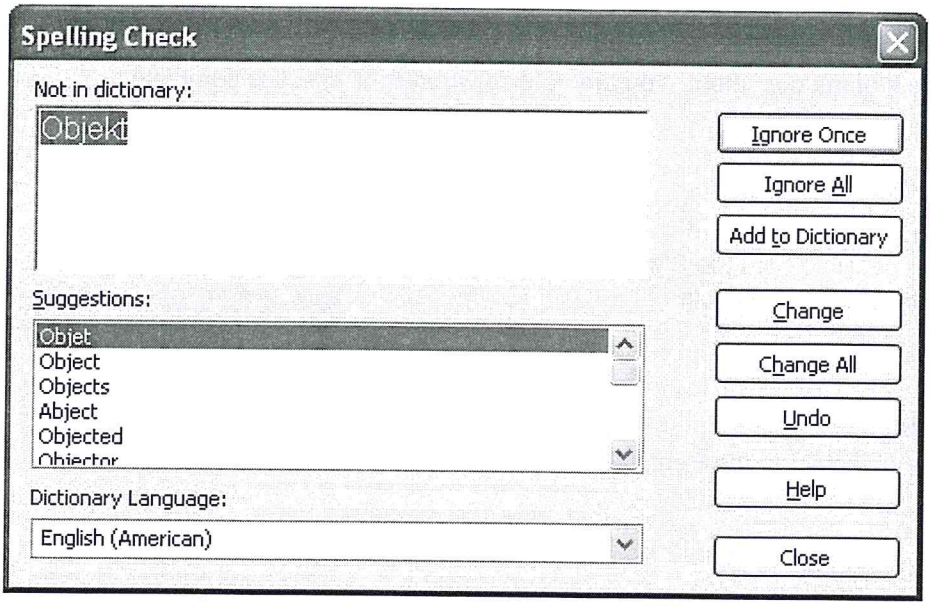


## Check Spelling



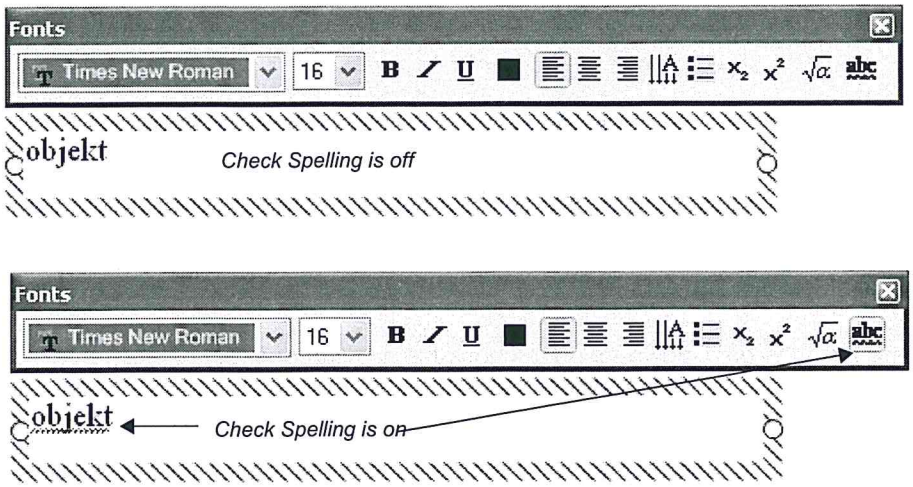

Click **Check Spelling** from the drop-down menu to check the spelling of a text object.

The *Spelling Check* dialog box will appear with a list of spelling suggestions if the spelling of the selected text object is incorrect. Chose the correct spelling of the text object from the suggestions list, and click the **Change** button to correct the misspelled word.




When Check Spelling is turned on at the toolbar, make sure you tap the space bar at the end of the word. This action indicates you are finished typing, and Check Spelling can begin.

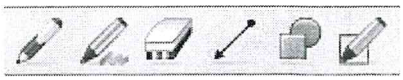
When you turn the spell checker on, incorrectly spelled words will appear underlined in red as you type.




To spell check all the text objects in your file, click on any one text object to select it, and from the drop-down menu click **Check Spelling** .... SMART Notebook software will check the spelling of that word and then ask if you wish to check the rest of the document. You are notified when spell check is complete.

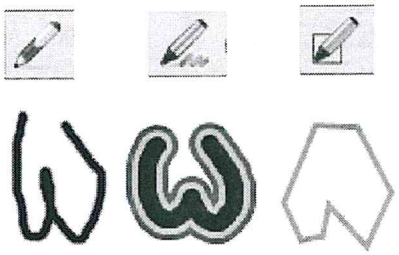
## Drawing tools

Use the drawing tools – accessible from the SMART Notebook software toolbar – to create your own objects.



### Pen and Eraser tools

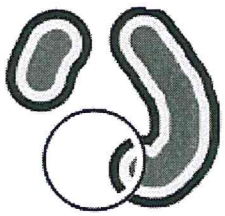
Use your mouse to create objects with the Pen, Creative Pen or Shape Pen tools.



*The same object drawn with three different pens: Pen, Creative Pen, Shape Pen*



*Part of the Creative tool object erased by the Eraser tool*

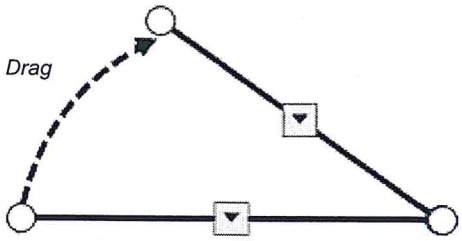


The Eraser tool erases anything you have created with a pen tool. When you erase part of an object, the properties of the remaining parts can be changed independently.

## Line tool

Press the **Line** button on the SMART Notebook software toolbar to draw straight lines. Select any line made with the Line tool, and drag the end points to stretch it or change the angle. Hold down the **Shift** key while pivoting a line, and the line will snap in place every 45°.

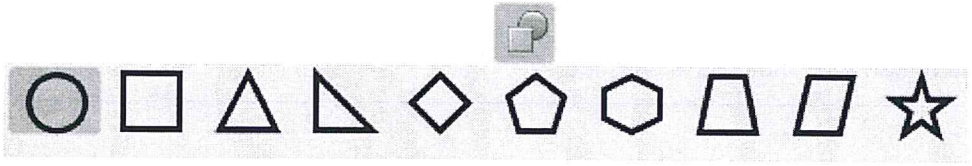




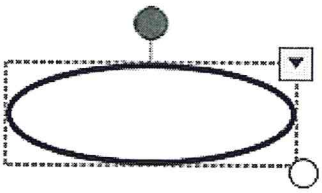

## Shapes tool

Enhance any activity with the Shapes tool on the SMART Notebook software toolbar.

### Create a shape



When you click on the Shapes icon, a menu of shapes will appear. Click on the shape you would like to use, and position your cursor on the page where you would like to create the shape. Hold down the left mouse button and drag your cursor until your shape is the desired size. To draw a *perfect* shape, hold down the **Shift** key while drawing your shape.



Once a shape is on your SMART Notebook page, it can be modified the same way you modify other objects, using the rotation handle, the resize handle or the drop-down menu.

If you click on the **Select** tool icon and then double-click on the shape, a text box will appear and you can add a label to your shape.

## Fill tool



Any shape can be quickly filled with color by tipping the paint can over the shape object. The fill color is the last color chosen from the color palette. To change the color in the paint can, click on the shape icon, click on the paint can, click on the Properties tab and select a color from the color palette.

# Inserting images into SMART Notebook software

To add an image to the SMART Notebook file, use the Insert menu to import graphics or clip art from another location on your computer.

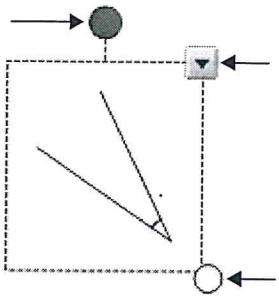
## Capturing information

The Screen Capture toolbar allows you to capture an image, such as a digital photo from the Internet, to a SMART Notebook page. To access the Screen Capture toolbar, click the **Screen Capture** icon (the camera), on the SMART Notebook software toolbar. Always remember to respect copyright.

| Button | How it's used |
|---|---|
|  | Hold down the left mouse button, and drag to outline the rectangular area you want to capture. Release the left mouse button after the area is selected. |
|  | Click in the window you want to capture. Release the left mouse button after the desired window appears as a hatched area. |
|  | Navigate to the screen you want to capture, and click the button to capture the entire screen |
|  | Press and drag to create a freehand shape around the area you want to capture. Release the left mouse button after the area is selected. |

## Review questions: Objects in SMART Notebook software

**1** Label the rotation handle, the resize handle and the drop-down menu on the object below.



**2** Describe how to move an object from one SMART Notebook page to another.

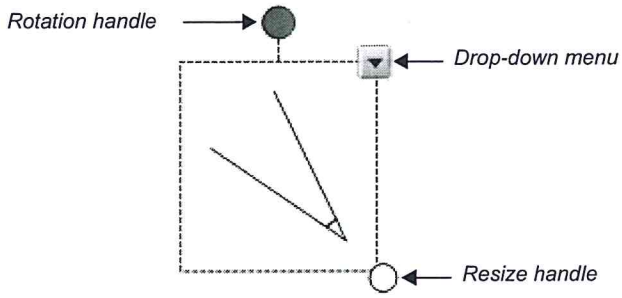
**3** Why would you add a link to an object that would direct you to another page in your SMART Notebook file?

**4** What is the difference between **Send to Back** and **Send Backward** when ordering objects?

**5** How do you spell check within a SMART Notebook file?

## Review answers: Objects in SMART Notebook software

**1** Label the rotation handle, the resize handle and the drop-down menu on the object below.




**2** Describe how to move an object from one SMART Notebook page to another.

*To move an object, drag it from the work area to a thumbnail in the Page Sorter.*

**3** Why would you add a link to an object that would direct you to another page in your SMART Notebook file?

*You might use this type of link when presenting a question in SMART Notebook software. For example, you could ask a question, then ask a student to select one of the answers. The object containing the correct answer could link to a reward screen. The objects containing an incorrect answer could link to a screen with an object that encourages the student to try again.*

**4** What is the difference between **Send to Back** and **Send Backward** when ordering objects?

***Send Backwards*** *reorders objects one layer at a time.* ***Send to Back*** *sends an object to the very bottom of a pile of objects.*

**5** How do you spell check within a SMART Notebook file?

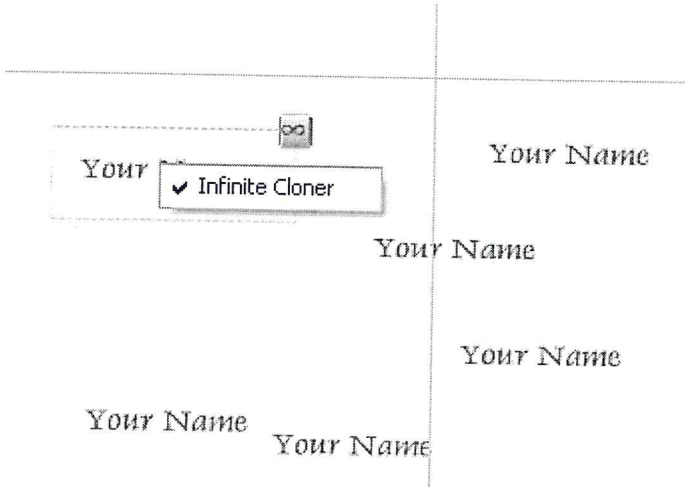
*On the fonts toolbar, select the Check Spelling icon. From the Object drop-down menu, select Check Spelling.*

# Hands-on practice: Objects in SMART Notebook software

1 Launch SMART Notebook software by double-clicking on the SMART Notebook software icon on the desktop. Open a new file.

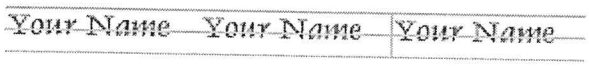
2 Set your Alignment Guides (**Format > Alignment**). Click all options to activate them. Click **OK**. The thin lines appear that mark the horizontal and vertical centers of the page. Page one is the active page. Save your file.

3 Create a text box that contains your name. From the drop-down menu, click on **Infinite Cloner**. From the original text box, drag five copies of your name to various locations on the page. Turn off the **Infinite Cloner** by right-clicking on the original, and clicking on the **Infinite Cloner** box to deselect it.

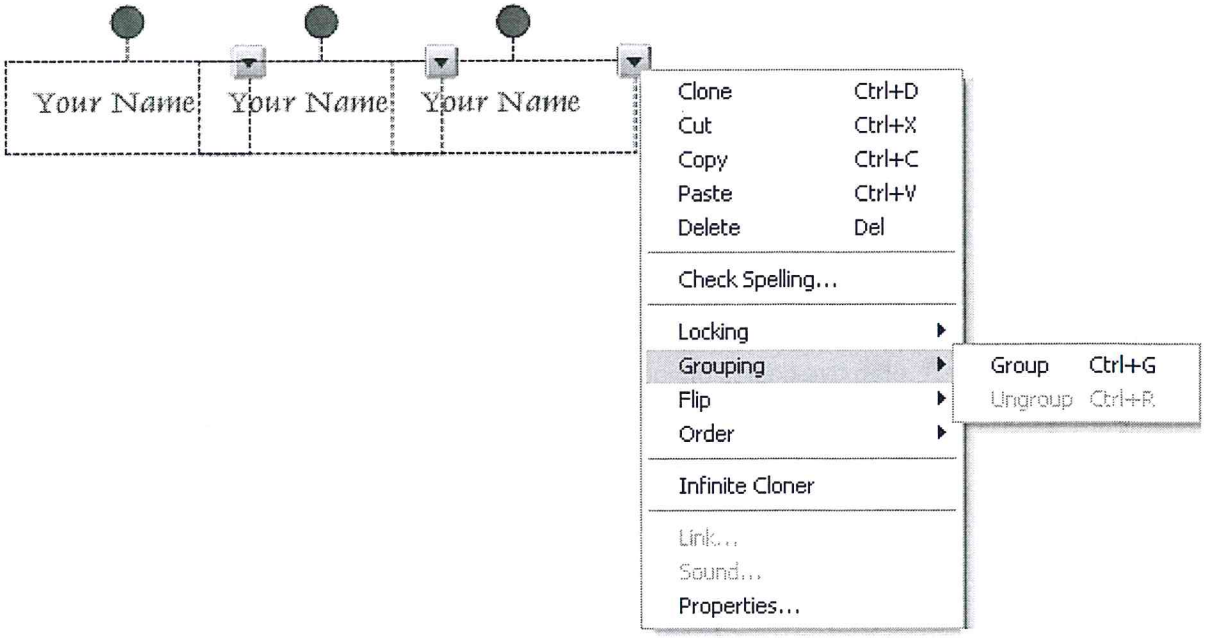



4 Align three of your names by dragging them.

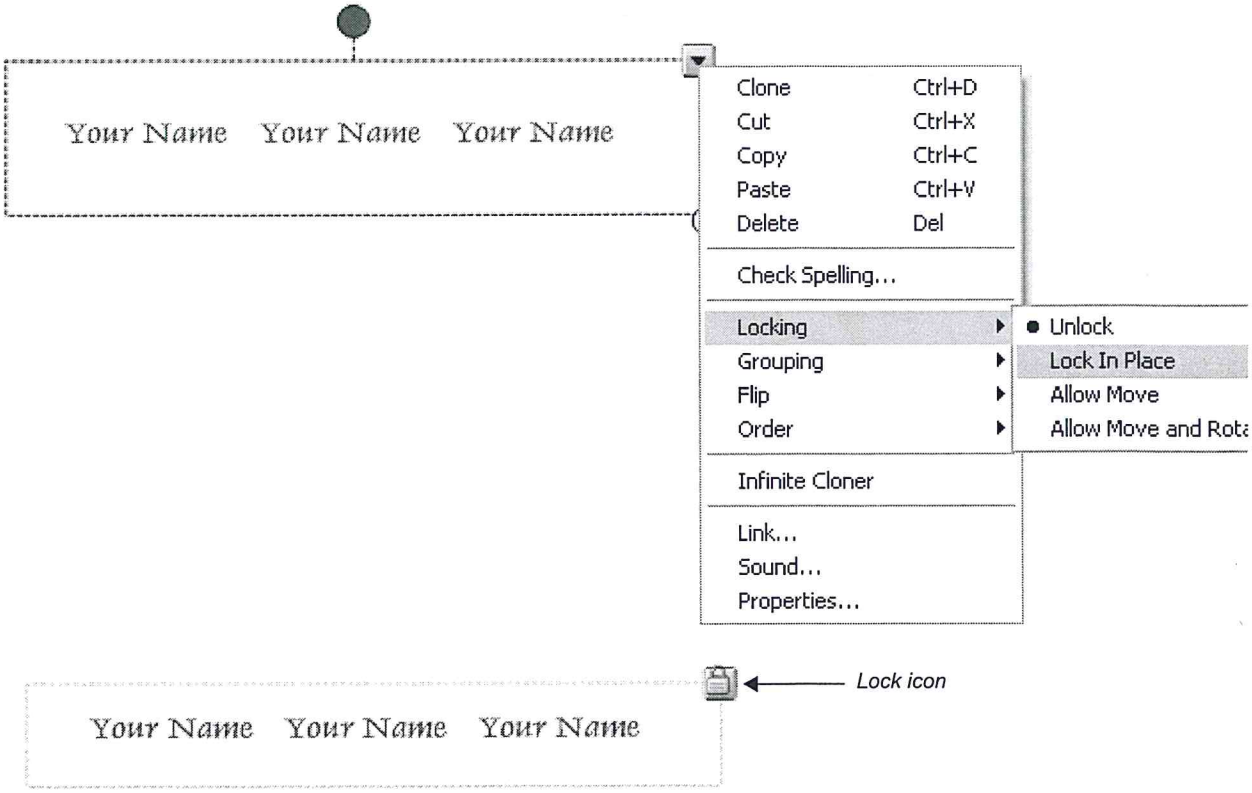
**NOTE:** With the alignment guides on, grids appear to help you align the objects vertically and horizontally.



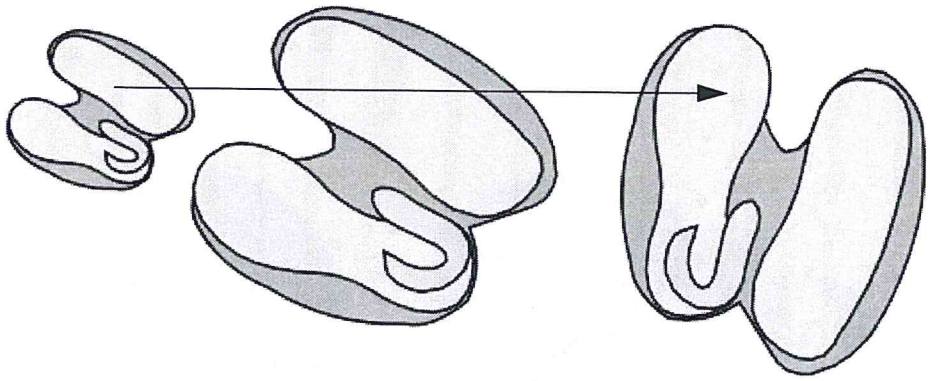
**5** Hold down the left mouse button, and drag to select all three names. Click on one of the drop-down menus, and click **Grouping > Group**. The three objects are now one.



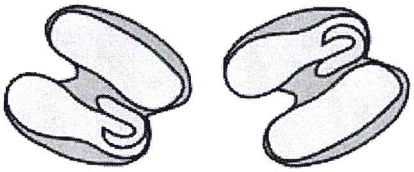

**6** Click on the drop-down menu, and select **Locking > Lock In Place**. The object is now locked and cannot be moved. If you want to unlock the object, from the Menu bar click **Edit > Select All Locked Nodes.** Then click the locked icon and click **Unlock**. Save your file.



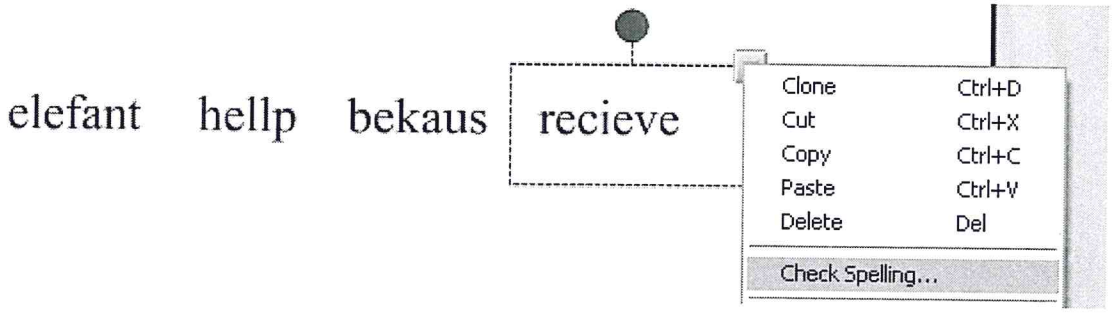
7 Click the **Add Page** icon to add another page. You are now on the newly created blank page two. Find a graphic from the Gallery, and drag it to your page. Make the graphic larger by dragging on the clear circle. Rotate the graphic by dragging on the solid circle. Save your file.



8 Click on the graphic and from the drop-down menu, click **Copy**. Add a page. From the menu bar, click on **Edit > Paste**. Click on the graphic, and from the drop-down menu click **Flip > Up/Down**. Save your file.

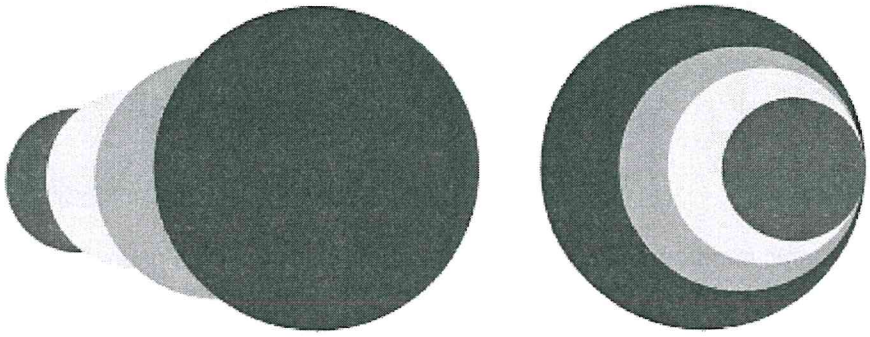


9 Add another page. Click the **Text Box** icon, and add four text boxes containing the words *hellp*, *bekaus*, *recieve*, and *elefant*. Click the **Select** icon, and click one of the words. From the drop-down menu, click **Check Spelling**. Correct the spelling of your four words. Save your file.




10 Click the **Add Page** icon to add another page. You are now on the newly created page five. Click the **Text Box** icon, turn on the spell checker by clicking the icon. Add four text boxes containing the words *hellp*, *bekaus*, *recieve* and *elefant*. To have the spelling checked automatically, you must tap the space bar at the end of the word to signify the word is complete. If you do not know the correct spelling, you can right-click on the word for suggestions. Save your file.

**11** Click the **Add Page** icon to add another page. You are now on the newly created page six. Click the **Create Shape** icon, and draw four shapes of different sizes. Remember, if you want to draw *perfect* circles, hold the Shift key down while you are drawing. Click the Properties tab. Fill each circle with a different color. Practice ordering your objects by moving them so they overlap and then bringing objects to the front or sending objects to the back. Save your file.



**12** Share your results with your colleagues. Close SMART Notebook softwareby clicking **File > Exit.**

# Creating interactive lesson activities

## Where do I start when creating a lesson activity for the SMART Board interactive whiteboard?

SMART Notebook software tools include functions that help you use the interactive whiteboard more effectively and allow you to create engaging, interactive and dynamic classroom lesson activities.

# Creating interactive lesson activities

This section is intended to act as a reference for the best practices for creating and presenting lesson activities using SMART Notebook software.



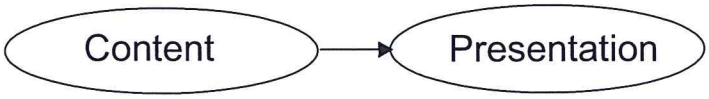
You are already familiar with the basics of SMART Notebook software, such as how to write in the work area, how to add new pages to your SMART Notebook file, how to navigate from one page to another and how to select and move objects on a SMART Notebook page.

To review the basics of working with a SMART Board interactive whiteboard and SMART Notebook software, visit SMART's training center at www.smarttech.com/trainingcenter.

Before reading the remainder of this workbook, make sure you have the latest version of SMART Notebook software installed on your computer from www.smarttech.com/support/software.

## Review of design basics

Lesson activities need to be designed for both content and presentation. The SMART Board interactive whiteboard is a visual and an interactive medium. Knowing a little about design and the best practices on how to integrate interactivity using SMART Notebook software will help you create lesson activities that meet curriculum learning objectives and engage students. Creating content in SMART Notebook software with the knowledge that it will need to be presented in a classroom setting will ensure your lesson goes smoothly.



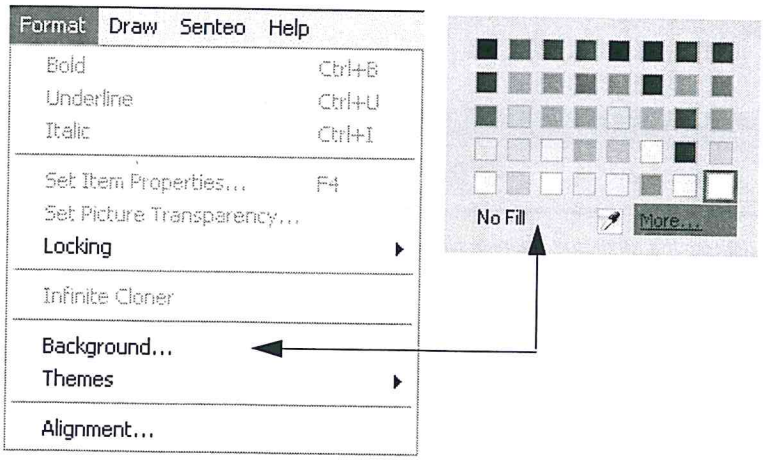

Once you have determined what content you will be teaching, create a title page and write your teacher's notes at the beginning of your lesson activity. Title pages and teacher's notes focus learning objectives and provide important information to any other teachers who use the lesson activity. You can see examples of how other teachers have created these items by downloading any lesson activity from the education solutions website www.education.smarttech.com/ste/en-US/Ed+Resource.

### Setting up your page

Once you have an idea for a SMART Notebook software lesson activity, you will need to start designing your page. One of the first things you will want to do is decide on a background color.

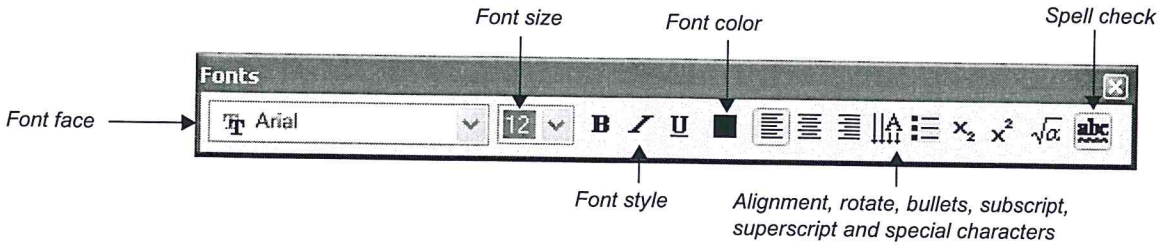
When choosing a color, keep in mind that very bright or intense colors can be distracting and draw attention from the page content to the background. A bright yellow might seem like a fun choice, but it may also distract from other elements on your page. Reserve the most vibrant colors for individual objects on your SMART Notebook page to which you want to draw student attention.

Select a background color by selecting **Format > Background** from the SMART Notebook software menu. A color palette will launch from which you can choose the background color of your SMART Notebook page.




## Working with fonts in SMART Notebook software

Next, you should choose the fonts you will want to use for the remainder of your lesson activity. One way to set your font is to select your text and use the functions available from the Fonts toolbar. The Fonts toolbar appears whenever you are typing on the SMART Notebook page or after you double-press a text object.



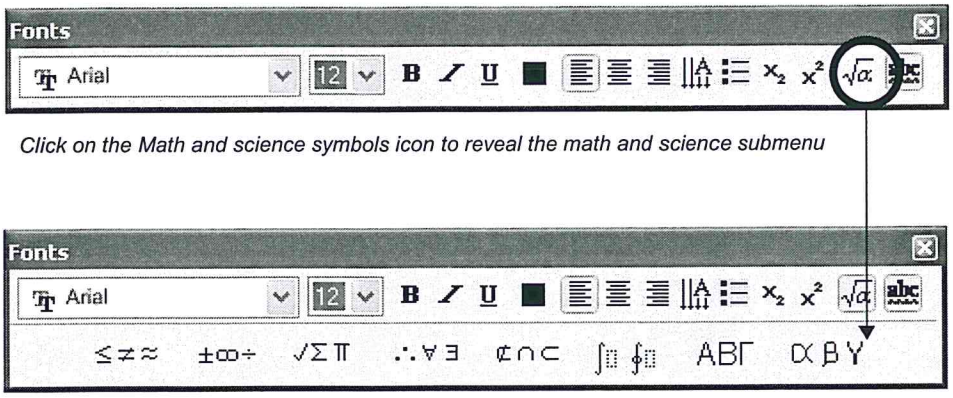

If possible, try using only one font throughout your lesson activity. Too many fonts can be distracting to the eye and draw attention away from important points.

General guidelines for choosing fonts for your SMART Notebook software lesson activity include the following:

- Titles should be at least 28 point and a bold type face
- Text used for sentences and paragraphs should be at least 22 point and in a regular type face
- Make sure the font color you choose is easy to read and see against the background color you have chosen

## Math and science symbols

Math and science teachers will find the math and science symbols particularly useful for writing equations or formulas. When you click on the **Math and Science** icon, a series of submenus are revealed. Clicking on each submenu reveals another series of choices. Click on your choice to insert that symbol into your text box.




*Click on the Math and science symbols icon to reveal the math and science submenu*

Average angular velocity = Angular displacement / time interval

$\omega = \Delta\theta / \Delta t$

# Adding interactivity

One of the benefits of SMART Notebook software is the ability to modify objects on the page. This section will focus on some of the different ways you can engage your students by designing interactive lesson plans.

## Reveal

One of the quickest ways to add interactivity to a lesson activity is to hide the answer to a question behind an object on the SMART Notebook page. The following information will provide four different methods that you can use to create reveal activities that can easily be integrated into any curriculum.

### Move and reveal

One way to create a reveal activity is to hide an answer behind another object.

1 Type your question and answer

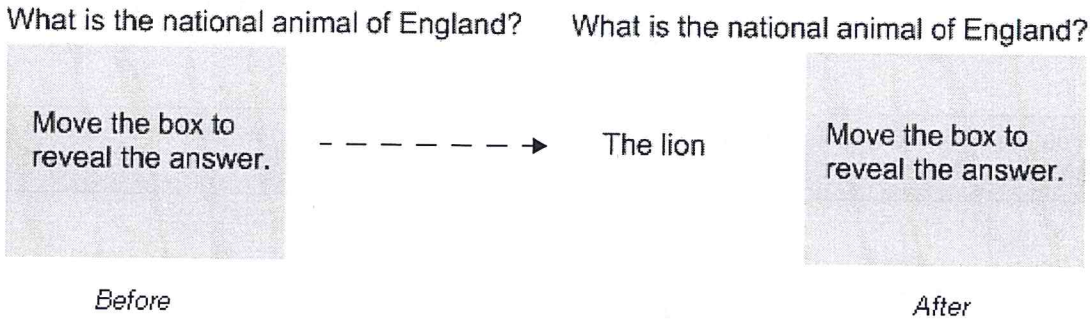
2 Draw a rectangle, and fill it with color to hide the answer

3 Double-click the shape for the ability to add text to it – ensure your text is a different color from the rectangle

4 Type *Move the box to reveal the answer* – you are adding instructions to the shape so students, other faculty members or a substitute teacher will be able to work with the file. Without the instructions, others might assume they are supposed to write the answer over the shape instead of moving it to reveal the answer.

**TIP:** It is a good practice to select *Order > Bring to Front* from the drop-down menu on any object you will be using to cover an answer. This action will ensure your students don't see the answer before it is time for it to be revealed.

5 Move the shape to reveal the answer



**Erase and reveal**
Another way to reveal information is with the Eraser tool. 

1 Type your question and answer. Use a pen to cover the answer with digital ink.

2 Click on a pen tool. Choose an ink color the same color as the page background. For example, if the page background is white, then the digital ink should also be white.

3 Click on the **Eraser** tool, and erase the digital ink covering the answer. The Eraser tool will only erase objects created with digital ink. Anything typed with your keyboard cannot be erased with the Eraser tool.

**TIP:** You may want to add instructions to let the class or other teachers know that all they need to do is use the eraser.

**Complete the number sequence**

Use the eraser to reveal the next number in the sequence.

1, 3, 5, 7, 

*Before*

**Complete the number sequence**

Use the eraser to reveal the next number in the sequence.

1, 3, 5, 7, 9

*After*

**Order and reveal**
Another way to reveal information is by ordering objects.

1 Create an object

2 Create a second, larger solid object

3 Move the larger object over the smaller object, which will be hidden

4 When it is time to reveal the smaller object, you can either move the larger object aside or change the order of the larger object to Send to Back

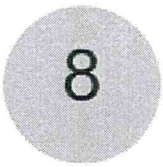
**TIP:** You may want to add instructions to let the class or other teachers know that all they need to do is move the object.

What is 4 + 4?



*Yellow circle covering red eight*

What is 4 + 4?

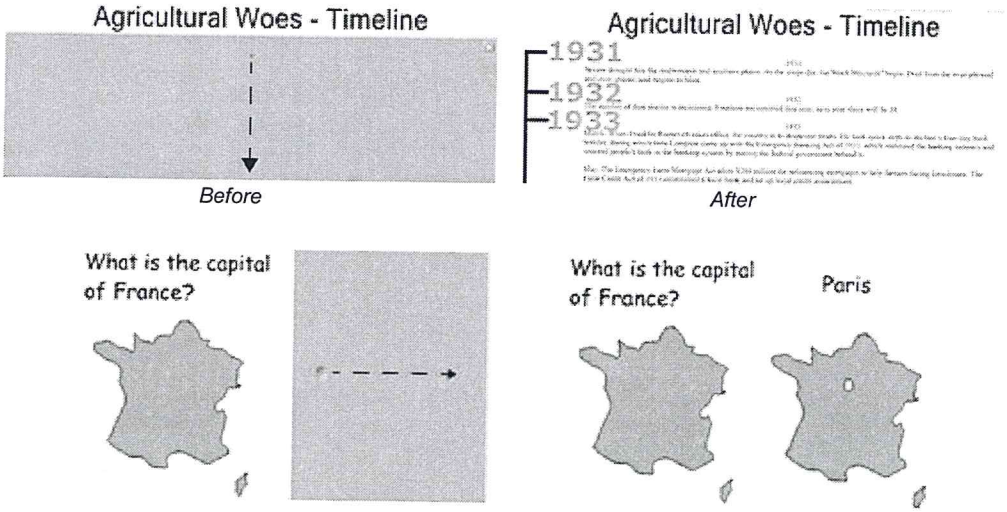



*Yellow circle Sent to Back*

**Screen Shade and reveal**
A fourth way you can reveal information is with the Screen Shade tool.

1. Type your question and answer
2. Click the **Screen Shade** button on the SMART Notebook software toolbar
3. Drag the Screen Shade so only the answer to your question is covered
4. When you are ready, drag the Screen Shade so it no longer covers the answer. This action is similar to using paper to cover answers that would be displayed through an overhead projector.

**TIP:** When you open a SMART Notebook file, the Screen Shade will be covering the same area it was hiding, and you will be able to start discussing the content in your file from exactly where you left off.



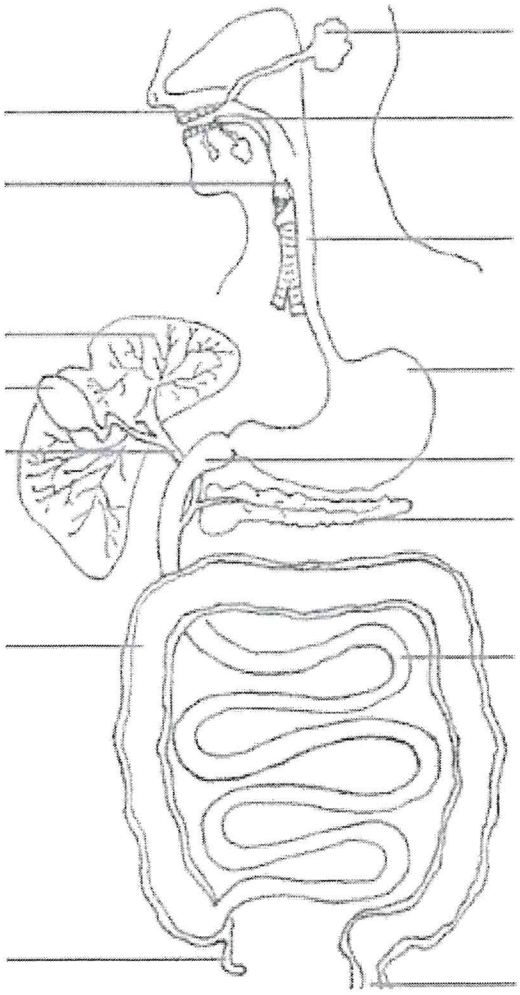
# Identify and label

## Drag and drop

Drag and drop activities are an excellent way to determine if your class has achieved recognition about specific learning objectives.

To create a drag and drop labeling activity, add the object you want labeled to the work area. The object can come from the SMART Notebook software Gallery, the My Content area or it might be a graphic you imported using the Insert menu. Use the object drop-down menu to lock in place the object that will be labeled. This action ensures the object won't be accidentally moved during the lesson activity.

Next, make the labels for your diagram and line them up at the bottom of the SMART Notebook page. Then you can ask members of the class to drag the labels to the appropriate area of the graphic.



Appendix

Tongue

Pancreas

Teeth

Gall Bladder

Salivary Gland

Duodenum

Epiglottis

Small Intestine

Large Intestine

Rectum

Esophagus

Liver

Stomach

Common Bile Duct

*Drag the labels to the appropriate part of the diagram.*

You may want to add a link to an object, such as the diagram of the digestive system above, to another SMART Notebook page with an answer key. This page will help anyone you share the file with find the correct answers.

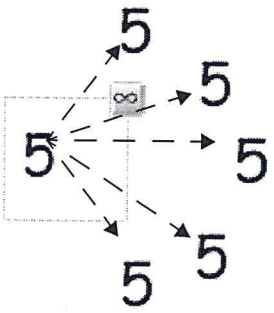
Drag and drop activities can also be used for text-based lessons. For example, you might drag events to specific dates on a timeline, define a series of words or match information.




*Drag the name of the famous composer to the country of his birth.*

## Infinite Cloner

The Infinite Cloner allows you to reproduce an object an unlimited number of times, without having to select Clone repeatedly from the drop-down menu. The Infinite Cloner also helps keep your SMART Notebook file's size smaller than if you were to copy and paste the same information, making the file easier to share with your colleagues.



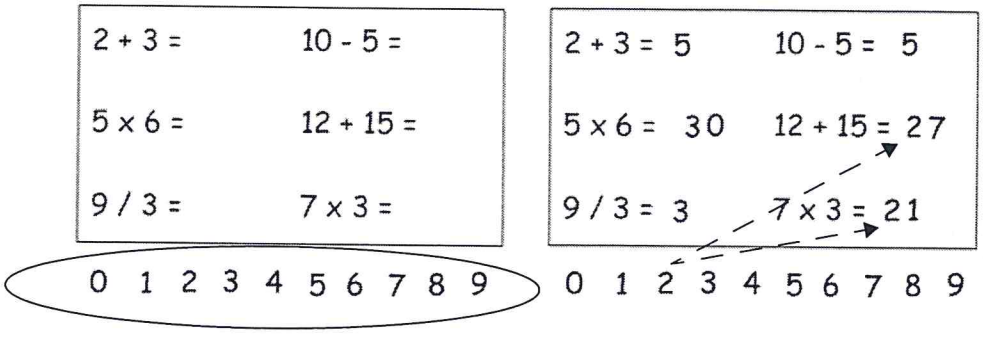

*Press and drag to create an identical object*

To set an object as an Infinite Cloner, complete the following steps:

1. Click an object
2. Click the object drop-down menu
3. Click **Infinite Cloner**
4. Click the object, then drag to create an identical object

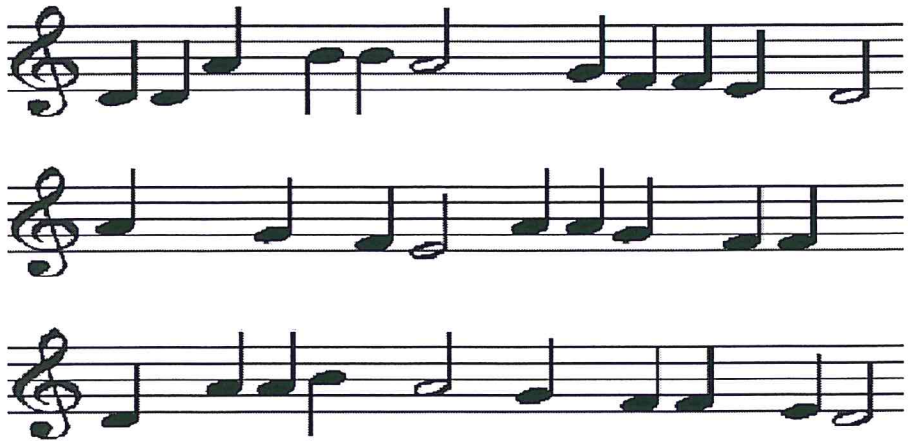
**Using the same object for multiple answers**

One advantage of the Infinite Cloner feature is the ability to create a drag and drop activity without diluting the pool of available options each time a question is answered correctly




*Set each number on the number line as an Infinite Cloner.*

*Use the same number multiple times to answer the questions.*





*Younger students "fill in the blanks" with infinitely cloned notes, or on blank music sheets, compose songs for their classmates to play*



| Element | Symbol | Classification |
|---|---|---|
| Oxygen | | |
| Hydrogen | | |
| Helium | | |
| Lithium | | |
| Boron | | |
| Beryllium | | |
| Neon | | |
| Sodium | | |
| Tin | | |
| Gold | | |
| Silver | | |
| Uranium | | |
| Chlorine | | |
| Carbon | | |

Metal
Non-metal
Noble Gas

*Drag and drop the symbol and classification to the corresponding element – Metal, Non-Metal and Noble Gas are infinite clones so they may be reused.*

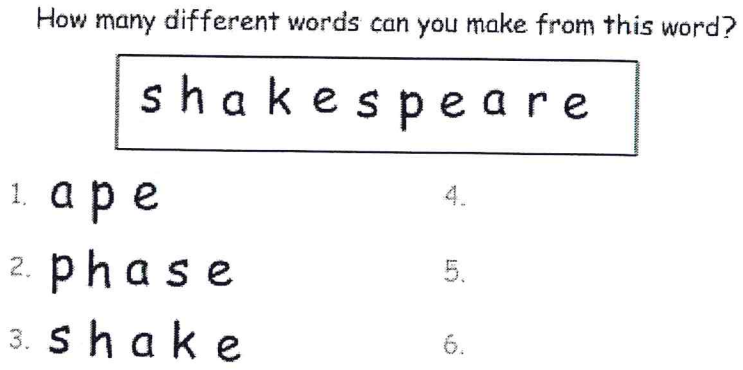
Be H Li
O Sn Ag
Ne
He
C B
Cl
U Na Au

## Keeping information in context

Another benefit of the Infinite Cloner feature is that it makes it easy to keep information in context. This feature is especially useful for text-based lessons.

Set each letter of a word as an Infinite Cloner. Drag the letter to a different area of your page to create anagrams. The original word will remain in place.

You may want to set a timer to make the lesson more challenging. An interactive timer is available from the Gallery Collections.




# Magic Pen



The Magic Pen icon from the SMART Notebook software toolbar allows you to highlight parts of your SMART Notebook page in a way similar to the Spotlight tool on the SMART Board interactive whiteboard.

## Magic Pen Spotlight

Click on the Magic Pen icon on the SMART Notebook toolbar to activate it.

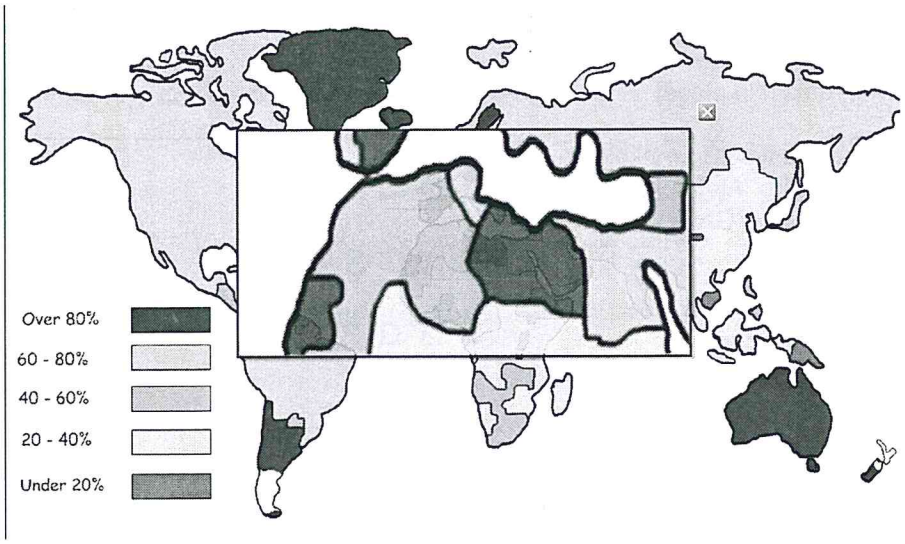
Draw a circular shape on the part of the work area you wish to highlight.

When you move your cursor over the magic shape, it turns into a double-ended arrow. This arrow allows you to make the highlighted area larger or smaller.



## Magic Pen zoom

When you use the Magic Pen and draw a rectangle around an area on your SMART Notebook page, it will allow you to zoom into that area.




When your cursor approaches the magic shape, it turns into a hand. This hand allows you to move the magic shape to zoom or highlight a different selection. The double-ended arrow allows you to resize the zoom or highlight area.



To close a magic shape and return your work area to normal, click on the X in the box.

When you write or draw with the Magic Pen, the ink disappears in about 10 seconds. This feature is an excellent way to keep your work area uncluttered. It is also a fine way to offer sequential problem solving clues to a class working on a SMART Board activity. You can use the Magic Pen to warm up the class by playing timed *Brain Gym* type exercises.

When the Spotlight or the Magic Pen are active, teachers can only write on or activate components in the spotlighted area.

## Review questions: Designing interactive lesson activities

1 What are some ways you can reveal answers to the group?

2 How would you use the Magic Pen?

3 How do you access the additional math and science symbols?

4 How would you use the Infinite Cloner?

5 Why is font selection important in creating a SMART Notebook file?

## Review answers: Designing interactive lesson activities

**1** What are some ways you can reveal answers to the group?

Move and reveal
Erase and reveal
Order and reveal
Screen Shade and reveal

**2** Why would you use the Magic Pen?

Bring attention to one area in SMART Notebook software

**3** How do you access the additional math and science symbols?

Double-click typed text and select the math and science symbols icon

**4** How would you use the Infinite Cloner?

To reproduce an object an unlimited number of times, for instance, in counting activities, graphing exercises, spelling and word games

**5** Why is font selection important in creating a SMART Notebook file?

Allows for less distraction; keeps the file consistent; allows for everyone in the room to see the text

# Hands-on practice: Designing interactive lesson activities

## Preparing your lesson

You will prepare a geography lesson activity that asks students to match North American countries to their flags. You can use the concepts outlined in this hands-on practice to prepare and deliver lessons in other subject areas.

1 Open a blank SMART Notebook file

2 Click the **Gallery** tab to search or browse collections of SMART's custom pages, clip art, Flash® animations and video files. For this example, you search for flags of North America.

**TIP**: Deselect the **Auto-hide** check box to keep the Side Tab visible. This action will provide you with easy access to the Page Sorter and Gallery tabs as you prepare and deliver your lesson.

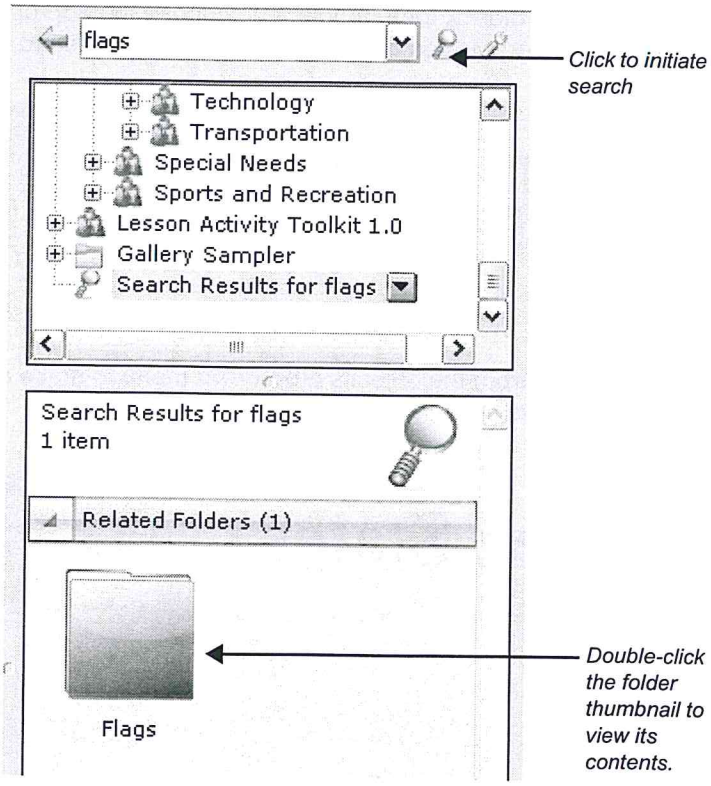
3 Type the keyword *flags*

4 Click the **Search** icon, which is the large magnifying glass, to initiate your search.

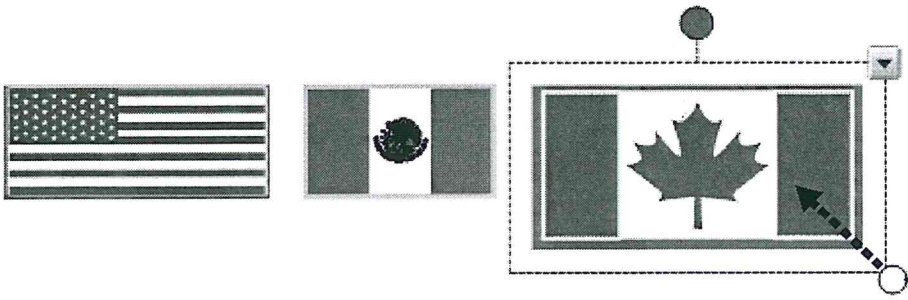
5 SMART Notebook software displays your search result(s) as a thumbnail image matching your search criteria. In this example, a folder named *Flags* will appear.

6 Double-click the folder thumbnail to view its contents

7 Scroll through the Gallery collection to find flags for the United States, Mexico and Canada. Drag each flag to the work area of your SMART Notebook file. You can double-click the flag's thumbnail image to quickly add it to your work area.



**8** Resize each flag by diagonally dragging the resize handle. Ensure the flags are approximately the same size.

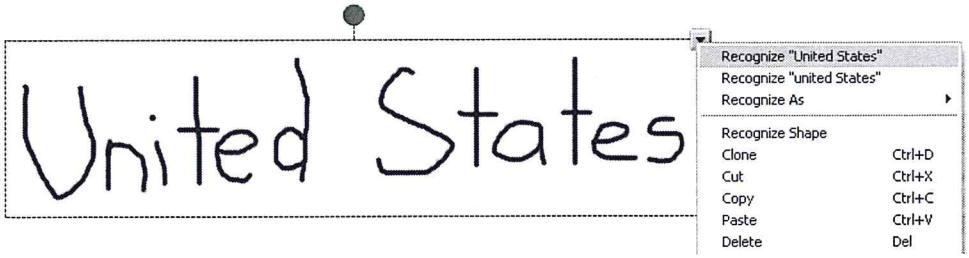


*Drag an object's resize handle to change its dimensions.*

**9** Align the flags horizontally

**10** Write the name of each country in a different color

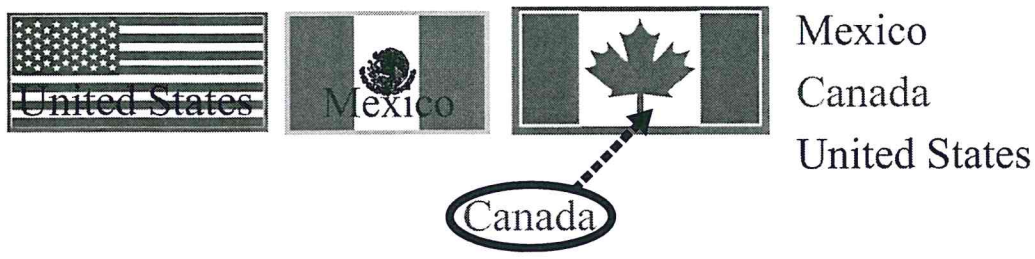
**11** Click *United States*, for example, and choose the appropriate typed text from the object's drop-down menu. Convert Mexico and Canada from handwritten to typed text also.



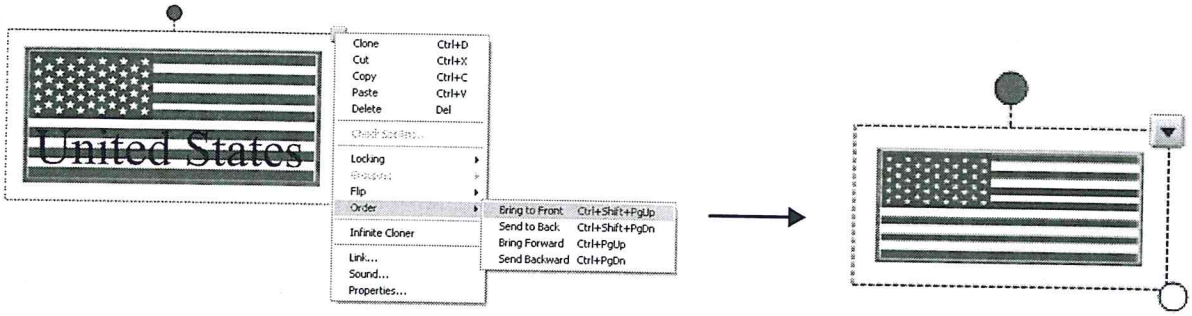

**12** Click **Clone** from the object's drop-down menu to make a copy of the name of each country. There should be two country names for each flag.




**13** Organize the names of each country so that one set of country names is placed in a vertical line on your work area. Drag the other country names over their corresponding flags.



14 Click the United States flag, for example, and choose **Order > Bring to Front** from the object's drop-down menu to cover the name *United States*. Complete this task for the Mexican and Canadian flags.




*The United States flag is positioned behind the typed text.*

*The United States flag is now positioned in front of the typed text.*

15 Click **File > Save** to save your SMART Notebook file. Give your SMART Notebook file a name, and choose the location where you want to save it.

## Using your lesson in the classroom

After opening your saved SMART Notebook file on the SMART Board interactive whiteboard, ask your students to drag the name of each country underneath its corresponding flag. Once the exercise is completed, remove the flags to reveal the correct answers.

**TIP**: Select a fun setting from the Creative pen menu to add check marks to correct answers.

You can add as many pages to your SMART Notebook file as you need to create additional lesson activities, such as labeling continents or identifying capital cities on regional maps.

## Preparing your lesson: Advanced features

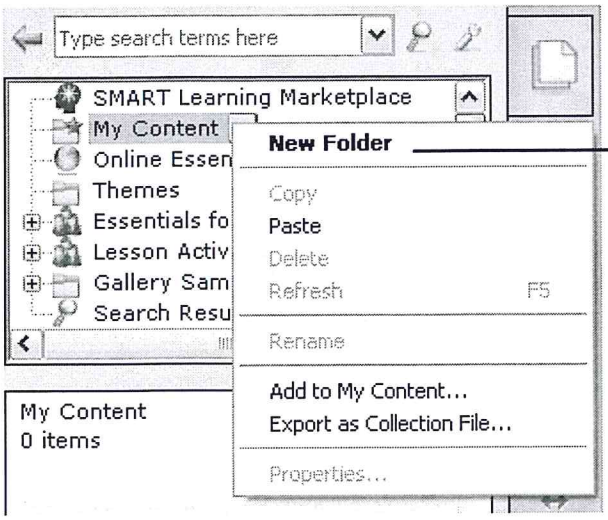
The My Content area is a Gallery collection reserved specifically for objects and lessons you have imported, captured or created, such as the lesson you just finished preparing. It's also a good place to store objects and lessons you use frequently or want to share with your colleagues.

1 Open your geography lesson

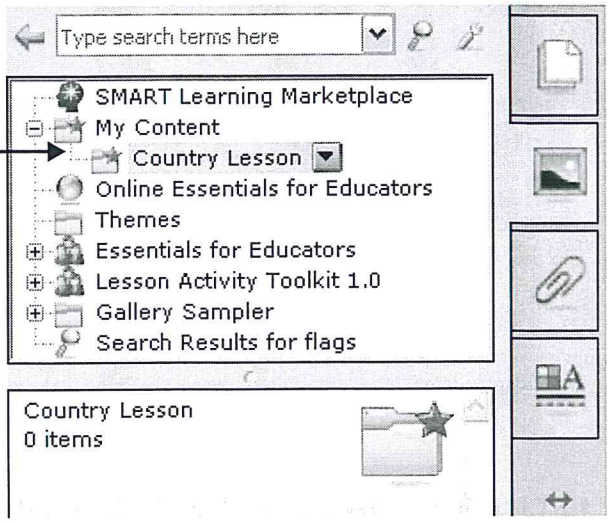
2 Click on the **Gallery** tab. By default, the My Content folder is selected.

3 Click the My Content drop-down menu and choose **New Folder**

4 Launch the On-Screen Keyboard and type *Country Lesson*. You have now created an area where you can store all objects related to your geography lesson.

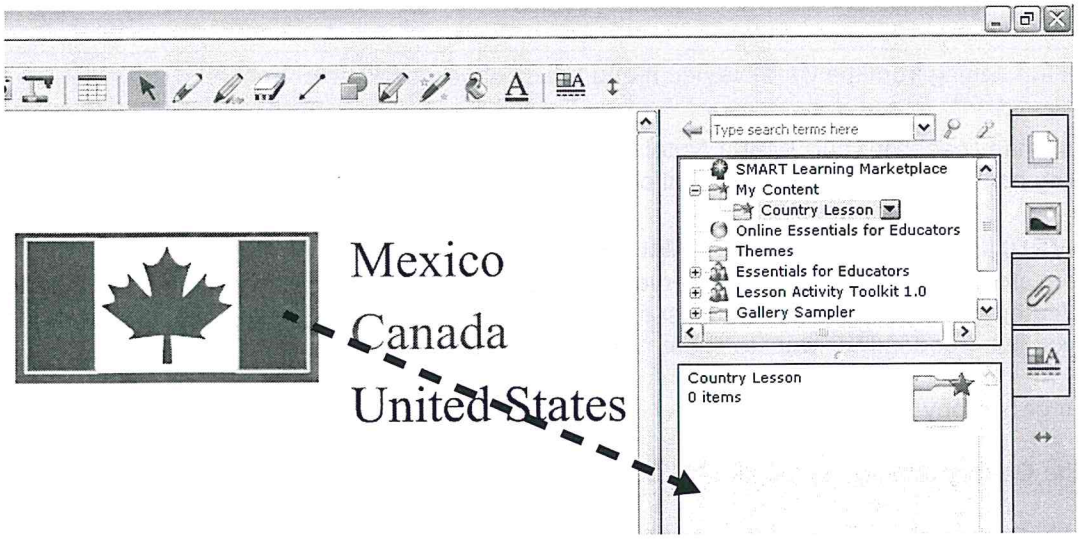



*Create a new folder.*




*Your new folder called Country Lesson appears under My Content.*

5 Drag each flag and country name into your new Gallery collection. Your new Gallery collection now contains nine individual Gallery items – one flag and two names for each country.




6 Select the **Page Sorter** tab. Insert a blank SMART Notebook page by clicking the **Add Blank Page** icon on the SMART Notebook software toolbar.



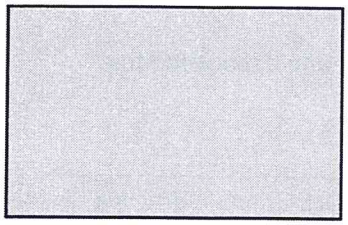
7 From the Shapes drop-down menu on the SMART Notebook software toolbar, select the square. Position your cursor on the left side of your work area and draw a large rectangle.



Click the **Select** tool from the SMART Notebook software toolbar. Fill the rectangle with color by selecting the rectangle, then choosing **Properties** from the object's drop-down menu.

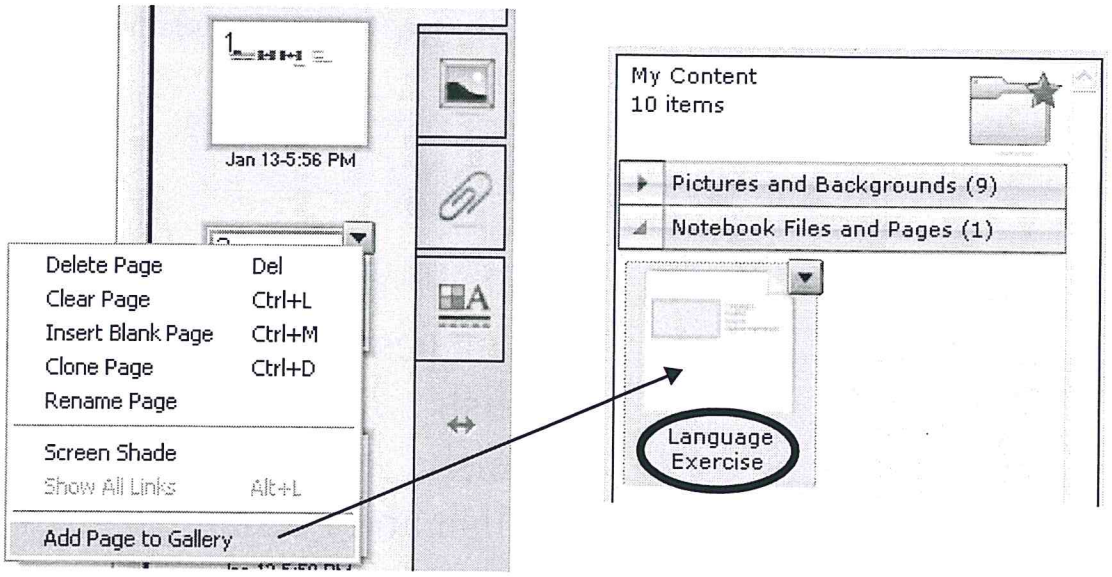
**TIP**: Alternately, you could change the rectangle's properties by using the Properties tab.

**8** To the right of the rectangle, write or type *Languages:* and below this write or type *English*, *Spanish, English and French*



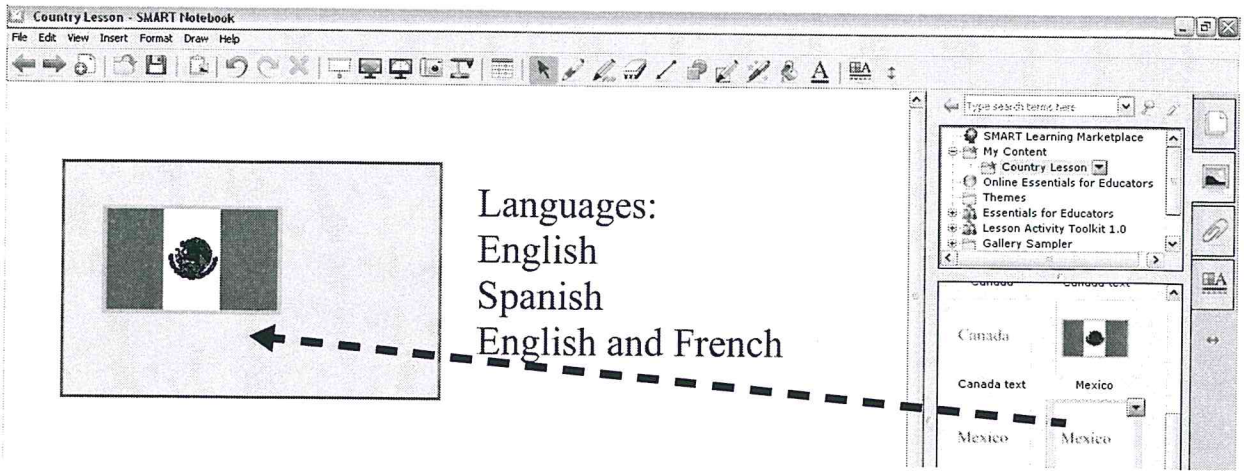
Languages:
English
Spanish
English and French

**9** Press the page thumbnail's drop-down menu in the Page Sorter tab. Select **Add Page to Gallery** to place the entire SMART Notebook page into the My Content area of the Gallery Collections. This action gives you quick and easy access to SMART Notebook pages for lesson planning and delivery.




**TIP:** Name your new SMART Notebook page *Language Exercise* so you can organize your Gallery items into meaningful groups.

**10** Drag the Mexican flag from the My Content area to the top-left corner of the rectangle you created in step seven. Then drag the word *Mexico* to sit directly below the flag.



**11** Drag the Language Exercise page you created in step 10 to the work area of your SMART Notebook file. This action will automatically insert a new SMART Notebook page directly after the active SMART Notebook page.

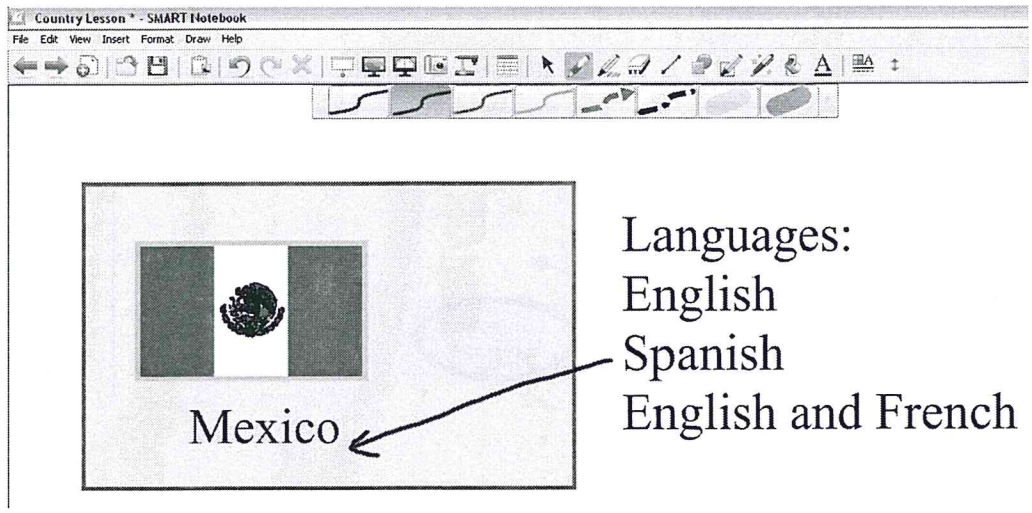
**12** Repeat steps 11 and 12 using the Canadian and United States flags and associated text

**13** Press **File > Save** to save your SMART Notebook file

**TIP:** Share your geography lesson with other colleagues using the SMART Board interactive whiteboard in the classroom. Select **Export as Collection File** from the My Content drop-down menu to distribute your electronic file.

## Using your lesson in the classroom

Invite your students up to the SMART Board interactive whiteboard to draw an arrow from the language text to the corresponding flag using the Line tool or a pen tool from the pen tray. You can hide the correct answers behind the rectangle or flags.



# Explore the possibilities

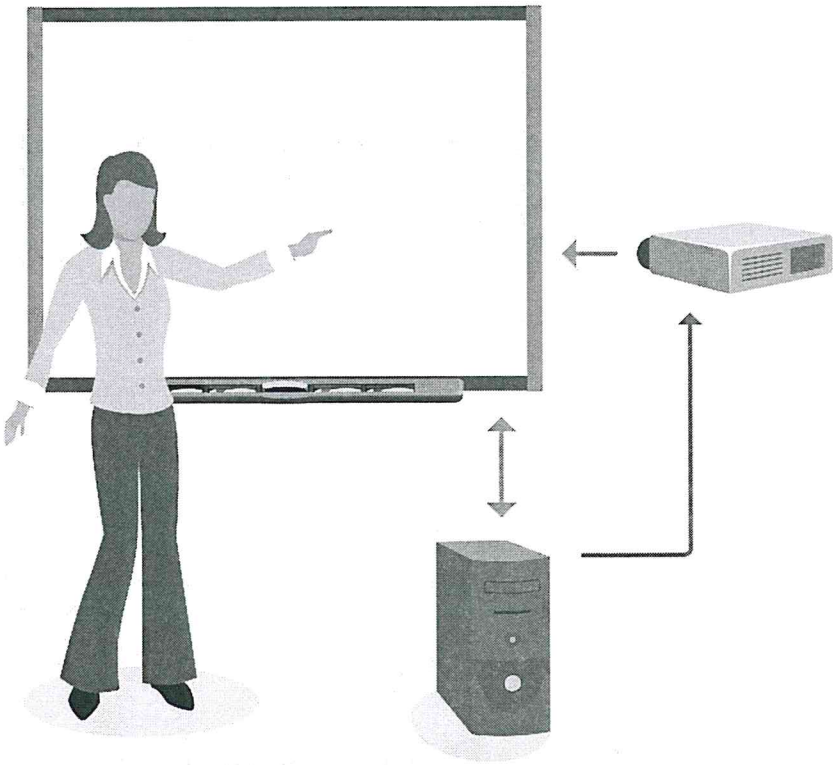
## Why and when would I use an interactive whiteboard in my classroom?

Interactive whiteboards and their collaborative learning software have many strengths in the classroom. This section explains what an interactive whiteboard is and what its advantages are over traditional and other digital mediums. General usage tips are also outlined.

## Understanding the interactive whiteboard

Each brand of interactive whiteboard operates a little differently but they all have some core similarities. All interactive whiteboards get their information from a computer and their image from some type of projection system, either rear or front projection. Each interactive whiteboard has some means of recording where you are pressing on the screen. Some interactive whiteboards register the pressure of your touch on the screen. Other interactive whiteboards use electromagnetic technology that is housed in special pens and read by the board. Several others use a camera system that *sees* where your finger or stylus is on the board. Whichever way the interactive whiteboard senses your input, this information is fed back to the computer, which uses that input to navigate through digital information the same way that clicking your mouse does.

Essentially, anything you would do with your mouse on a computer screen, you do with your finger or a special pen on an interactive whiteboard.



## An interactive whiteboard can do anything a computer can do

Because an interactive whiteboard is just another way of seeing and controlling what is on your computer, you can do anything on it that you can do on the computer it is attached to. The same software can be loaded, used and saved. A wireless keyboard can be attached so that you can type. You can also navigate the Internet and play video, sound and other multimedia.

## Interactive whiteboards add some functionality to your computer

Interactive whiteboards also add some extra functionality to your computer, or rather the collaborative learning software that comes with your interactive whiteboard adds functionality. All interactive whiteboards are set up to make it easy to write or take notes on top of your other applications or in specialized note-taking software that may be provided with your interactive whiteboard. Many interactive whiteboards recognize the text you write and turn it into typed text. Some interactive whiteboard providers incorporate software that allows you to input handwritten text or drawings into your favorite software applications such as Microsoft Word® or Excel® spreadsheet software.

## Integrate with other technology

Many users don't realize that you can also seamlessly use additional technology such as DVD players, document cameras and video cameras with some interactive whiteboards, much as you would with a television.

## What you can do depends on the interactive whiteboard provider

One of the biggest factors separating the various brands of interactive whiteboards is the quality of the software and teaching resources they provide. In discussions pertaining to interactive whiteboard use in the classroom, we will be assuming the use of high-quality collaborative learning software that is designed to support the easy creation of interactive whiteboard lessons. As a result, there may be some suggestions mentioned in this module that your brand of interactive whiteboard is not able to accomplish easily.

## The interactive whiteboard's role in the classroom

An interactive whiteboard with collaborative learning software has a number of major strengths that make it a wonderful tool in the classroom.

| Use an interactive whiteboard for the following: | Some advantages of doing these tasks on an interactive whiteboard are the following: |
|---|---|
| • Whole-class teaching<br>• Demonstrating an activity before students begin independent work<br>• Introducing and generating excitement about a new topic<br>• Writing notes that can be saved and printed or posted to a class website<br>• Idea generation and concept-mapping<br>• Reviewing and revising at the end of the day or unit<br>• Showing a video and annotating on top of it | • Teachers can be more flexible with their presentation of material<br>• Students can be involved in active full-class activities<br>• Images and multimedia can be easily integrated<br>• Past work can be easily pulled up and revisited<br>• Lessons and notes can be saved and printed<br>• It is easy for all students to see<br>• Teachers can do more with their full-class lessons using less prep time |

Some teachers also use the interactive whiteboard and collaborative learning software for the following:

- Classroom management (taking attendance, timing breaks)
- Displaying assignment information for students to reference as they work at their desks

Interactive whiteboards are great tools for the classroom, but like any other tool they should be used only when it is effective to do so. There is no need and probably no advantage in asking students to spend all day in front of the interactive whiteboard. While the interactive whiteboard is an excellent tool for many classroom activities, it is best to leverage whole-class interactive whiteboard use with other activities, just as you would in a classroom without an interactive whiteboard.

## Best content for exploration on the interactive whiteboard

Any type of curriculum content for any subject can be explored on an interactive whiteboard, but it works better for some subjects than others. Below are some general guidelines for getting started.

| **An interactive whiteboard with collaborative learning software is an excellent choice for the following:** | **An interactive whiteboard makes a poor substitute for the following:** |
|---|---|
| • Showing a video – An interactive whiteboard is better than a television because you can take screen shots of a video and build lessons around it. You can also pause and annotate over a video to highlight information.<br>• Content that is highly visual and difficult to explain without images<br>• Content that is too dangerous, inaccessible or hard to see in real life<br>• Writing lecture notes that you can save and print later. This ability also saves teachers from having to wait for students to finish copying so they can erase the board and keep writing.<br>• Lessons where objects need to be manipulated such as a classification exercise or coin-counting exercise, but it would be too time-consuming or hard for the whole class to see with real objects.<br>• Content that is abstract but that you want to make more concrete through use of simulations or Flash® animated learning objects<br>• Interacting with schools or guest speakers in another part of the world | • Real science experiments<br>• Live visits from guest speakers<br>• Field trips to accessible destinations<br>• Art using real materials. However, it is excellent for art history and art theory.<br>• Music using real instruments, but it is excellent for theory and history.<br>• Individual use of manipulatives<br>• Physical activity such as recess<br>• Learning to print with a pen and paper |

# Lesson design

## How do I design a lesson that enables effective teaching using an interactive whiteboard?

This section explores the relationship between traditional instructional design practices and engaging, effective lesson activities designed for the SMART Board™ interactive whiteboard.

# Instructional design basics

Planning any lesson activity involves thinking about what content you want students to explore and how to present that content in a way that is meaningful, engaging and effectively achieves student learning outcomes. Today's classrooms are diverse and challenging. Good teachers take many factors into consideration when designing their lessons. It is the consideration of these factors in lesson development that we refer to when we use the term instructional design.

## What's different about instructional design for interactive whiteboards?

The interactive whiteboard is a digital, visual medium that shares many qualities with a screen and digital projector. Part of what makes instructional design for interactive whiteboards different from traditional instructional design, or lesson planning, is dealing with this highly visual, digital medium – avoiding *Death by PowerPoint®*, as they say.

What sets an interactive whiteboard apart from a screen and digital projector however, is its capacity for interactivity. A large part of this learner workbook deals with understanding and taking full advantage of the unique strengths offered by interactive whiteboarding technology.

This section is intended to be a reflection of the best practices you already know and incorporate into your lesson development, through the lens of interactive whiteboard use. Knowing a little about design for a visual medium, and some best practices for how to integrate the strengths of an interactive whiteboard into your lessons, will help you create engaging, meaningful lesson activities that meet curriculum learning objectives and save you time as a teacher.

The following principles of good lesson design, as they apply to interactive whiteboard lessons, will be discussed:

- Convey content clearly
- Target student age and ability
- Enable active student participation
- Cater to multiple learning styles
- Consider special needs
- Involve the entire class
- Scaffold students into other activities
- Encourage further inquiry
- Enable assessment of learning objectives
- Allow review and reflection

## Convey content clearly

Clearly conveying content becomes a highly visual issue when presenting a lesson on an interactive whiteboard. To convey information clearly you'll want to remove distractions, make sure text is easy to read and ensure lesson activities are clearly explained. The following section will give you a place to start with designing clear, attractive lessons.

### Give your lesson a title page

Once you have determined what content will be taught in this lesson, create a title page and include a section of teacher's notes at the beginning of your lesson activity. Title pages and teacher's notes focus learning objectives and provide important information to a substitute teacher or any other teachers that might share the lesson activity.

### Consider your background color

When choosing a background color, keep in mind that very bright or intense colors can be distracting and draw attention from the page content. A bright yellow might seem like a fun choice, but it may also distract from other elements on your page. Reserve the most vibrant colors for the individual objects on your interactive whiteboard page to which you want to draw student attention.

Although a white background is typically the default option, you may wish to consider an off-white or pastel color as a background for your lesson. A bright white reflects a lot of glare and can be hard on some students' eyes.

### Select fonts appropriately

When you are choosing a font, you are choosing how your text will appear on the interactive whiteboard. Each font has a personality, and some are easier to read than others. For example, Times New Roman, Comic Sans and Arial look very different.




*Times New Roman* *Comic Sans* *Arial*

If possible, try using only one font throughout your lesson activity. Too many fonts can be distracting to the eye and draw attention away from important points.



## Use fonts that are installed on your interactive whiteboard's computer

Your computer comes with a small number of default fonts. Installing certain programs adds more fonts to that list. New fonts can also be chosen and downloaded from websites that specialize in providing or selling unusual fonts. Some fonts are specific to either Macintosh or Windows operating system platforms, while others can be used on both.

As a result, some fonts are common to just about any computer, for instance Arial and Times New Roman, while others might be on your computer but nowhere else. You will need to use caution when using unusual, non-standard fonts in your lesson, otherwise you may experience a frustrating message telling you that the font you used on the amazing lesson you created at home cannot be found. This occurs because font information is stored on each computer and only referenced, not stored, by the interactive whiteboard software you use. To avoid this complication, use only common fonts in your lesson development. If you find an unusual font that you can't live without, install it on both your home computer, if you create lessons at home, and on the classroom computer that the interactive whiteboard will be using.

## Never sacrifice clarity for style

Consider the size and color of text you will be using throughout your lesson activity. Always think about the student at the back of the class. It may be hard to tell whether your text is big enough or clear enough when you're creating it at your personal computer. A projector will enlarge your text but chances are good that your students won't be as close to the interactive whiteboard as you are to your personal computer screen. Stand back from your computer monitor to gauge clarity or test-drive your lesson on an interactive whiteboard. If in doubt, always choose clarity over style. Once you have decided what your text will look like, make sure you keep it consistent to give your lesson a nice flow from one page to another.

General guidelines for choosing fonts for your interactive whiteboard lesson activity include the following:

- Titles should be at least 28 point and bold type face
- Text used for sentences and paragraphs should be the same font as the header, 22 point and in regular type face
- Make sure the font color you choose is easy to read and see against the background color you have chosen

*Fonts like this may look nice, but consider where you use them. Titles and fun games are fine, but do you want to convey an important fact in such a distracting, hard to read font?*

## Use an age-appropriate font

Reading different types of print is actually a skill that develops over time. Primary grade children who are just learning to read and write may find it easier to read a font where the letters more closely resemble those they are being taught to print. The lower case *a* of typed print tends to be the most confusing for very young children. Serif fonts such as Times New Roman are also confusing for children because the letters are shaped differently from those they print in the classroom. Teachers of very young children may find it helpful to find the perfect font by downloading one that closely resembles handprinting from one of the many websites that offer fonts for free or for a charge. However, if you create lessons at home, be sure to install this font on your home computer as well to avoid missing font errors.

## Don't be afraid to start a new page

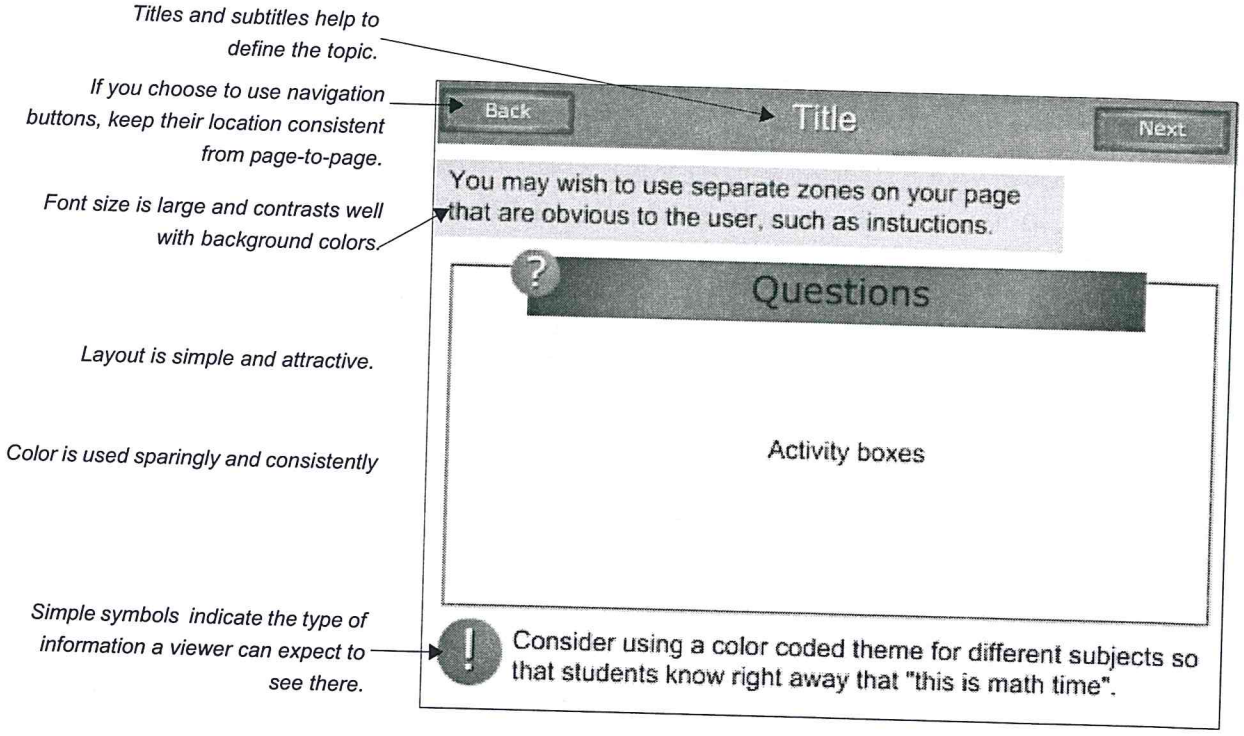
You can add as many pages to a SMART Notebook file as you like. For maximum clarity, keep your lesson design to one idea per page. As soon as the page starts to fill up with content, break the information into two simpler and easier to read pages.

## Be wary of overly text-heavy pages

Pages that are crammed full of text are difficult to read and overwhelming to look at. Limit text to a maximum of five bullet points per page, or three for young children, and be as concise as possible with your text. Not every word that you will be speaking about needs to be on the page. If possible, lighten your lesson up with some images or interactive elements. If the type of content you are dealing with is not conducive to images or if you'd rather not spend time on them, consider using color to separate and define your page. The image included in the following section is an example of lesson layout using graphic elements rather than images.

## Consider developing consistent themes

Consistent layout of your lesson from page-to-page lets the viewer know where to look for information. Additionally, the random or unattractive placement of objects distracts many viewers from focusing on your important content. You don't have to be a graphic designer to make a lesson that is clear and easy on the eyes. Here are some tips.




When you have developed one page that you are happy with, copy or clone that page and use it as a basis for the other lesson pages. This will save you time by preventing you from arranging things on each page. It will also keep your layout from appearing as if it jumps around when you move from page-to-page.

## Make links obvious and relevant

Inserting a link into your lesson gives the computer the information it needs to bring up another document, a different page in your lesson, a video or a website on the Internet. Some interactive whiteboard software offers you the option of making an object into a link or displaying the link as an additional icon that you can touch to activate. Setting up your link so that it is activated when you touch an object is useful for making navigation buttons or creating an activity where a reward screen opens if the correct object is touched. It is also useful to set your actual text as a link, rather than a separate icon near the text, if you want the link to more closely resemble text links that appear on webpages.

Whichever style of link you choose, ensure that it is obvious to any user, not just you, the creator. Making links easy to identify helps if you want to reuse a lesson at a later date. It's also easier for substitute teachers, students or others who use the lesson to find the link. To make your link obvious, preface it with an instructional statement such as *Click here to view a virtual tour of Tutankhamun's tomb*. Create navigation buttons that look like buttons and have text on them to say what they do, for instance, *back*, on a button that links to a previous page in the lesson. If you've made text into a linking object, change the font to blue and underline it. This action makes it appear like the more familiar webpage text link.

**Effective object links**

Click the image to view a virtual tour of Tutankhamun's tomb



*Image used as an object link with an instructional statement to locate it for the user*

The discovery of Tutankhamun's tomb by Howard Carter in 1922 was considered one of the most

*Text used as an object link and formatted to look like a familiar webpage text link*




*Effective navigation buttons look like buttons and incorporate instructional text*

Check your lessons after you've created them to make sure that all of the links go where you want them to go. If you are linking to another page in your lesson, make sure there is a *back* button to return to where you started so that the flow of your lesson is not disrupted. If you are using a lesson that someone else created or that you created some time ago, it is a good idea to check the links to confirm that they still lead to active websites.

## Use interactive and multimedia content judiciously

Multimedia elements are a popular way to integrate content to your lesson activities and appeal to different learning styles. These tools are a good supplement to any lesson, but should be used with some restraint. Filling every page with animations, videos and sound can distract students from the learning objectives and direct their focus to the technology instead of to the content of your lesson.

Use and experiment with all the tools available to you, but make sure you know why you are using a specific tool – to meet a learning objective.

## Target student age and ability

Effective teachers design lessons that are targeted appropriately to the age and ability of the students they are teaching. This is easier said than done because there is typically a wide range of abilities in the classroom. Additionally, the teacher may not always correctly anticipate how much background knowledge a group of students have about a topic. This section outlines some ideas about how to take advantage of the added flexibility of teaching on an interactive whiteboard to better target the abilities and previous knowledge of students.

### Make a note of prior knowledge and lesson objectives

Add a section to the teacher's notes at the beginning of your lesson that outlines the background knowledge students have prior to beginning the activity, and specific learning objectives your lesson will target. Including this information in your lesson file helps focus your attention on these ideas while you are developing your lesson content. It also provides important background information to substitute teachers or any other teachers with whom you may wish to share your lesson activity.

### Take advantage of added flexibility

When you are planning and building a lesson, it may be necessary to make certain assumptions about the ability level and prior knowledge of the students. Pre-lesson assessments such as pre-tests and KWL charts (Know, Want to know, Learned) are wonderful ways to minimize the assumptions you'll have to make in future lessons. These types of pre-lesson assessments can easily be done on the interactive whiteboard and saved for reference later in the unit.

A major advantage of interactive whiteboard use is their flexibility. If a teacher is in the middle of a lesson and realizes he's misjudged student ability or prior knowledge, he can draw upon the World Wide Web or the content from his interactive whiteboard provider to spontaneously provide background for his lesson. Pausing your planned lesson to pull up a search engine or a website that you've previously identified and attached to your lesson is an excellent way to explore and build a foundation for a topic before continuing with a lesson. Not only does this lesson flexibility ensure that all students have a solid base on which to build further content, but it demonstrates to students how they can take action when they don't fully understand a topic or assignment.

### Give students access to information outside of class

Conducting lessons on an interactive whiteboard offers the flexibility of easily printing lesson materials or posting them to a class website. This approach makes content available to students who missed class or who will benefit from extended access to material.

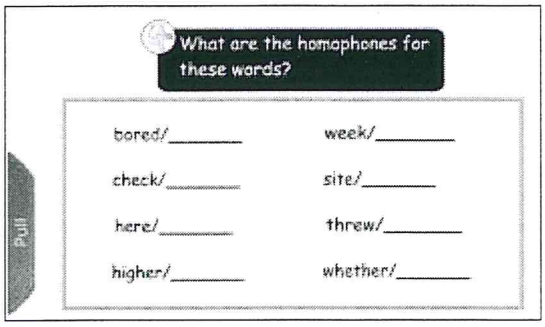
### Consider literacy

If students in your class have low levels of literacy, consider using visuals such as images, videos or diagrams to make your point. Leave text to play a supporting role. Incorporating visuals is an area where using an interactive whiteboard to teach has major advantages. When evaluating the literacy of your class, don't forget about special needs students and students for whom the language of instruction is not their first language. Using visuals is also a great way to teach language literacy because it relates the words you are speaking and writing to a visual representation that students can identify.

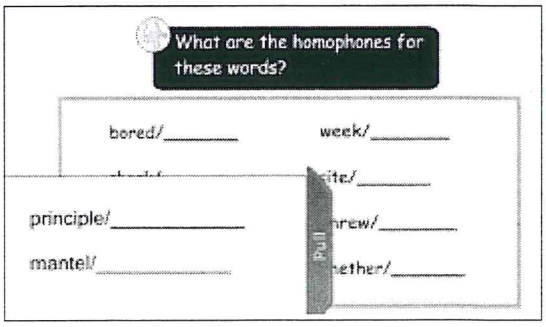
## Differentiate instruction seamlessly

The interactive whiteboard allows for easier integration of differentiation strategies within a lesson. Several different levels of activities can be prepared and organized in advance, allowing teachers to spontaneously select the one that seems most appropriate during the lesson. Teachers can also offer different levels of questions to particular students based on their ability, without it being obvious that some students are getting easier questions. Pull tabs are another good way to store information of varying difficulty and display it as needed. Using hide-and-reveal strategies in lessons also allows you to change the level of difficulty by keeping supplementary information hidden unless it is needed.

*Pull tab information stored*



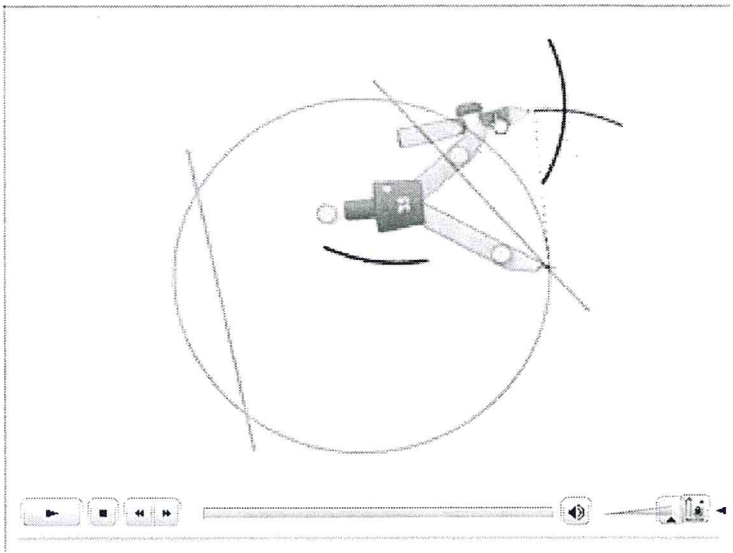

*Pull tab information revealed*




Educators can also differentiate by color-coding interactive whiteboard questions by level of difficulty or displaying different streams of assignments on the interactive whiteboard for students to work on independently.

## Differentiate by recording your process

Some interactive whiteboards have a recorder tool that allows teachers to record the steps they take on the interactive whiteboard and play them back to students at a later time. For example, an instructor can turn on the recorder feature, walk a class through the steps required to solve a math problem by doing an example on the interactive whiteboard, stop the recorder feature and set it to play back repeatedly for the class to reference while they work.



Use of the recorder feature allows strong students to get on with their work without the tedium of repeated whole-class instruction, while supporting the middle and low ability students who may need to reference the instruction many times as they work. If a microphone is attached to your computer when the process is recorded, sound will be included with the file. A narrated recording of a process is useful for posting on a class website or sending to students who were away.

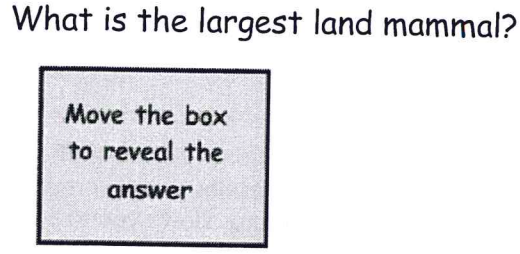
# Enable active student participation

One of the biggest benefits of teaching on an interactive whiteboard is the ability for students and teachers to interact with objects and activities on the page. Interaction with the whiteboard, apart from just manipulating the screen, allows for more active learning to take place. This means that instead of treating students as receptacles for knowledge and trying to *fill them up* with information, students are given the power to construct their own meaning out of the content you provide. Many educators believe that information learned through active processes are more easily retained, and are retained over a longer period than information that is passively absorbed. Enabling active student participation with lessons also gives the teacher an opportunity to assess student learning.

The following section offers suggestions about how to design interactive whiteboard lessons that encourage student participation.

## Create hide-and-reveal activities

One of the quickest ways to add interactivity to a lesson is to hide the answer to a question behind an object on your interactive whiteboard page. Instead of giving students a piece of information, write a question and hide the answer under a box or an object that can be moved out of the way when you are ready to reveal it. Alternatively, you could use the Screen Shade tool to accomplish a hide-and-reveal activity.




## Create drag and drop activities

Drag and drop activities are an excellent way to determine if your class has understood the lesson. These activities work well with labeling exercises, sorting exercises, ordering, counting and matching. It is extremely easy to create a drag and drop activity on an interactive whiteboard, compared to creating a sorting exercise with paper. It is much easier for a whole class of students to see a demonstration when this type of activity is done on an interactive whiteboard rather than with real objects, particularly small objects. Drag and drop activities keep your class active and engage more parts of the brain because of the physical movement involved.

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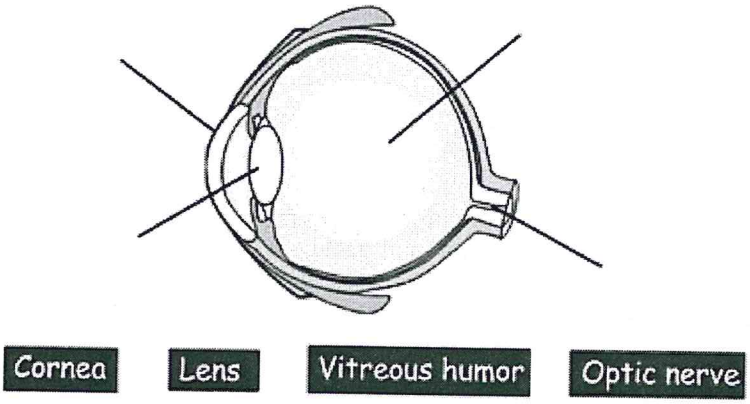
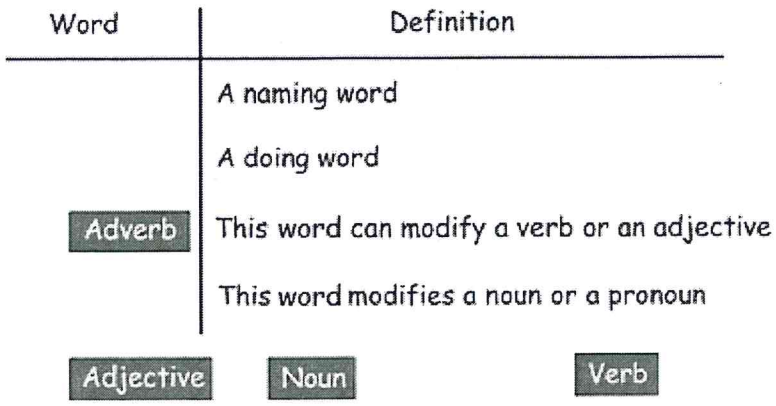



*Labeling a diagram is an excellent drag and drop activity.*

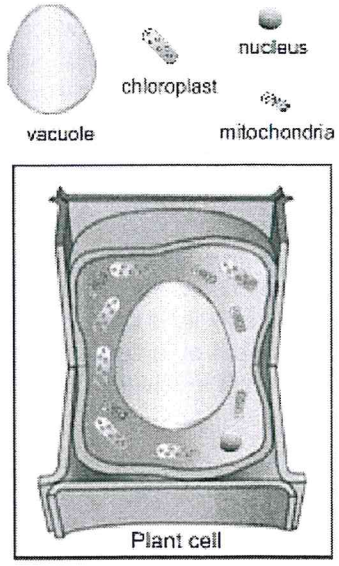
It is a good idea to copy your drag and drop lesson activities onto another page at the end of your lesson to create an answer key. This page will help future users of the file find the correct answers.

Drag and drop activities can also be used for text-based lessons. For example, you might drag events to specific dates on a timeline or define a series of words.




*Use drag and drop activities to enliven text-based lessons.*

If your interactive whiteboard software offers an infinite cloning feature, this can be very advantageous when creating drag and drop activities. The Infinite Cloner feature allows you to create a pool of choices that students can drag from as often as needed without diluting the pool of available options.




*Use Infinite Cloner to label graphics that need to use the same element more than once.*

## Incorporate Flash® activities

Flash is a software application that is used to create animated images and interactive graphics. All interactive whiteboards will allow users to view websites where students can access and manipulate Flash objects, and some interactive whiteboard providers supply educational Flash content that can be used directly within a lesson. Interactive Flash activities and similarly dynamic graphics help achieve learning objectives and bring the lesson to life. Finding a Flash object that enhances your lesson, or creating your own if you have Flash software and the necessary skills, is a way to incorporate more complex interactivity into lessons that demand it.

## Get and record students' opinion

Engage students' opinion by taking votes with an interactive response system, which is sold as an interactive whiteboard add-on by some interactive whiteboard providers, or a simple tally on the interactive whiteboard. Opinion polls stimulate discussion and allow students to participate actively in a lesson. Saving your software file with the voting results recorded allows you to bring up these results later on in the unit to see whether opinions on the issue have changed with further study.

# Cater to multiple learning styles

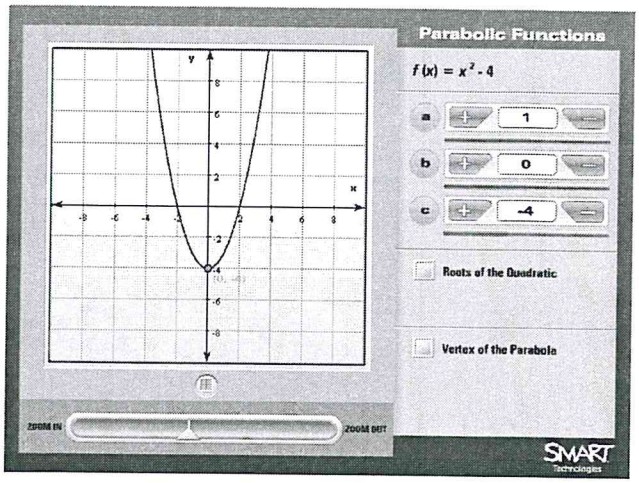
The term multiple learning styles refers to the theory that individuals are naturally more able to learn material that is presented in a particular way. Educators will often refer to visual learners, auditory learners and kinesthetic, or body movement, learners.

The best lesson design is one that considers and targets a number of different learning preferences. Interactive whiteboards have a unique advantage over a screen and digital projector in that lessons can be manipulated physically such as in a sorting exercise. Appeal to as many learning styles as you can within a single page or activity, without sacrificing clarity, and vary the approach from page to page so that there's something to address every learning style within a single lesson.

This section outlines some of the ways that interactive whiteboard lessons can help you cater to multiple learning styles.

## Incorporate interactive and multimedia content

Video and animated Flash-created content can be easily incorporated into your interactive whiteboard lesson. Video content can be used to give students an impression of a historical event or to demonstrate how something moves, such as microscopic cells. Flash-created content can be used as an alternative to video for something that cannot be videotaped, such as movement of a line on a graph, or when you want students to interact directly with a learning object and receive instant feedback. Many students learn better from seeing something in action, rather than just hearing or reading about it.




Interactive Flash content can be especially valuable for the substantial proportion of learners who need to understand difficult concepts – mathematical concepts, for example – in context rather than as an abstraction. Teachers can use the Flash learning objects made available by their interactive whiteboard provider or link to the many education websites that provide these resources.

## Incorporate sound

Some collaborative learning software for the interactive whiteboard makes it easy to engage auditory learners by using sound within a lesson activity. It is also a good way to give students insight into a speaker's personality – listening to a historical speech, for example, rather than reading it, can be more engaging for students. Another way to use sound is to give immediate feedback to students when they interact with specific objects in the interactive whiteboard lesson. Try recording applause to use for correct answers or the words *try again* for incorrect answers.

Some interactive whiteboard providers make sound files available to users as part of their educational resource offering. You can also record sounds or text using a digital recorder or download sound files from the Internet.

## Make it active

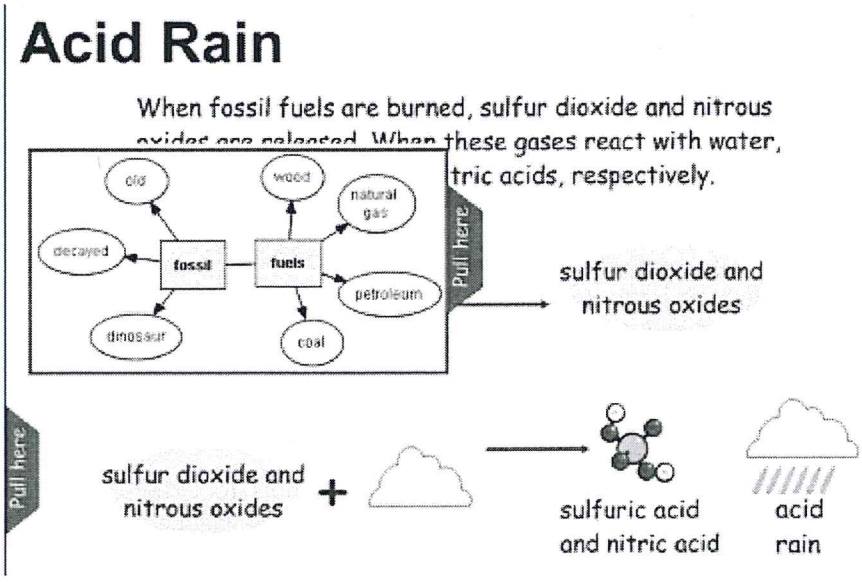
Inviting students up to the interactive whiteboard to move or sort objects engages kinesthetic learners. Seeing objects being moved around the interactive whiteboard engages visual and spatial learners. Increased interaction between students and teachers engages verbal learners. All students learn best from active rather than passive processing of information. In short, keeping lessons active and interactive will appeal to more students' needs than lecture-style delivery.

## Consider special needs

Inclusive education practices have made today's classrooms very diverse. Most teachers need to consider the special needs in their classroom such as those of English language learners (ELL), students with learning or behavioral disabilities and even those with severe disabilities. This section outlines some ideas to help you consider the special needs in your classroom when teaching on an interactive whiteboard.

### Access key lesson vocabulary when you need it

An effective instructional strategy for English language learners is to include key vocabulary for the lesson. An effective way to handle key vocabulary on an interactive whiteboard is to use a hide-and-reveal technique or pull-tab. This approach allows the instructor to address key vocabulary at the beginning of each presentation page or activity and then store it away to better access the main page content. This type of interactivity also gives the teacher the flexibility to bring that information out only if, or when, needed. The text on these key vocabulary tabs is an independent object – that's why you can move it around. It is an easy task to collect all of the key vocabulary in your lesson onto a single page to print. ELL students or struggling readers can use this advance vocabulary list to familiarize themselves with key words before the full-class lesson.




*Use of pull tabs to store and access vocabulary information for key lesson words*

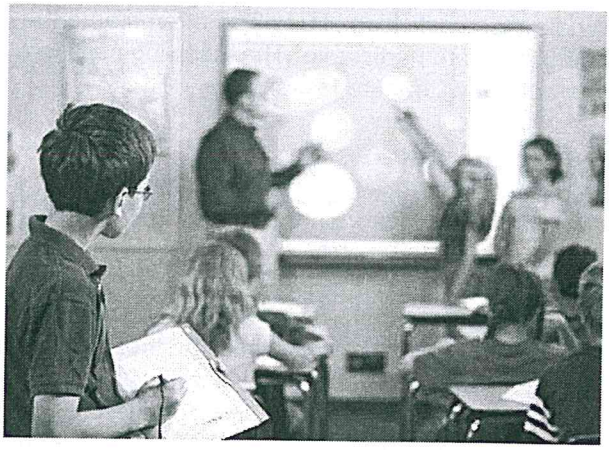
### Students with severe disabilities also benefit from interactive whiteboard use

Students with severe cognitive and physical disabilities can derive a great deal of benefit from interactive whiteboard use. These students can learn action-and-response and physical coordination. Use interactive whiteboard software to customize the activity to what the particular student enjoys. For some students, linking a sound file that will play when a student interacts with an object is very effective. Other students may prefer to be rewarded with images of faces or animals, animated objects, or changes in color. When designing your interactive whiteboard activity, keep in mind that some students may be sensitive to glare, so consider using a pastel shade such as beige or light blue for your page background. Some students with severe disabilities also suffer from visual impairment, so consider keeping objects and any text quite large.

Interactive whiteboards that respond to touch pressure have an advantage over those that operate with an electromagnetic pen when they are being used to teach students with severe disabilities. Those students who find it difficult to grip a pen or stylus can use other implements to write or to navigate a touch-sensitive board. These students might find it easier to grip a tennis ball, drumstick or manipulate the interactive whiteboard with their hands.

## Use wireless slates to include students with limited mobility

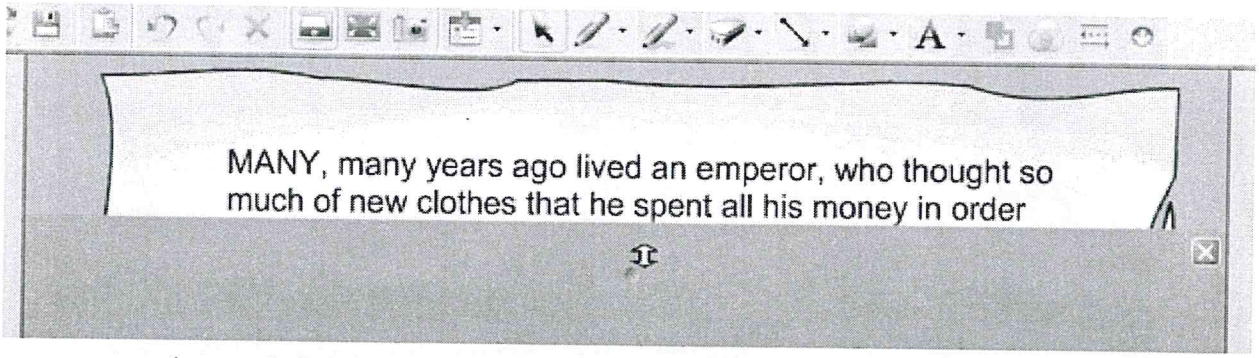
Similarly, teachers with students who have the physical coordination to interact with the whiteboard using a pen but who experience mobility issues may wish to consider using a wireless slate device. Wireless slates are an add-on component offered by many interactive whiteboard providers. They allow the interactive whiteboard to be manipulated from a distance, which makes it easier for students with low or awkward mobility to participate in activities and discussions. Wireless slates also have many advantages for all students and teachers, such as easier classroom management and increased engagement when the teacher is able to manipulate the lesson activity from a distance. Wireless slates and other interactive technology that can accompany interactive whiteboards will be discussed more in subsequent modules.



*Student using a wireless slate to interact with an interactive whiteboard*

## Take advantage of tools to focus attention and guide students

Some interactive whiteboards have a screen shade tool and a spotlight tool. A screen shade tool can be used to help struggling readers focus on a single line or word in a piece of text. Moving the screen shade over word-by-word or down line-by-line can help the student or class track text as they read from the interactive whiteboard screen. This approach is especially helpful for beginning readers, students with dyslexia or other learning disorders, and students with attention issues. Alternatively, a spotlight tool can help focus student attention on a particular section of the interactive whiteboard and can also be used to aid reading. Some students find spotlight tools bothersome because they can't see the highlighted information in context of the whole page. If this is a problem, reducing the opacity of the spotlight tool helps to focus attention on a particular element of a lesson without losing the context of that element.




*A screen shade tool can be pulled down vertically to help track text line by line as a student reads.*

## Use color to guide emerging readers

Coloring each bullet point in an alternating color sequence is another way to help readers follow what you are teaching. It is also easier for some students to refer to *the words in red* in a question to the teacher than to say *the third point down*, or *you were saying something about...*

## Involve the entire class

Whole-class activities of any kind often create the problem of engaging the students who are not directly being asked to participate. The following section outlines some tips to help involve every student in interactive whiteboard lessons.

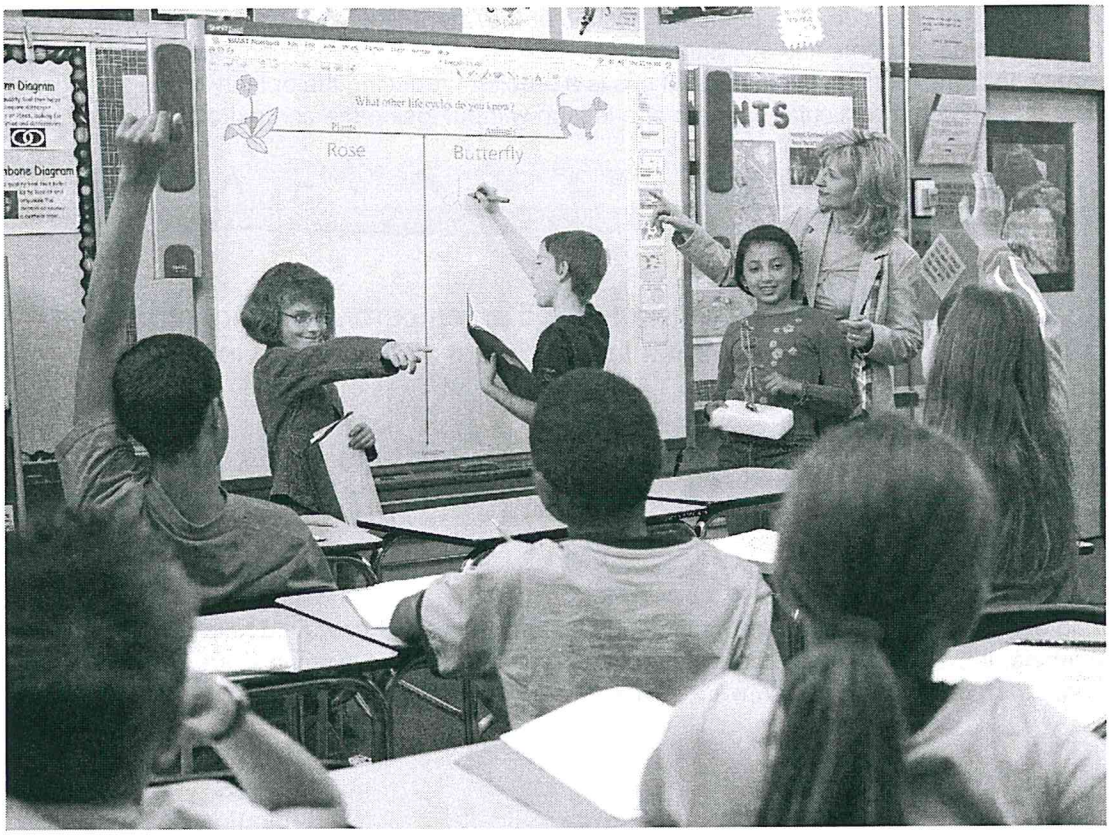
### Generate discussion

Incorporate interactive whiteboard activities that generate classroom discussion. Puzzles or riddles work very well to engage a whole class, as do opinion polls and character dilemma scenarios.

Try using a puzzle or riddle involving an image, sound clip or intriguing piece of video. There are also many websites with puzzlers for a variety of age groups and subject content. There is no need for puzzles and riddles to take up extra class time. Tie them in with the curriculum you're covering. Puzzles or riddles provide an engaging lead-in to other lesson activities and encourage students to think more deeply about the material they are learning. Brainstorm ideas as a class by writing or mapping them out on the interactive whiteboard. Be sure to reinforce and teach the critical thinking skills involved in problem solving by using the interactive whiteboard to map out the process or multiple processes that students work through to arrive at a solution.

### Structure your activities to accommodate multiple perspectives

Consider structuring your interactive whiteboard activities in ways that allow multiple interpretations or have more than one correct answer. This strategy allows more students to be involved in each lesson activity, encourages classroom discussion and debate, and teaches students that in life there is often more than one correct approach and solution.



## Use a small-group approach for some interactive whiteboard activities

Employ a *think-pair-share* approach or conduct some interactive whiteboard activities in small groups. Individual students or small groups can use paper or a laptop computer, if your school is one of many to make a mobile laptop cart available to its teachers, to engage in activities presented on the interactive whiteboard. A representative from each group can relay the group's thoughts or solution on the interactive whiteboard, explaining the process they used to arrive at their solution.

## Scaffold whole-class activities into other work

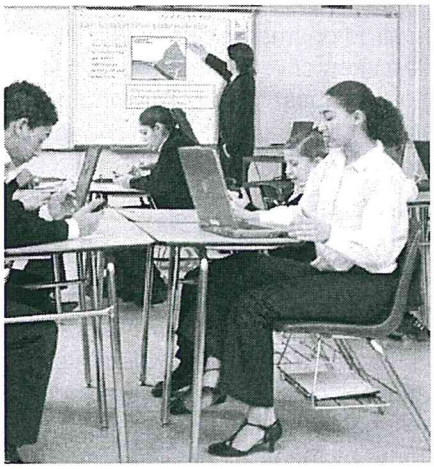
Scaffold whole-class interactive whiteboard activities into individual, paired or small-group work. There is no need, and probably no advantage, to spending all day in front of the interactive whiteboard. While the interactive whiteboard is an excellent tool for many classroom activities, it is best to leverage whole-class interactive whiteboard use with other activities that will allow every student to simultaneously engage in meaningful work, just as you would do in a classroom without an interactive whiteboard.

## Incorporate interactive response systems

Some interactive whiteboard providers also sell add-on products and software called interactive response systems. These systems are designed to allow every student to simultaneously make their contribution to interactive whiteboard lessons. Teachers using interactive response systems put personal clickers into the hands of every student so that they can respond to quizzes and polls that have been integrated into interactive whiteboard lessons. This ability greatly changes the dynamic of whole-class activities, because every student has the opportunity and expectation to participate in every activity. The answers given by each student can be optionally recorded for later review and assessment by the teacher. The results of interactive response system use with an interactive whiteboard are both highly engaging whole-class lesson activities, and instant assessment and data collection for every student. Interactive response systems and their uses in the classroom will be explored in greater detail in subsequent modules.

## Scaffold students into other activities

The intention with interactive whiteboards is not that you use them all day, for everything, but that you use them at the times and in the ways that it is advantageous to do so. While interactive whiteboards tend to be most successfully implemented as a permanent fixture and tool in a classroom, they are actually an excellent tool for scaffolding students into other activities. This section offers a few ideas for integrating the interactive whiteboard into an effective day in the classroom.



### Don't just explain, demonstrate

Interactive whiteboards have a huge role to play in enabling teachers to demonstrate concepts to the whole class in a way that is much clearer and more engaging for students than just listening to instructions. A teacher can use the interactive whiteboard to conduct a whole-class activity paralleling the types of activities they will be asked to begin independently. This demonstration is easy for all students to see, and weaker students have the advantage of learning from stronger students before they have to tackle an activity on their own. As a result, when the children return to their desks for individual work, the majority understand what they are being asked to do and can work independently for a time, allowing teachers to get to those students they know will need extra assistance.

### Record and playback your process while students work

Some interactive whiteboards have a recorder tool that allows teachers to record the steps they take on the interactive whiteboard and play them back to students at a later time. An example of effectively scaffolding students into independent work might be a teacher-led whole-class demonstration of how to perform an activity. This might be any kind of activity or process ranging from how to solve a mathematical equation to how to conjugate a verb. Using his recorder tool, the teacher records his demonstration and plays it back for the students as they move to their desks to complete the task on their own. The recorded process provides enough of a reference to guide most students through their work, enabling the teacher to work one-on-one with particular students.

### Try a mental starter

Mental starters are a great way to get students of any age interested in a topic they are about to explore with or without the interactive whiteboard. A good mental starter is a thought-provoking, fun or otherwise highly engaging activity that gets students' brain juices flowing and turns them on to the topic they are about to investigate. On the interactive whiteboard, a mental starter could be a content-based game or puzzle, a video clip with the sound removed so that students can write their own dialogue, or an exploration of a place of study using the Google Earth™ mapping service. The possibilities are limited only by your imagination.

# Encourage further inquiry

Encouraging inquiry takes advantage of students' natural interests and encourages independent and life-long learning. The added flexibility of interactive whiteboard lessons allow teachers to take the lesson where student interest is high. This section explores some ideas for designing an interactive whiteboard lesson that encourages student inquiry.

## Construct a spontaneous lesson

Demonstrate the process of inquiry into a subject by planning, searching for and collecting information about a lesson topic in front of your students. The interactive whiteboard introduces a great deal of flexibility for teachers to follow the threads of content that interests their students. Instead of brushing off a student question or comment that is slightly tangential to the topic you intended to cover, show students how they might find out more about that topic by exploring it together.

Add a blank page to your interactive whiteboard lesson and write or map out what the class already knows about this spontaneous inquiry topic. Use digital resources that you've already collected and attached to your original lesson, or search for new ones on the Internet. Take the opportunity to point out to students the criteria you use to judge whether a resource is likely to be a good one. Collect resources by cutting and pasting images and text, and arranging them into a word processing application such as Microsoft Word software, or directly into a blank page in your original lesson. Highlight interesting information to show students how to sort relevant from irrelevant information. Drag your text or images around to show how to order ideas into a logical sequence.

Teachers who are comfortable with and excited about pursuing relevant inquiry threads will pass this enthusiasm for learning along to their students.

## Incorporate current events

Teaching on an interactive whiteboard allows you to reference the most up-to-date material to show students that what they're learning is relevant outside their textbook. Subscribe to an online news service or to digital magazines with subjects that fit your teaching specialization. Link to or incorporate these mediums into your interactive whiteboard lessons for authentic learning that your textbook can't compete with.

## Store extra content

When teachers are planning and building lessons, they often search for and sort through more content than will actually be used in the lesson. Using the interactive whiteboard's collaborative learning software to store that extra information or source material allows teachers to easily pull up extra information in response to student questions or interest. Typically, this extra content can be stored as attachments, as pull tabs or as weblinks within the lesson.

## You don't really know something until you have to teach it

As a twist on a digital student presentation, students can create their own lessons to demonstrate their understanding of an inquiry topic and share that understanding with the class. This approach works particularly well for projects set up in a jigsaw fashion where students or groups of students are responsible for inquiring into a piece of a topic, then sharing what they've learned with others to create a full-class understanding of the whole concept. Jigsaw is a popular way to differentiate instruction because it allows students to approach and demonstrate understanding a topic in their own way and from the perspective of their own interests. The interactive whiteboard allows students to create and conduct their own activities and decide on the most effective and interesting way to share knowledge with their peers.

# Enable assessment of learning objectives

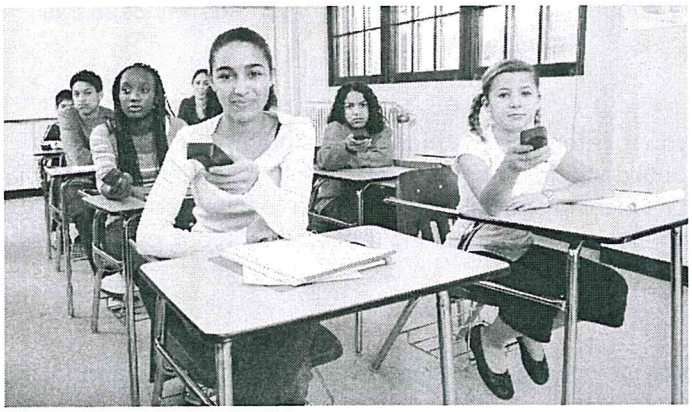
Whole-class interactive whiteboard use might seem to offer a bit of a challenge to teachers who are used to structuring their lessons around the production of assessable materials such as worksheets. If the whole class is spending time working through lessons on an interactive whiteboard, and there are no physical products to demonstrate their learning, how can teachers assess student achievement? This section offers some advice to help teachers feel confident about their ability to assess student achievement when they teach on an interactive whiteboard.

## Define learning objectives

Be clear about what you expect your lesson to achieve in terms of learning objectives. It is a good practice to include an outline of the learning objectives for your lesson in the title section of your interactive whiteboard lesson. Including this information in your lesson file helps focus your attention on these ideas while you are developing your lesson content. It also provides important background information to substitute teachers or any other teachers with whom you may wish to share your lesson activity.

## Explore the assessment advantages offered by interactive response systems

Personal interactive response systems are tools that are available from some providers as an add-on product for the interactive whiteboard. Teachers using these systems are able to integrate quizzes and polls into their interactive whiteboard lessons and put personal clickers into the hands of every student so that they can enter responses to these questions. The answers that each student has entered can be optionally recorded for later review and recordkeeping by the teacher.



Interactive response system use with an interactive whiteboard offers teachers incredible benefits in terms of both formative and summative assessment. Integrating a feedback mechanism into your lessons lets you instantly get a picture of where the class as a whole is, in terms of achieving learning objectives, and identify which particular students need extra help or aren't being challenged enough.

Interactive response systems can also be used in the place of regular exams – as summative assessments designed to produce reportable grades – with the advantage of instant electronic grading that can be exported to a standard spreadsheet for recordkeeping. The result of interactive response system use with an interactive whiteboard is both highly engaging whole-class lesson activities, and instant assessment and data collection for every student. Interactive response systems and their uses in the classroom are explored in greater detail in subsequent modules.

## Traditional assessment tools still work

If a personal interactive response system is not available to you, traditional methods of collecting and evaluating the achievement of student learning objectives are still valid in interactive whiteboard teaching. Rubrics and anecdotal recordkeeping work well for assessing whole-class activities, whether they are being conducted on an interactive whiteboard or a more traditional medium. You may even find it easier to conduct these types of assessments when teaching with an interactive whiteboard because students can manipulate lesson activities at the board, freeing you to take on the role of facilitator and observer.

As detailed in the *Scaffold students into other activities* section of this module, the intention with interactive whiteboards is not that you use them all day, for everything, but that you use them at the times and in the ways that it is advantageous to do so. A very effective way to use the interactive whiteboard is to use it primarily as a tool for whole-class instruction before moving students into other activities that involve the creation of individual physical products for later assessment. In other words, teachers can structure their class time and assessment as they would without an interactive whiteboard, but take advantage of the many opportunities to enhance their teaching with the interactive whiteboard.

## Shared content creation

Allowing students to create and share content on the interactive whiteboard incorporates inquiry-style learning, guide-on-the-side style teaching and allows for individualized demonstration of understanding. It also frees the teacher to do more detailed anecdotal or rubric style assessments while students are presenting content and manipulating the interactive whiteboard.

## Student portfolios

Interactive whiteboard software can be a useful tool for assigning and collecting independent student work. Teachers could begin by introducing a lesson activity to the whole class on the interactive whiteboard, then ask students to do independent or group work on school or home computers. This individual work could be carried out using the interactive whiteboard's collaborative learning software – if it can be installed on school or students' personal computers. Working on this software ensures that the format of the activity is familiar and consistent with that demonstrated to the whole class. Because the work is digital, individual or whole-group work, using collaborative learning software can easily be saved, sorted and compiled into student portfolios for assessment and demonstration to parents.

## Allow review and reflection

Review and reflection allows students to see and appreciate the progression of their learning and reinforces the idea that the class work students do is relevant and meaningful. Regular review helps keep information fresh and accessible for test time and aids long-term retention. Outlined in this section are a few ideas on how to take advantage of the unique review opportunities offered by teaching on an interactive whiteboard.

### Make review materials accessible

Digital lesson content enables teachers to give students access to lesson materials and notes at home by posting them to a class webpage. Students can then reference class notes while they work on their homework assignments, or review more easily for tests. It also gives parents access to material so that they can discuss and reinforce that material with their children.

### Take advantage of increased lesson flexibility

If students are having a hard time with the current lesson topic, interactive whiteboard use makes it easy to bring up a past file for a quick review or to spend more time developing a strong content base.

### Make daily or weekly reflection a part of your routine

One of the beautiful things about interactive whiteboards is that if you regularly use the interactive whiteboard to introduce topics or conduct lessons, all of your past content is available at your fingertips. Make it part of your routine to open lessons taught throughout the week and review or reflect as a class on the most important concepts. Compile pages from several lessons into a new weekly review file by asking students what they found the most important or most interesting. At the end of a unit, take these weekly review files and, as a whole-class activity, re-compile the most important concepts to create a unit review file. Accessing and manipulating past lessons aids retention and lets students get a big-picture view of content that may have seemed irrelevant without the greater context of further studies.

# Additional resources

## What's next?

SMART supports your use of SMART products with a number of resources, including free training materials on the SMART website and a special online community for educators.

# SMART's training center

SMART's training center is where you'll find additional training resources and support, including free training materials and online training sessions to help you effectively use the SMART products. Visit www.smarttech.com/trainingcenter.

## Free training materials

The free training materials available from SMART's training center will help you gain practical experience with SMART products in addition to developing skills to deliver lesson activities on the SMART Board interactive whiteboard.

Quick references are simple one- or two-page overviews of the features of SMART Notebook software and other SMART products. They are formatted for printing, so you can keep them beside your computer or SMART Board interactive whiteboard to remind you of how to use some of the features.

## Free online training sessions

SMART online training sessions are 30- to 45-minute computer and telephone conferences that offer a quick, no-cost overview of the basics of working with SMART products. Each session is led by a SMART trainer who uses SMART products every day. SMART's online training sessions are useful as a review and they give you an opportunity to ask questions.

The following are a few of the online sessions that SMART provides:

- SMART Board interactive whiteboard basics
- SMART Notebook software basics
- Senteo™ interactive response system
- Setting up your SMART Board interactive whiteboard
- SynchronEyes™ classroom management software

Visit http://smarttech.com/trainingcenter/online/index.asp for a full listing of online sessions.

We are always developing new, free online training offerings. Visit SMART's training center often to learn about the latest sessions.

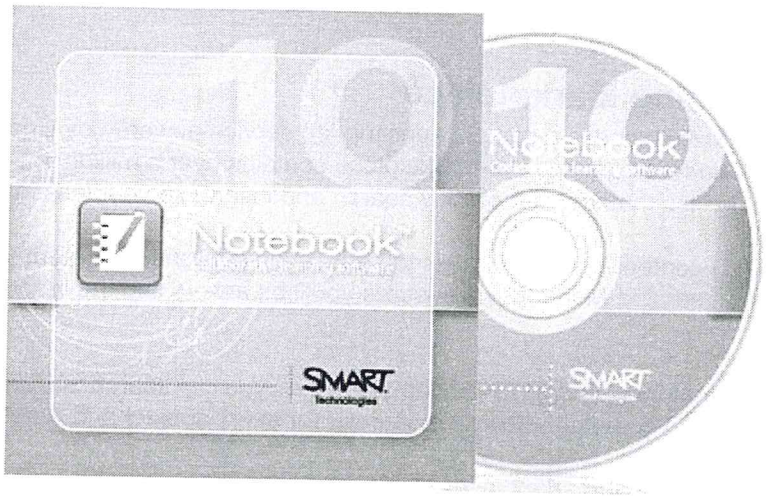
## SMART support

SMART's support site offers a variety of product support options. Visit SMART's support site to download software, including SMART Notebook software, Senteo assessment software and SynchronEyes classroom management software. You'll find installation and user's guides, how-to and troubleshooting articles, solutions for your SMART product and answers to your questions. You can also use SMART's support site to contact technical support and to register your SMART product.

Visit www.smarttech.com/support.

## SMART's software downloads

The latest versions and upgrades for SMART software are available on the software downloads section of www.smarttech.com. You can download SMART Notebook software and free trials for an assortment of other useful software at http://www2.smarttech.com/st/en-US/Support/Downloads/default.htm.



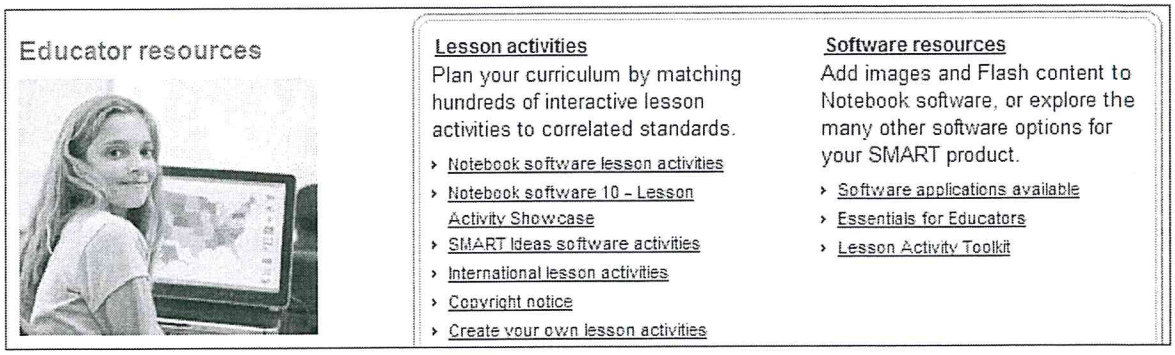

## SMART's education solutions website

SMART's education solutions website is an online community where educators can share resources and ideas with other educators worldwide. The education solutions website is where you will find the following resources:

- **Free learning resources** for use with SMART products, including content collections, software applications and website resources
- **Hundreds of SMART Notebook software lesson activities** correlated to state and provincial curriculum standards
- **Professional development programs** to reward, recognize and support educators
- **Research** on the effectiveness of SMART Board interactive whiteboards in learning environments
- **Advice** for educators about using SMART products, integrating peripherals, mastering grant writing and evaluating technology

Sometimes the hardest part of creating a lesson activity is coming up with creative ideas. One place you can look for inspiration is SMART's education solutions website, an online community where educators can share resources and ideas with other educators worldwide.

Visit www.education.smarttech.com and select **Educator resources > Lesson activities** to browse SMART Notebook software lesson activities created by teachers and organized by curriculum standards.




## The SMART Learning Marketplace

The SMART Learning Marketplace is a content subscription service powered by Cambridge University Press and the Global Grid for Learning. The Marketplace contains over a million images, video clips, manipulatives and audio files that you can quickly search and insert into your lesson activities.

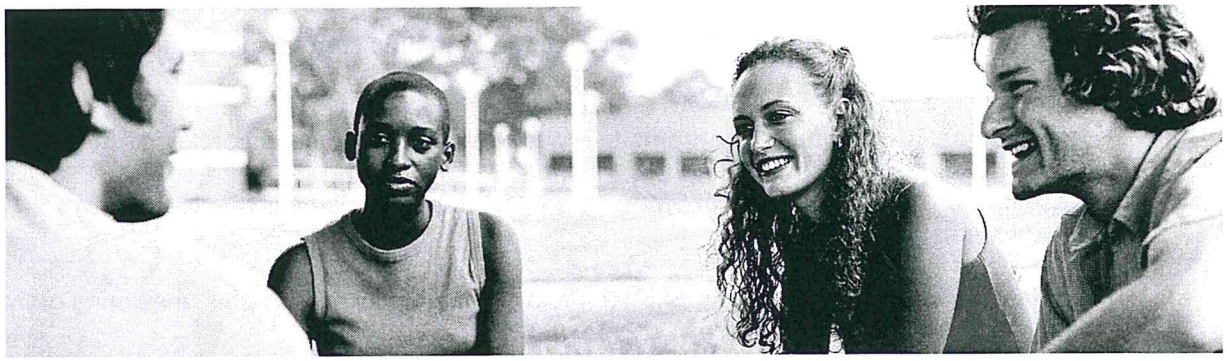
Offering only high-quality content from the world's top education publishers, museums and technology and software educators, the Learning Marketplace ensures you'll be able to find the resources you need, when you need them.

And as a fully integrated feature of SMART Notebook software, you can search the Marketplace right in your SMART Notebook file to find copyright-cleared resources for every subject and grade level.

Visit www.smarttech.com/learningmarketplace.

## The SMART Exchange

You may also find the SMART Exchange helpful. The SMART Exchange www.exchange.smarttech.com is a free resource center and community network that provides a wealth of resources for technology-enabled learning. Exchange ideas and find the information you are looking for, including recent research, best practices, success stories and daily tools.



## SMART's Teachers' Hub

SMART's Teachers' Hub – it has all the resources you need to get started.

Visit www.education.smarttech.com/Hub.

## SMART accredited titles

Find a wealth of multimedia content and software to enhance your classroom environment on SMART's education solutions website. SMART accredits education titles based on their level of compatibility with SMART Board interactive whiteboards and SMART Notebook collaborative learning software.

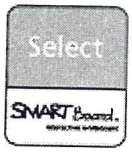
SMART offers three levels of accreditation.




**Ready** This is the basic accreditation level for a software or content product, indicating that SMART has approved the title for use with its products.




**Enabled** Products at this level meet the requirements of the *Ready* level and are also integrated with SMART Board Tools. The integration enhances interactivity because it takes advantage of a digital ink feature called SMART Ink Aware.




**Select** Software and content products at this level meet all requirements of the *Enabled* level and are specifically designed for use on SMART Notebook software.

To access the list of accredited software programs and details on these programs, go to SMART's education solutions website and select **Educator resources > SMART accredited software**. Accredited software is categorized by subject and grade level, enabling you to quickly find software that meets your needs.