Intro to iPad Accessibility Features for Blind and Low Vision Students

Chapter 2: iPad with Low Vision Features

iOS 9.3

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The *Introduction to iPad Accessibility Features for Blind and Low Vision Students* manual is being shared on the *Paths to Technology* website with permission from SAS Institute Inc.

Overview

This chapter of the *iPad Accessibility Features for Blind and Low Vision Students* focuses on how to use the iPad's built-in magnification features along with several apps that are beneficial for students with low vision. Many applications such as Mail, Maps, and web pages allow mainstream zooming with a tap or pinch. However, Zoom lets you magnify the entire screen at anytime and anywhere. Zoom works seamlessly with Voiceover. Zoom Window enables you to magnify a portion of the screen while maintaining the normal size on the rest of the screen. You can also choose to increase the text size, change the color contrast and more.

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2.1 Mainstream Magnification

Mainstream Magnification allows you to tap or pinch to magnify within specific apps, such as Mail, Maps, and web pages. It does not allow you to magnify the Home screen, Calendar, Settings, etc.

When in an app, such as Maps, you can pinch or double tap to magnify.

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2.2 Zoom

At the beginning of the training, we set Triple-Click Home to Zoom, Inverted Colors and Voiceover. (See Accessibility Shortcut/Triple-Click Home in the Settings document.)

The discussion below assumes that Zoom is "On".

Zoom allows you to adjust the magnification in any app or any screen – including the Home screen and the Status Bar at the top of each screen. After you have zoomed in, you can pan around the screen.

Zoom has two modes: zoomed out or zoomed in. Zoomed out is the default mode, i.e. when you are zoomed out you can see the entire iPad screen at normal magnification. When you are zoomed in, only a portion of the screen is displayed and you must pan to see other areas of the screen.

To toggle between zoomed out and zoomed in, *3 fingers, double tap*.

Zoom Commands

- Double tap-three fingers to Zoom in/out
- Drag three fingers to move around the screen
- Double tap (holding on second tap) three-fingers and drag up to increase the Zoom
- Double tap (holding on the second tap) three-fingers and drag down to decrease the Zoom
- 1 finger hold on the top, bottom, right or left edge of the screen to quickly scroll in that direction*

*Using 1 finger hold on the edge of the screen to scroll was fixed in a iOS 9.3 update; however, sometimes the 1 finger scroll will only work after using three fingers to initiate the scrolling feature.

Adjust Zoom Size

When you are zoomed in, you can adjust the magnification between 100% and 500%. To increase the magnification, *3 fingers, double tap* and *hold* (do not lift your fingers after the second tap) and *drag* your fingers *up*. To decrease the magnification, *3 fingers, double tap* and *hold* and then *drag* your fingers *down*. Once your preferred magnification is set, simply *three fingers*, *double tap* to zoom in or zoom out. Zoom will automatically go back to the last magnification level that was used. If you want a different magnification, *3 fingers*, *double tap* and *drag* to adjust the level of magnification.

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Navigate the Zoomed Page

When you are zoomed in, use *3 fingers*, *drag* to move around the screen. By sliding your three fingers up, down, back and forth, you can pan to view all the items on the original non-magnified screen.

When using Zoom, holding 1 finger on the top/bottom/left/right side of the screen will automatically pan the screen in that direction.

Zoom In on a Specific Location

If you are zoomed out (no magnification), use *3 fingers, double tap* – on the area you want to view. The area where you tap will be the area shown on the screen in magnification. Example: When on the Home screen in normal view (no magnification); *3 fingers, double tap* - on the Calendar app in the top left corner – the iPad will display the magnified Calendar app. If you use 3 fingers, double tap – on the Safari app in the bottom right corner – the iPad will display the magnified Safari app.

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Activity 2.2a Zoom In/Out and Pan

1. Go to Home Screen: (Click Home button one time).
2. Turn Zoom on: (Triple-Click Home).
3. Zoom to full magnification – 1 app on the screen: (3 fingers, double tap and drag up).
4. Zoom out: (3 fingers, double tap).
5. Zoom in: (3 fingers, double tap).
6. Find Safari: (3 fingers, drag to pan screen).
7. Find Calendar: (3 fingers, drag to pan screen).
8. Decrease Zoom so that four apps are on the screen: (3 fingers, double tap and drag down).
9. Find Safari: (3 fingers, drag to pan screen).

Activity 2.2b Notes Activity with Zoom

For this activity, we will turn off Follow Focus in Settings before completing the activity. Start without magnification (Zoom off). Use only the on-screen keyboard – do not use a Bluetooth keyboard.

1. Go to Home Screen: (Press Home button one time).
2. Go to General > Accessibility > Zoom > Follow Focus. Turn Follow Focus off.
3. Go to the Home Screen: (Click the Home button one time).
4. Turn Zoom on and fully magnify: (3 fingers double tap; if the screen is not fully magnified, then double tap and hold, slide up).
5. Launch Notes: (Scroll with three finger drag).
6. Create a new note: (Activate New Note in top right corner)
7. Type your first and last name using the on-scree keyboard. (If you have a Bluetooth keyboard connected press the hide keyboard key or turn the Bluetooth keyboard off.)

This should be challenging! Scrolling to find the letters on the keyboard and not being able to see the letters you typed is tough and often frustrating. This is what we are asking students with low vision to do when they have to scroll to see the line. Bigger is not necessarily better.

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Activity 2.2c Notes Activity with Zoom and Follow Focus

For this activity, we will turn Follow Focus on in Settings before completing the activity. When Follow Focus and Smart Typing are on, the full on-screen keyboard is visible on the bottom of the screen (not magnified) and the top of the screen displays the magnified text – as you type. Follow Focus automatically switches to Zoom Window when the on-screen keyboard is present. This means that the current letters that you type are displayed – you do not have to scroll to keep up with the magnified letters as they are being typed. Start without magnification (Zoom off).

1. Go to Home Screen: (Press Home button one time).
2. Go to General > Accessibility > Zoom > Follow Focus. Turn Follow Focus on.
3. Go to the Home Screen: (Click the Home button one time).
4. Turn Zoom on and fully magnify: (3 fingers double tap; if the screen is not fully magnified, then double tap and hold, slide up).
5. Launch Notes: (Scroll with three finger drag).
6. Create a new note: (Activate New Note in top right corner)
7. Type your first and last name using the on-screen keyboard. (If you have a Bluetooth keyboard connected press the hide keyboard key or turn the Bluetooth keyboard off.)

It is often believed that educational materials for low vision students should be enlarged - "the bigger the better". However, when the print size is too big, it creates additional issues. Using Zoom at 500 percent may allow a low vision student to easily access items on the iPad, but it is difficult to navigate the iPad. Remember how challenging it was to maneuver around the Home screen when one icon filled the entire screen? How efficiently can you read a book when the text is zoomed 1,500 percent? Consider the reading speed, fatigue, time needed to complete the homework assignments, headaches, etc. that low vision students often experience when trying to read large print. The iPad offers these students additional tools such as using Voiceover to read documents and using the Bluetooth keyboard commands to navigate through the iPad.

TEACHER HINT: REMOVE ZOOM AND INVERT COLORS FROM TRIPLE-CLICK FOR STUDENTS WHO ARE TOTALLY BLIND. THIS ELIMINATES THE POSSIBILITY OF CONFUSION IF ZOOM IS ACCIDENTLY ENABLED. WHEN VOICEOVER ON/OFF IS THE ONLY OPTION, TRIPLE-CLICK HOME WILL AUTOMATICALLY TOGGLE BETWEEN VOICEOVER ON OR VOICEOVER OFF.

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Activity 2.2d Reading Fully Zoomed Document

For this activity, we will use the Pages document, Jupiter Inlet Lighthouse. (Any document in Pages that is several paragraphs will work.) The training instructor will fully zoom the document and we will read it together as a class.

1. Go to Home Screen: (Press Home button one time).
2. Launch the Pages app.
3. Activate Jupiter Inlet Lighthouse document.
4. Fully zoom the document: (Three fingers double tap).
5. Read the first few sentences: (Drag three fingers to scroll across the page).

Consider reading large amounts of text while scrolling. Imagine reading "War and Peace" like this! Using a real worksheet or activity that your student has to complete. Do the activity above with regular education classroom teachers, families and IEP teams. This is a great activity to demonstrate hands-on how challenging it is for low vision students who have to scroll around the page.

If a student with low vision has to magnify the text to the point that he/she has to scroll, that student's primary mode of learning should not be visual. Teach the mechanics of reading *and* listening skills to emerging readers. Once the student has learned to read, auditory (screen readers) will be the most efficient mode of reading and completing classwork.

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2.3 Zoom Menu and Zoom Controller

Note: A number of these options can be turned on/off in Settings. To set your Zoom options, go to Settings > General > Accessibility > Zoom. For more information, go to Zoom and Zoom Window in the Settings Manual. You should have Zoom Controller

Zoom Menu

The Zoom Menu is a popup box that enables a user to change the Zoom settings on the fly. As long as Zoom is turned on in Settings, you can access the Zoom Menu from any screen or within any app. The Zoom Menu changes according to if you have Zoom Window or Full Screen Zoom selected.

The Zoom Menu has the options of:

- Zoom In or Zoom Out
- Full Screen Zoom/Window Zoom*
  *If Window Zoom is selected: Resize Lens (Allows you to change the size of the window)
- Choose Filter (None, Inverted, Grayscale, Grayscale Inverted, Low light
- Hide/Show Controller
- Slider to increase/decrease the magnification

Activity 2.3a Full Screen Zoom Menu

1. Start on the Home Screen, without Zoom.
2. Show Zoom Menu: (Three fingers triple tap).

*If your Zoom Menu displays Full Screen Zoom, then tap on Full Screen Zoom. The menu should now include Window Zoom.

3. Zoom in: (Tap on Zoom In).
4. Zoom out: (Tap on Zoom Out)
   - Zoom Menu will disappear
5. Show Zoom Menu: (Three fingers triple tap).
6. Change to Inverted colors: (Tap on Choose Filter, tap on Invert Colors).
7. Change to Low Light: (Tap on Choose Filter, tap on Low Light).
8. Change back to normal filter: (Tap on None).
9. Change the magnification rate: (Slide slider right and left).

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Zoom Controller

This toggle setting adds the Zoom Controller - a small circle - to the screen. The Zoom Controller is used to move Zoom focus around, to bring up the new Zoom Menu and to quickly zoom in and out of an area. The Zoom Menu is a popup box with options/settings that you can select.

To Hide/Show the Zoom Controller:

- When the Zoom Menu is displayed, tap on Hide/Show Controller option.
- When the Zoom Menu is NOT displayed, three-finger triple tap will show the Zoom Menu. Then, tap on Show Controller.
- When the Zoom Controller is displayed, single tap on the Zoom Controller to display the Zoom Menu. Then, tap on Hide Controller.

Activity 2.3b Show Zoom Menu and Zoom Controller

Start on the Home screen, without Zoom.

1. Show Zoom Menu: (Three fingers triple tap).
2. Show Controller: (tap on Show Controller).
   - A small grey circle now appears on your screen.
3. Hide Zoom Menu: (1 finger tap outside of the Zoom Menu box or three fingers triple tap).

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The Zoom Controller Commands

- Tap once on the Zoom Controller circle to show the Zoom menu.
- Double tap on the Zoom Controller circle to zoom in and out.
- When Zoomed in, hold then drag the Zoom Controller circle to a new area on the iPad's screen.
- When Zoomed in, touch and immediately drag up/down/right/left to scroll/pan around the magnified content on the screen.

Activity 2.3c Zoom Controller Commands

1. Open the Zoom Menu using the Zoom Controller: (Tap on the Zoom Controller).
2. Close the Zoom Menu: (Tap outside the Zoom Menu box).
3. Quickly zoom in: (Double tap the Zoom Controller).
4. Quickly zoom out: (Double tap the Zoom Controller).
5. Drag the Zoom Controller to the opposite side of your screen:
   - Zoom Out: (Tap on Zoom Out)
   - Drag Zoom Controller: (Touch Zoom Controller and *quickly* drag across the screen).
6. Move Zoom Focus:
   - Open Zoom Menu: (Tap Zoom Controller).
   - Zoom In: (Tap Zoom In).
   - Move Zoom focus to Calendar in the top, left corner of screen: (Touch and slightly drag up or Touch and drag left Controller – Zoom Controller will become slightly bigger, then Zoom focus will move in that direction.

     Hint: You only drag your finger a short distance in the desired direction – your finger stays within the Zoom Controller circle. The "ball" inside the Controller moves with your finger.

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2.4 Zoom Window

Zoom Window is the ability to magnify a section of the screen while maintaining the normal settings on the rest of the screen. This feature enables students with low vision to magnify a desired item while maintaining spatial awareness of where that item is located on the screen. This feature helps keep many students from "getting lost" when using magnification.

Zoom Menu

When Window Zoom is selected, the Zoom Menu options change to:

- Zoom In/Out (Zoom Out will remove the Zoom Window & screen converts to native size)
- Full Screen Zoom (disables Zoom Window and full screen is magnified)
- Resize Lens (Allows you to change the size of the window)
- Choose Filter (None, Inverted, Grayscale, Grayscale Inverted, Low light
- Hide/Show Controller
- Slider to increase/decrease the magnification

Activity 2.4a Zoom Controller Commands

Start from the Home screen.

1. Open the Zoom Menu: (Three fingers triple tap).
2. Open Zoom Window: (Tap on Window Zoom).
   A magnified Window appears.
3. Change window size: (Tap on Resize Lens; make window bigger, smaller, wider, etc.).
   When Resize Lens is available, there will be small circles on the edges of the lens, touch a circle and drag it to make the lens the desired size.
4. Open Settings: (Tap on Settings app).
5. Drag window down the left column: (Place finger on the bottom edge of the lens and drag down).
6. Resize lens to fit the left column:
   - Open Zoom Menu: (Tap on Zoom controller).
   - Tap on Resize Lens.
   - Drag circles so that you can read two lines at a time in the left column)
   - When sized appropriately, tap outside of the window.
7. Read the left column - drag Zoom Window down the left column.
8. Open Zoom Menu: (Tap "grabber handle" at the bottom of the Zoom Window or tap on Zoom Controller)
9. Remove magnification: (Tap on Zoom Out).
10. Remove Zoom Controller: (Tap on Zoom Controller, tap on Hide Controller, tap outside the Zoom Menu).

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2.5 Large Text

The iPad allows you to increase the text size from approximately 8-point print up to 26-point print. The large text works with alerts, Calendar, Contacts, Mail, Messages and Notes. 12-point print is one notch to the left of the middle "A" on the slider.

Reading small print is frequently an issue for older, sighted adults, especially email and text messages on the iPhone. Changing the iPhone settings to a larger print size allows people – including seniors - to easily read their email/text messages without magnifying the entire app or require learning another set of gestures.

To change the print size, go to Settings> General> Accessibility> Larger Text> turn Larger Accessibility Sizes On> then slide drag the slider to your desired text size.

Activity 2.5 Large Text

1. Launch Settings: (Tap on Settings).
2. Select General: Tap).
3. Select Accessibility: (Scroll down, tap on Accessibility).
4. Select Larger Text: (Tap).
5. Select the largest available print: (move slider to the far right).
6. Launch Notes: (Tap).
7. If it not already opened, open the document with your name: (Tap).
8. Change text size back to 12 point: (repeat steps 1 -4, move slider one tick mark to the left of the middle A).

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2.6 Invert Colors

Changing the color to white on black enables some users' better visual access. This higher contrast works in all applications – anytime and anywhere. Invert colors can also be used with Zoom and Voiceover. You can add Invert Colors to Triple-Click Home. (See Settings Manual, Triple-Click Home for details on how to set Invert Colors.) In this training, we set Triple-Click Home to Zoom, Voiceover and Invert Colors. When you press the Home button three times, a popup will appear; check Invert Colors.

To invert colors, go to Settings General> Accessibility> Invert Colors and slide to "On".

Note: When Invert Colors is "on", the screen background is black and the text is white: however, this inverted color scheme does not show up on screenshots or when projected to another screen.

TEACHER HINT: SOME STUDENTS WITH VISUAL IMPAIRMENTS PREFER THE HIGHER CONTRAST PROVIDED WHEN THE SCREEN COLORS ARE INVERTED.

Activity 2.6 – Invert Colors

1. Launch Settings: (Tap).
2. Tap on General: (Tap).
3. Tap on Accessibility: (Scroll down then tap).
4. Select Invert Colors: (1 finger, slide on/off button).
5. Go to Home Screen: (Click Home button one time).
6. Open Notes and read your last Note: (Tap).
7. Turn Invert Colors off: (Repeat steps 1-4).

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2.7 Viewing the Interactive Whiteboard - Join.Me App

Join.Me is a FREE solution that allows a teacher to share the screen of their PC, Smart Board, Mimio or other interactive Whiteboard system, so that the materials can be viewed on an iPad. Students with low vision can then view the screen using the low vision features of the iPad such as zoom and color inversion. Join.Me is compatible with computers and tablets. (Originally, Join.Me required that the teacher use a computer. Now, the teacher can now share her iPad's screen.)

To view a video of the Join.Me app, go to:
https://www.youtube.com/watch?v=E_PT1Y7usjA&index=17&list=PLhXV41ZuNuOkcMyCDM8rELykSDIz_BBCP

Or, perform an Internet search for "Diane Brauner Youtube" and look for the How to Use Join.Me video.

TEACHER HINT: THE FREE VERSION OF JOIN.ME ONLY ALLOWS THE STUDENT'S IPAD TO MIRROR THE TEACHER'S IPAD. THE PAID VERSION OF JOIN.ME ALLOWS THE STUDENT'S IPAD TO CONTROL AND MAKE CHANGES TO THE TEACHER'S IPAD.

Configuring Join.Me on your computer and/or iPad requires about five minutes. There are three steps:

1. Install the FREE Join.Me app on the iPad (one time only)
   - You may be required to do the Pro Trial for 30 days.
2. Create a Join.Me Account
3. Share the teacher's screen
4. Display the teacher's screen on the student's iPad

Activity 2.7a Install the FREE Join.Me App on the student's Pad (one time only)

Perform these steps on the student's iPad.

NOTE: You only perform these steps once.

1. Launch the App Store app.
2. In the search box at the top right of the screen, enter "join me". The Join.Me app should appear as the first search result.
3. Select Join.Me from the search results.
4. Activate the "Free" button near the top left of the screen. After it is activated, the label on the button should change to "Install".
5. Activate the "Install" button.
6. Enter the username and password for your Apple account to complete the installation.

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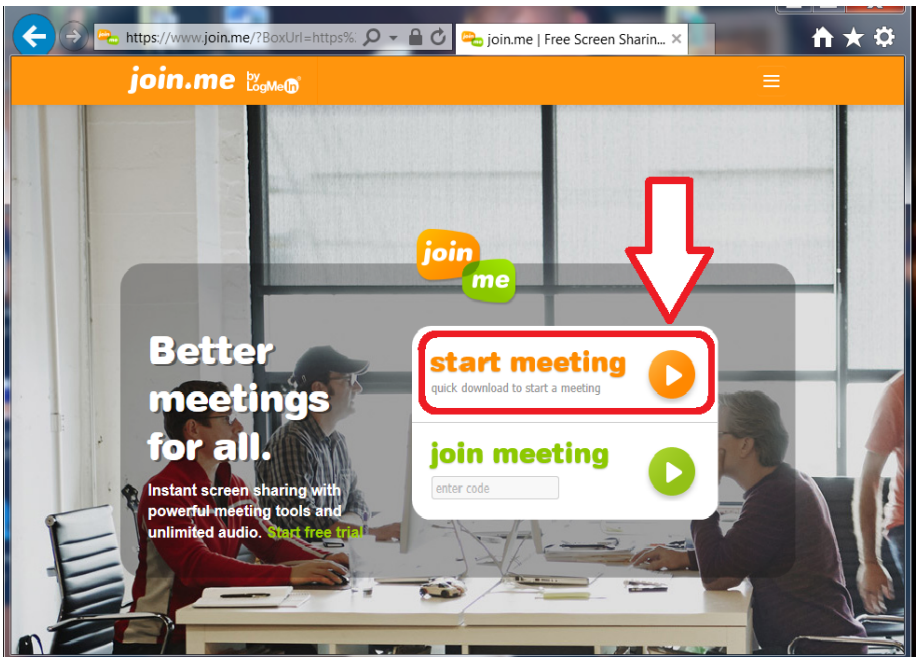
Activity 2.7b Installing Join.Me on the Teacher's Device and Creating an Account

Perform these steps on the teacher's device each time you share your screen.
NOTE: These instructions have been written assuming you are using Internet Explorer on a Windows PC. However, the process should work similarly for any browser on a PC, Mac or iPad.

Note: Join.Me's screen (images and layout) changes but the basic steps remain the same.

1. Launch Internet Explorer.
2. Go to https://join.me .

Figure 1 PC Screenshot of Join.Me Start Meeting



3. Under "Start Meeting" click "A Quick Download to Get Started". Do NOT click on Free Trial.
4. If the download process does not start automatically, simply click Download OR you can click "Run" on the download notification bar.
5. Register with your email and password. This is now required.

*Clicking Download will install Join.Me on your desktop. After the initial installation, you can open Join.Me directly from the icon on your computer. Choosing to "Run" means you will have to access Join.Me from the website.

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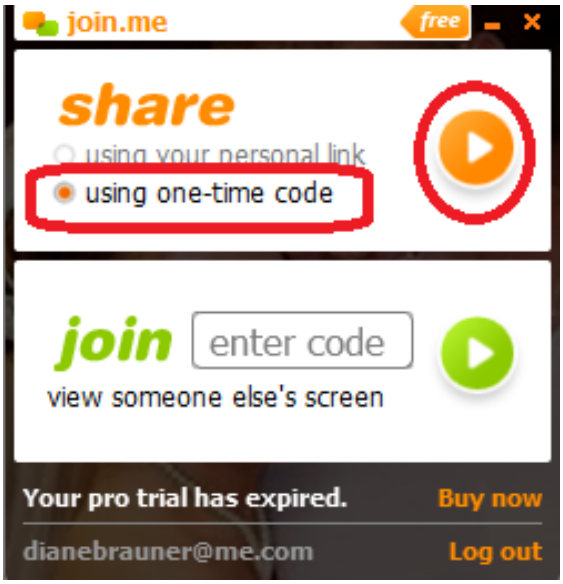
Activity 2.7c Share the teacher's Screen

Perform these steps on the teacher's device each time you share your screen.

NOTE: These instructions have been written assuming you are using Internet Explorer on a Windows PC. However, the process should work similarly for any browser on a PC or Mac.

1. Launch Join.Me which is installed on your computer
   OR
1. Launch Internet Explorer.
2. Go to https://join.me .

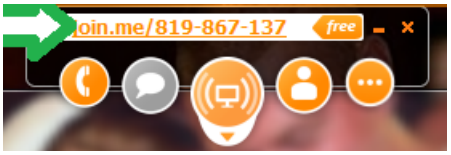
Figure 2 PC screenshot of Join.Me with Share options circled



TEACHER HINT: JOIN.ME PERIODICALLY OFFERS A FREE TRIAL OF THE FULL JOIN.ME. ONCE THE FREE TRIAL IS OVER (USUALLY AFTER A COUPLE OF WEEKS), YOU WILL HAVE THE OPTION OF THE FREE VERSION – JUST CLICK SHARE ON THE TEACHER'S COMPUTER. NOTICE THAT FIGURE 2 (IMAGE OF THE JOIN.ME SHARE SCREEN) SHOWS THAT THE PRO TRIAL HAS EXPIRED; HOWEVER, YOU CAN CHOOSE TO USE THE ONE TIME CODE – THE 9 DIGIT NUMBER THAT CHANGES WITH EACH USE – WHICH CONTINUES TO BE FREE.

3. Confirm "Using one-time code" is selected.
4. Under "Share Meeting" click on the orange arrow.
5. After joinme.exe is downloaded and runs you will see a screen that looks like the screenshot below. Note the 9-digit number 819-867-137 is located *at the very top of the screen.* This is a random number that Join.Me created to identify your PC's screen. The number will be different each time you share your screen. You must locate that number and enter it on the iPad to display the teacher's screen on the iPad.

Figure 3 PC screenshot of Join.Me with 9-digit number



The 9 digit number in this screen shot is: 819-867-137

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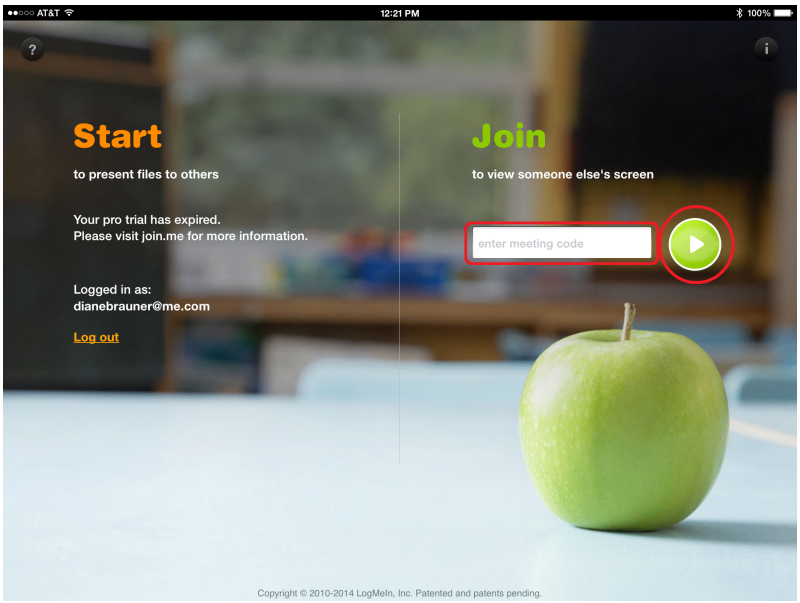
Activity 2.7d Display the PC's Screen on the iPad

Perform the following steps on the student's iPad.

NOTE: You will need the 9-digit number that was generated when you shared the PC's screen.

1. Launch the Join.Me app on the iPad.
2. In the "Join" textbox, enter the 9-digit number that was generated when you shared the PC's screen.
3. Tap on the arrow to allow a low-vision student to view the PC's screen in conjunction with the low-vision features of the iPad such as zoom and color inversion.

Figure 4 iPad screenshot of Join.Me app



Type 9 digit code from the Teacher's computer in the box then tap on the green arrow. Example: The teacher's computer above was given the random number: 819-867-137.

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2.8 Screenshot

Students can take a picture of what is on the iPad's screen. The picture will automatically be placed as the last picture in Photos. Any photo can be zoomed.

To take a screen shot, simultaneously press and release the Wake/Sleep button and the Home button. To view the picture, launch Photos and go to the last picture.

TEACHER HINT: THIS IS A GREAT LOW VISION TOOL TO CAPTURE WHAT IS ON THE INTERACTIVE WHITEBOARD. THE STUDENT CAN TAKE A SCREENSHOT AND THEN REVIEW THAT SCREENSHOT AT A LATER TIME. EXAMPLE: WHEN THE CLASSROOM TEACHER IS DOING A COMPLEX MATH PROBLEM ON THE WHITEBOARD, THE STUDENT CAN CHOOSE TO TAKE A SCREENSHOT OF THE STEPS AND THEN REVIEW THOSE IMAGES WHEN DOING HOMEWORK. THE STUDENT (OR TEACHER CAN ALSO USE AN ANOTATION APP, SUCH AS "SAS Gloss" THAT WILL ALLOW NOTES TO BE ADDED DIRECTLY TO THE SCREENSHOT.

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2.9 Annotation App – SAS Gloss App

Annotation apps are apps that enable users "annotate" – write, type, draw and color on top of a PDF document or picture. This is a quick and easy way to convert a paper worksheet into a digital worksheet that students with low vision can then zoom as needed and can type or write their answers directly on the worksheet. Young students with low vision can complete those worksheets that require coloring different sections different colors. Many students with low vision who struggle with writing legibly or who have trouble reading their own handwriting, are more successful with typing their answers on the worksheet.

SAS Gloss, a free app, is one of many available annotation apps. For detailed instructions on how to use SAS Gloss go to support.sas.com/mobileapps/mobilelearning/gloss

Simply use the iPad's camera to take a picture of a print worksheet. If the worksheet is in digital form, use the "open in" feature to open in SAS Gloss.

Scanned copies of the Baseball Bar Graph and Learning About Halves coloring worksheets are provided after the SAS Gloss Activity. You can use these sample worksheets for the activity below by taking a picture of the worksheet using the iPad's built-in camera.

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Activity 2.9 SAS Gloss

During this training, we will use the Baseball Bar Graph (either the digital form of the worksheet or taking a picture of the print worksheet). Any typical one page worksheet will work for this activity. If using a digital worksheet, share the document using the "Open in" feature; open in SAS Gloss. If using a print worksheet, open SAS Gloss, activate the Add button in the top left corner. Activate the Image (photo) button in the bottom left corner. Activate Take Photo. Use the iPad's camera to take a picture of the worksheet – this picture will automatically be available in SAS Gloss. You can also choose a picture that is in your Photos app or you can paste a document from your clipboard.

1. From the SAS Gloss Home screen, select the Baseball Bar Graph: (Activate the worksheet).
2. Type the answer to the first question:
   - Activate typing: ("Aa" button in bottom left)
   - Type answer
   - Resize answer box: (Touch small square on answer box and drag in; lift finger)
   - Move answer to the line beside #1: (Tap outside the textbox – Squares will disappear – then drag to desired location)
   - Tap Done in the top left corner
   - If you make a mistake, press the Undo button in the top tool bar
3. Add a colored line to the graph:
   - Select color: Activate color options button in bottom tool bar
   - Select a color (red)
   - Tap outside the box to hide the color option popup
   - Select the pen button to the left of the color button
   - Select rectangle option
   - Turn Fill on
   - Tap outside of the popup box
   - Place finger where you want the red bar to appear (to the right of Sarah's bar) and drag up and over to make the bar the desired height and width.
4. Label the red bar "John":
   - Select "Aa"
   - Tap on the red color; select black.
   - Activate Edit Text then type "John"
   - Tap outside the box to close the popup
   - Tap on the tiny square and resize John; lift finger
   - Tap outside of the textbox – squares will disappear - then drag word to the desired place
   - Activate Done in the top left corner
5. Go to SAS Gloss Home screen: (Activate Gloss button in the top left corner).

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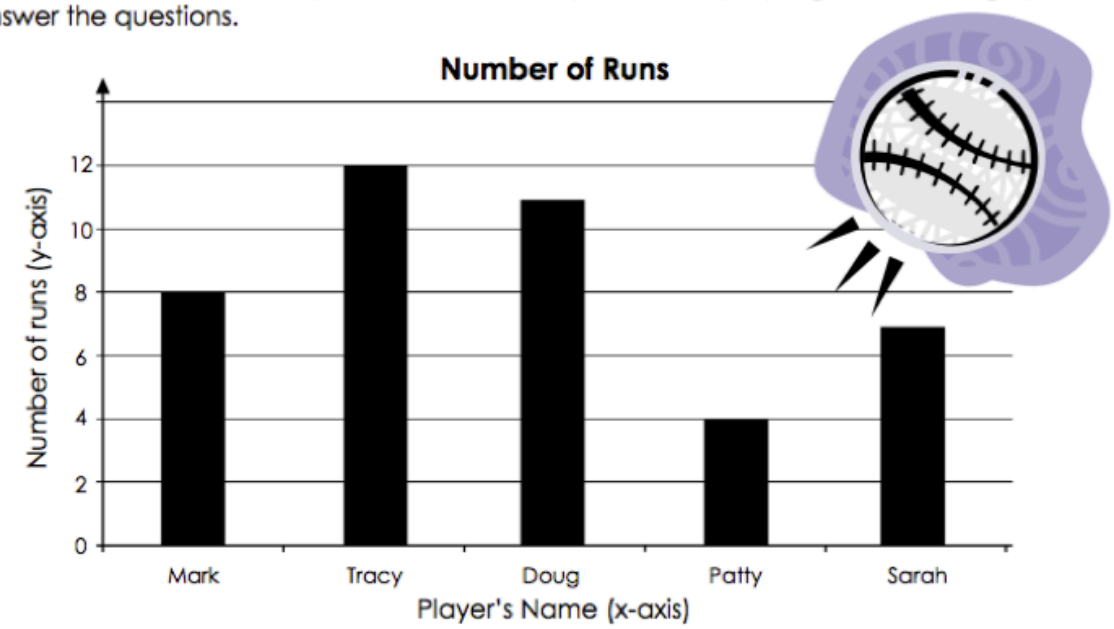
Baseball Bar Graph

The school baseball team keeps track of how many runs each player gets. Use the graph below to answer the questions.



1. How many runs did Sarah have? 1. _____

2. How many runs did the player with the most runs have? 2. _____

3. How many more runs did Doug have than Sarah? 3. _____

4. How many fewer runs did Mark have than Tracy? 4. _____

5. How many runs did Mark and Patty have? 5. _____

6. Who has more runs: Mark and Doug or Tracy and Patty? 6. _____

7. Which two players' runs added together are less than Tracy's? 7. _____

8. Jose scores five more runs than Tracy.
   How many runs did he score? 8. _____

9. List the players in order, from fewest runs to most runs.

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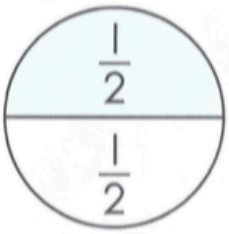
LEARNING ABOUT HALVES

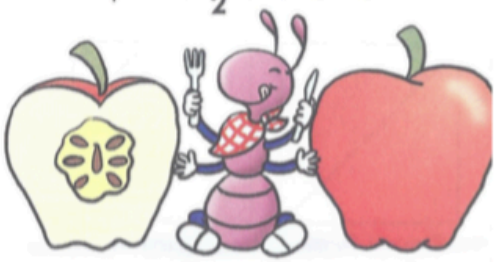
Look at the shape. It has 2 equal parts. Each part is $\frac{1}{2}$ or **one-half**.



$\frac{1}{2}$ ←part colored

$\frac{1}{2}$ ←equal parts

$\frac{1}{2}$ is a fraction.

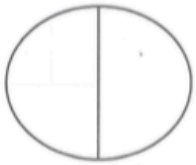


A **fraction** is a number that tells about part of a shape or group.

Write the fraction $\frac{1}{2}$ on each part. The first one is done for you.

1.

2.



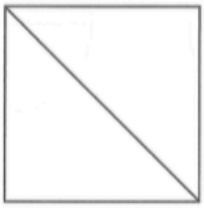
3.

4.

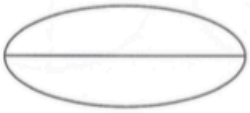
Color $\frac{1}{2}$ of each shape. The first one is done for you.

5.

6.



7.



8.

9.

10.

11.

12.

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2.10 Speak Screen

Speak Screen is a simple way to have the text on the page read aloud. Speak screen does not require learning a different gesture set, like VoiceOver requires. Speak Screen is NOT a full screen reader – Speak Screen is designed for students who want to have read aloud for some activities. Speak Screen does not read aloud buttons or navigation tools.

Students may want to use Speak Screen to read email, iMessages, web pages, and books. *From the top of the screen,* use a two-finger swipe down or tell Siri, "Speak screen" and all the content on the screen is read aloud. A popup will appear with these options:

> Move popup to the side (arrow symbol), slow speaking speed (turtle symbol), rewind, pause/play, fast forward, speed up (rabbit symbol), dismiss popup (x symbol).

The popup will automatically condense to become a greyed out arrow button at the left side of the screen.

TEACHER HINT: SPEAK SCREEN IS A SIMPLE TOOL FOR LOW VISION STUDENTS WHO ARE LEARNING TO USE VOICEOVER AND VOICEOVER GESTURES OR FOR THOSE WHO NEED A QUICK SELECTION READ OUTLOUD; HOWEVER, MOST LOW VISION STUDENTS WHO NEED MAGNIFICATION OR WHO CANNOT SUSTAIN READING, WILL BENEFIT FROM USING VOICEOVER. SPEAK SCREEN IS NOT INTENEDED TO REPLACE VOICEOVER.

Speak Screen only works in specific apps. Speak Screen does not work on the Home Screen.
To turn Speak Screen on or off, go to Settings > General > Accessibility > Speech > Speak Screen

TEACHER HINT: IF A STUDENT ALWAYS USES VOICEOVER, YOU CAN TURN SPEAK SCREEN OFF.

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