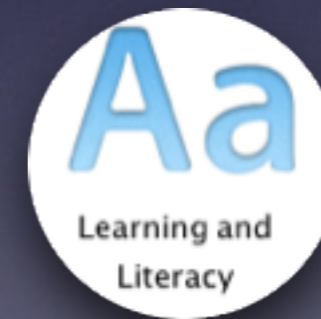
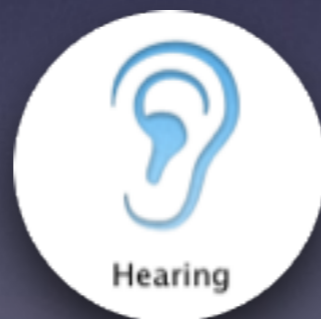


# Assistive Technology for Inclusive Learning

**An introduction to assistive technologies built into the MacBook.**

**Teachers will share ways to use accessibility features to help students with physical, sensory, or cognitive disabilities get more from their MacBook.**



Nick LaFave  
Clover High School  
[EdTechPicks.org](http://EdTechPicks.org)

LuisPerezOnline.com

**Creativity belongs to  
everyone..**

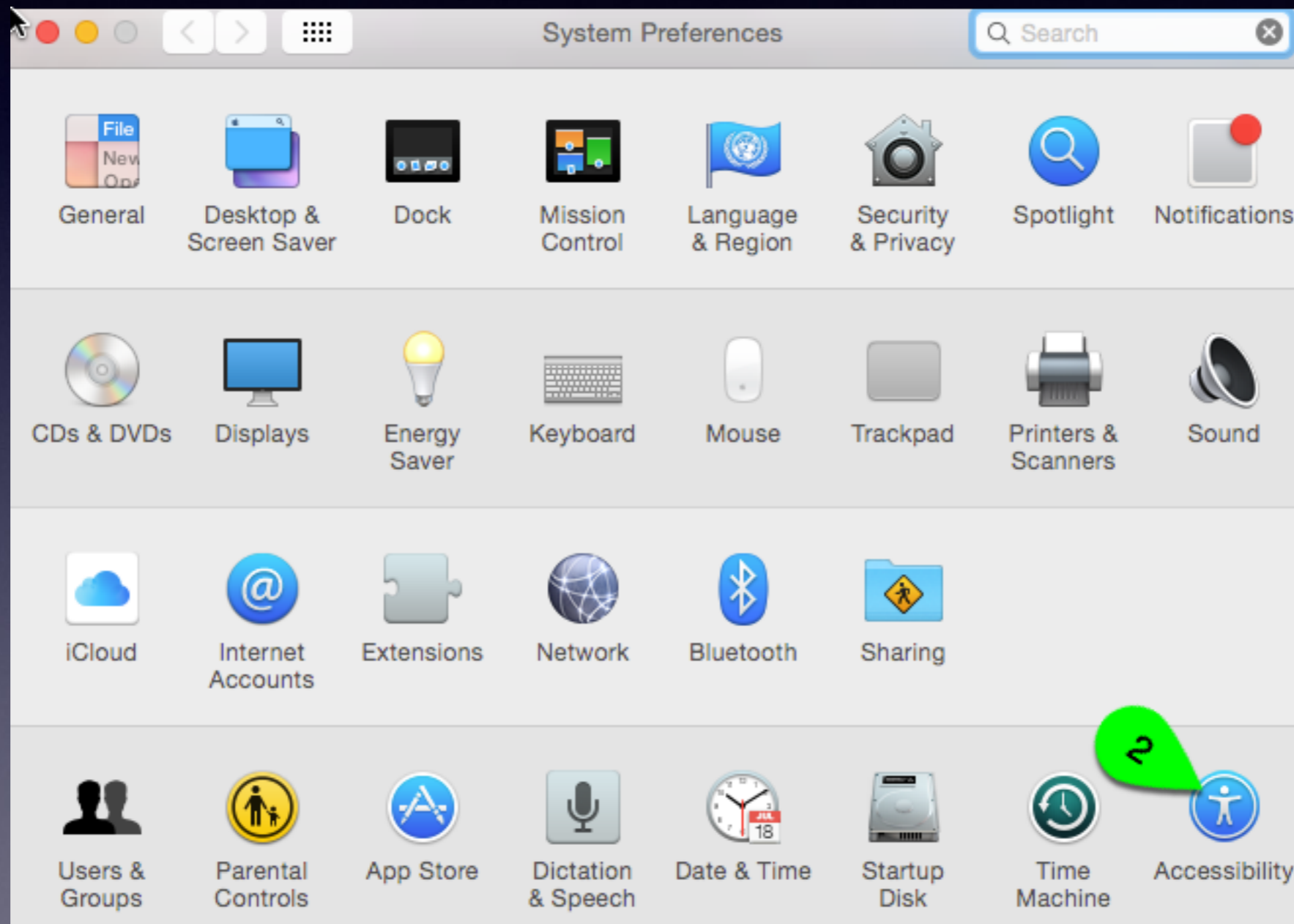
**...technology is the  
great equalizer.**

@\_luisfperez

@nflafave



# Accessing Accessibility Features



# Vision

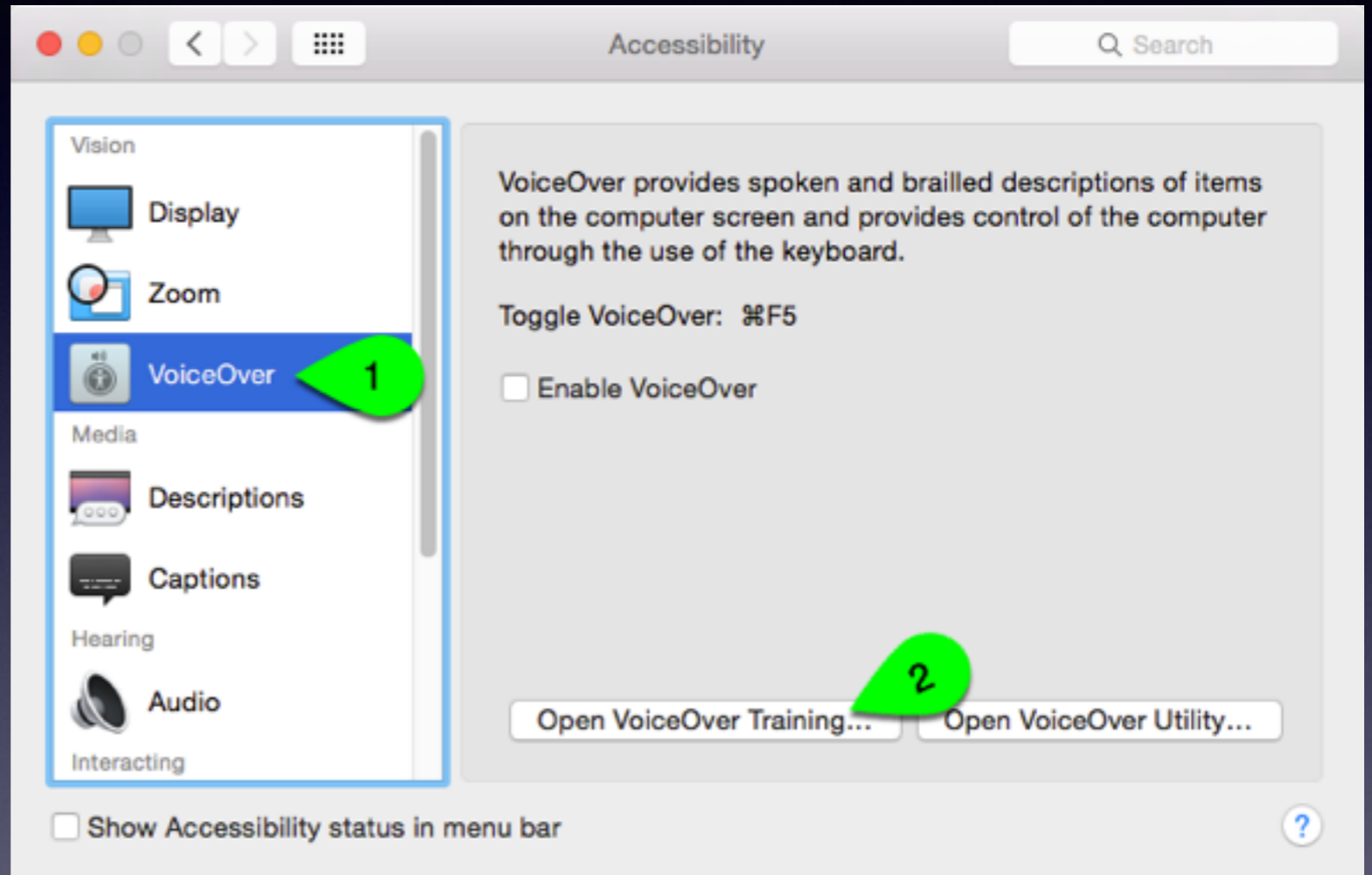


Vision

# Voice Over

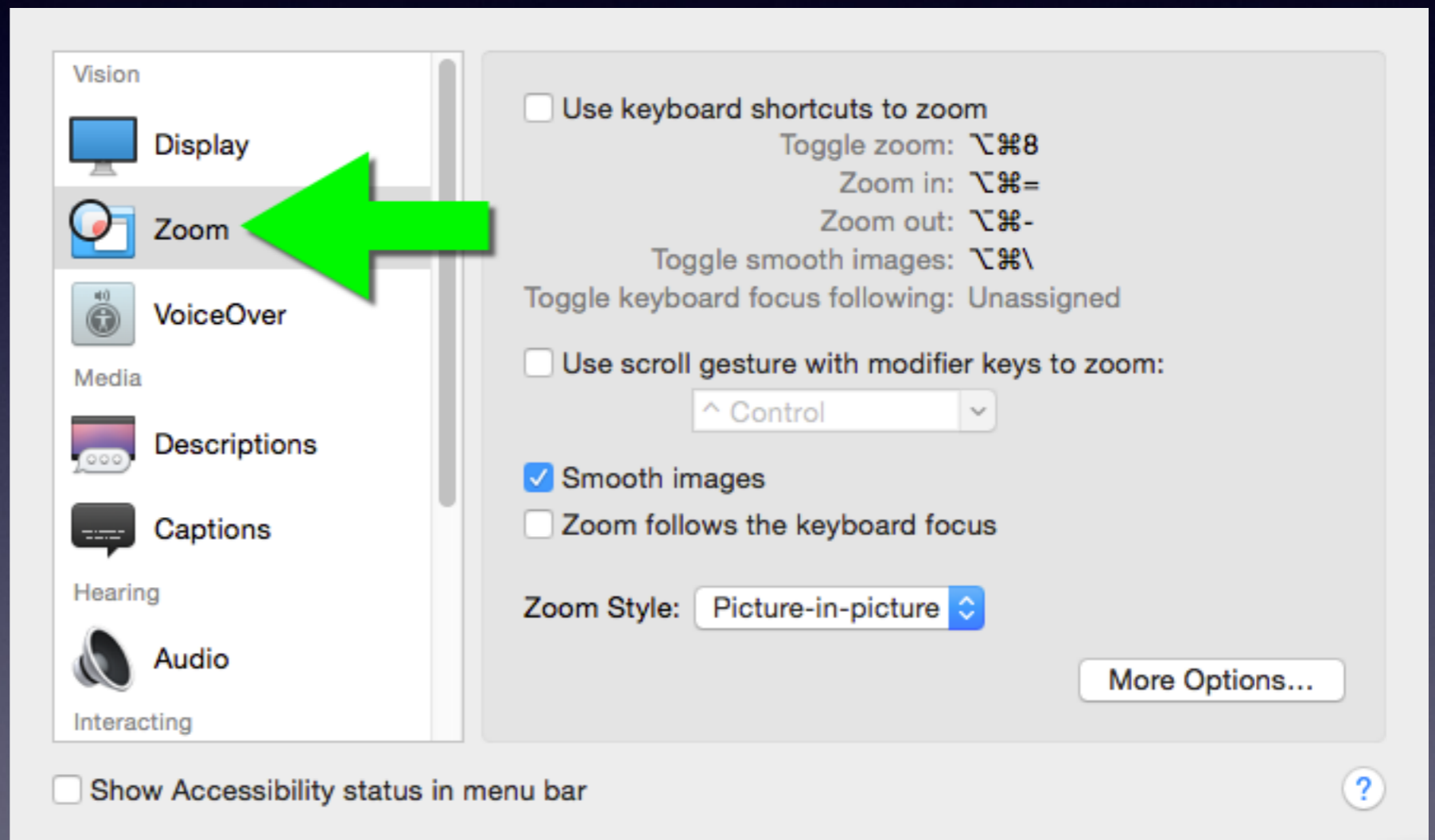
## Complete Control of Your Mac without Needing to See the Screen

- It tells you what's on your screen.
- Walks you through actions like:
  - selecting a menu option
  - activating a button using the keyboard or trackpad
- Over 30 languages
- Also works with native apps in iOS



# Zoom

- built-in magnifier
- enlarge your screen up to 20 X
- full screen or picture-in-picture



# Dictation

## Talk where you would type:

- reply to an email
- search the web
- write a report, etc

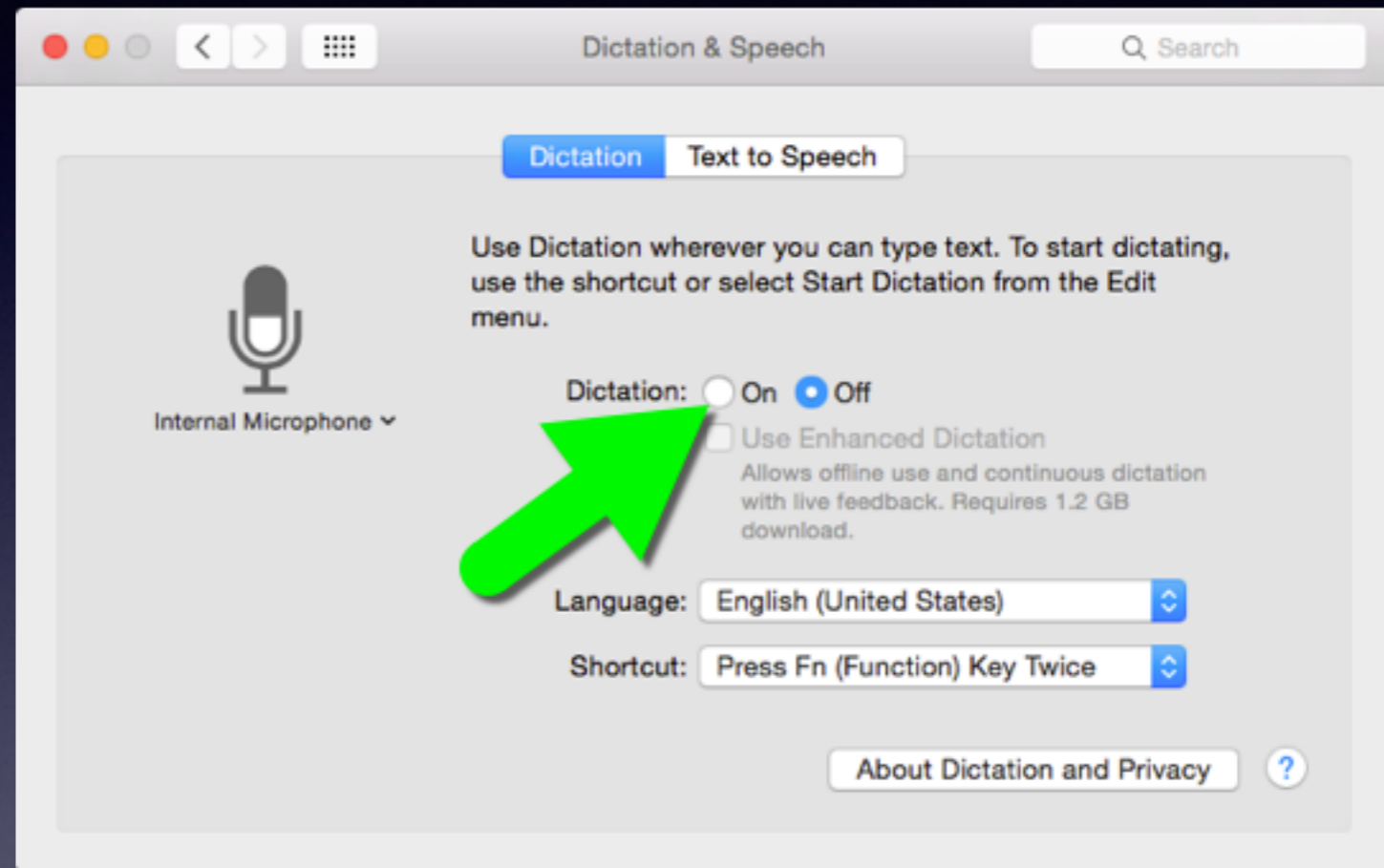
Works in over 40 languages.



# Dictation

## How?

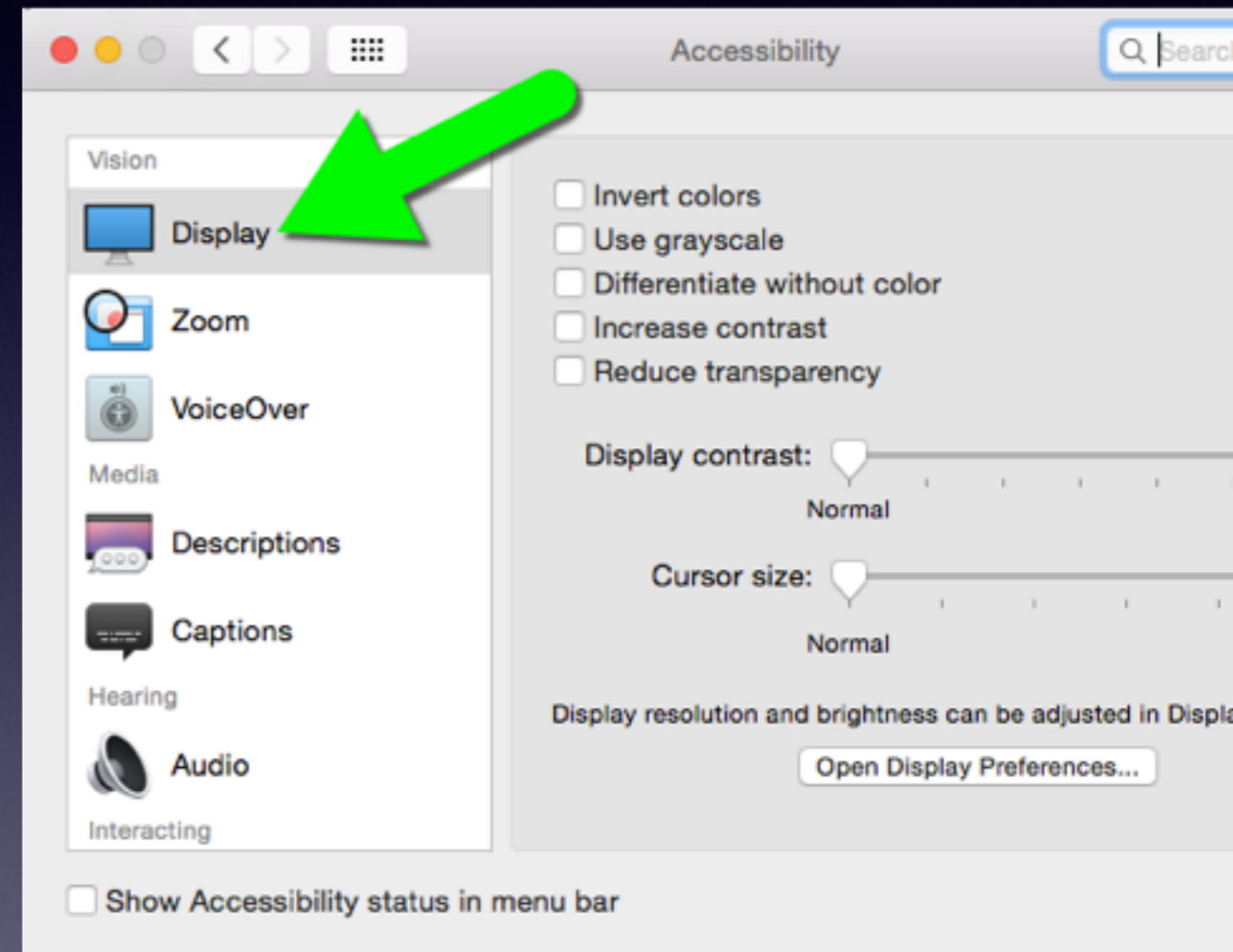
1. Navigate to any text field.
2. Activate Dictation.
3. Say what you want to write.





# Contrast Options

- Increase Contrast - to enhance definition
- Enable Grayscale
- Invert Colors
- Reduce Transparency (in some apps)

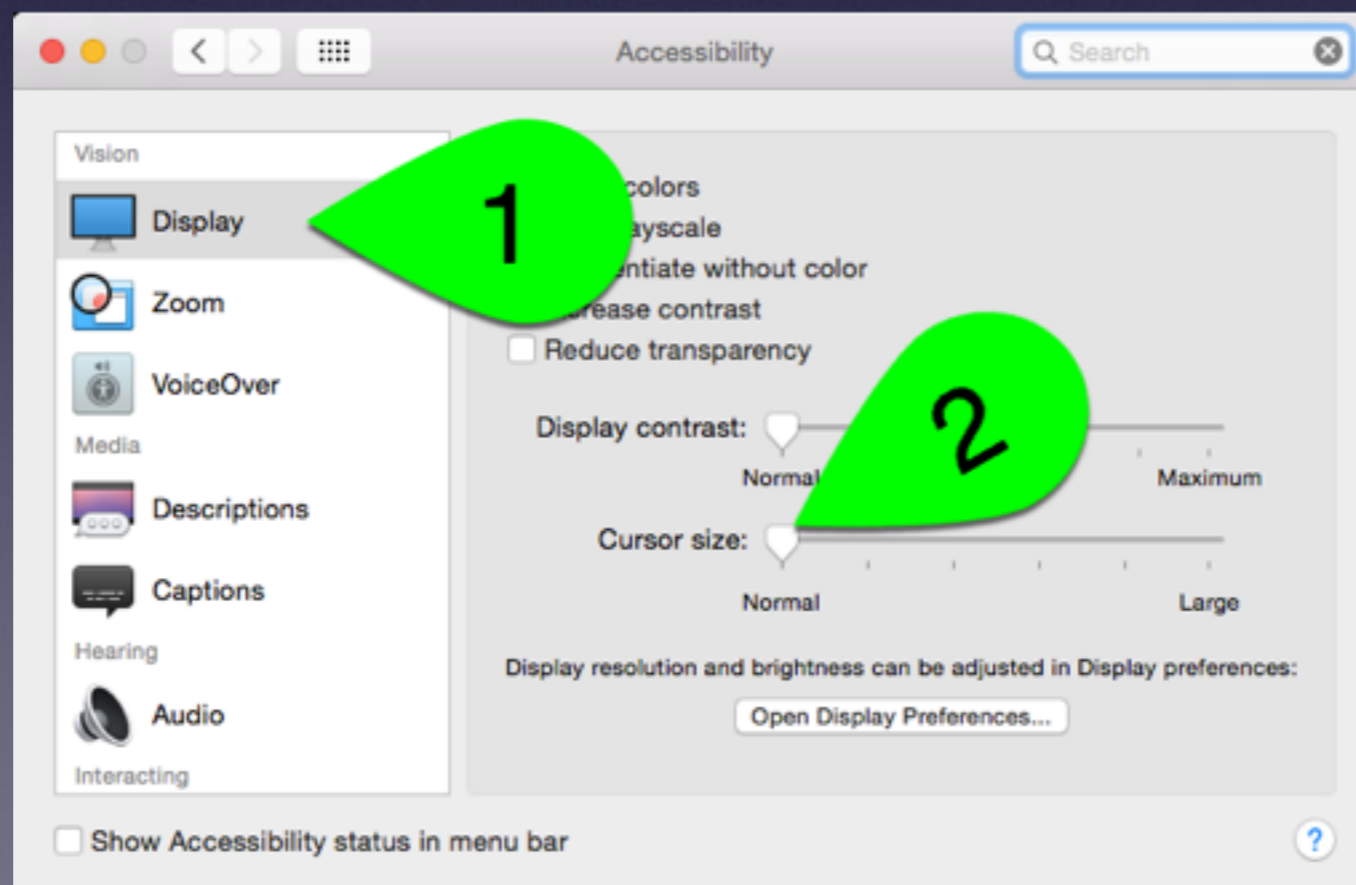


Once you set your preferences, they apply systemwide.



# Cursor Size

- Magnify your cursor.
- Easier to see where you are and follow along.
- Set the cursor size once and it stays magnified.
- Swipe back and forth on your trackpad and the pointer grows.



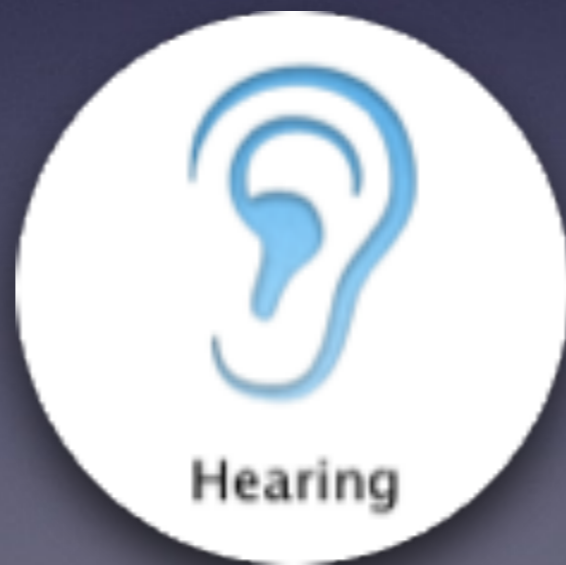
# Braille Displays

- Software drivers for both USB and Bluetooth wireless displays.
- More than 50 refreshable braille displays that work with VoiceOver.
- No additional software needed.

<http://www.apple.com/accessibility/osx/braille-display.html>



# Hearing



Hearing

# FaceTime

- Video Calls
- Catch every gesture and facial expression — from raised eyebrow to ear-to-ear smile.
- Ideal for people who communicate using sign language.

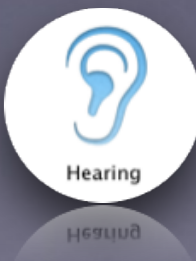
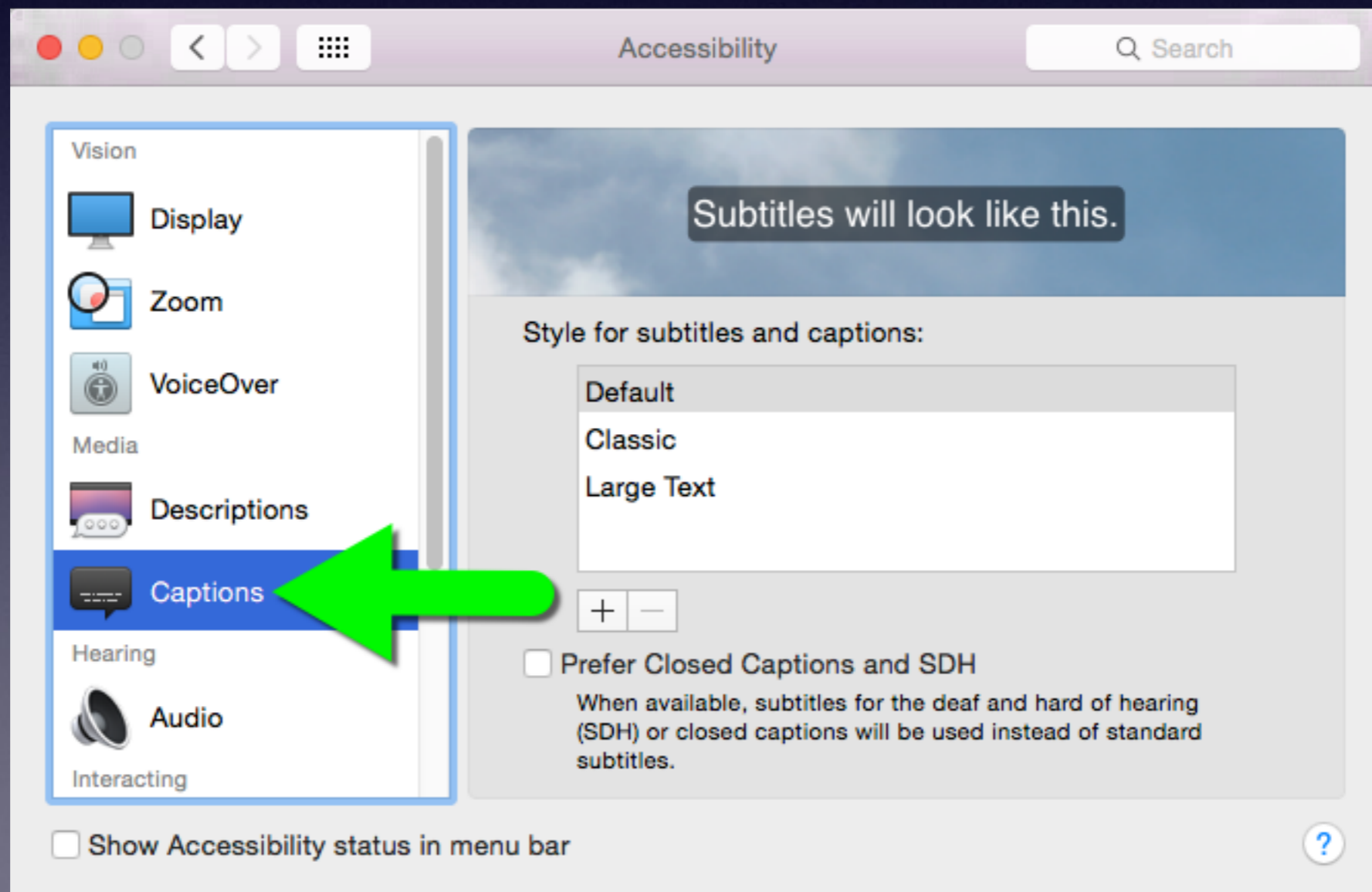


Hearing

Hearing

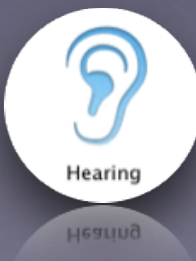
# Closed Captions

- Supported in apps like iTunes, QuickTime, and DVD Player.
- You can customize captions with different styles and fonts.



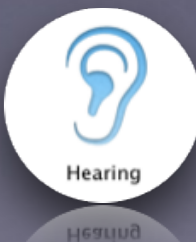
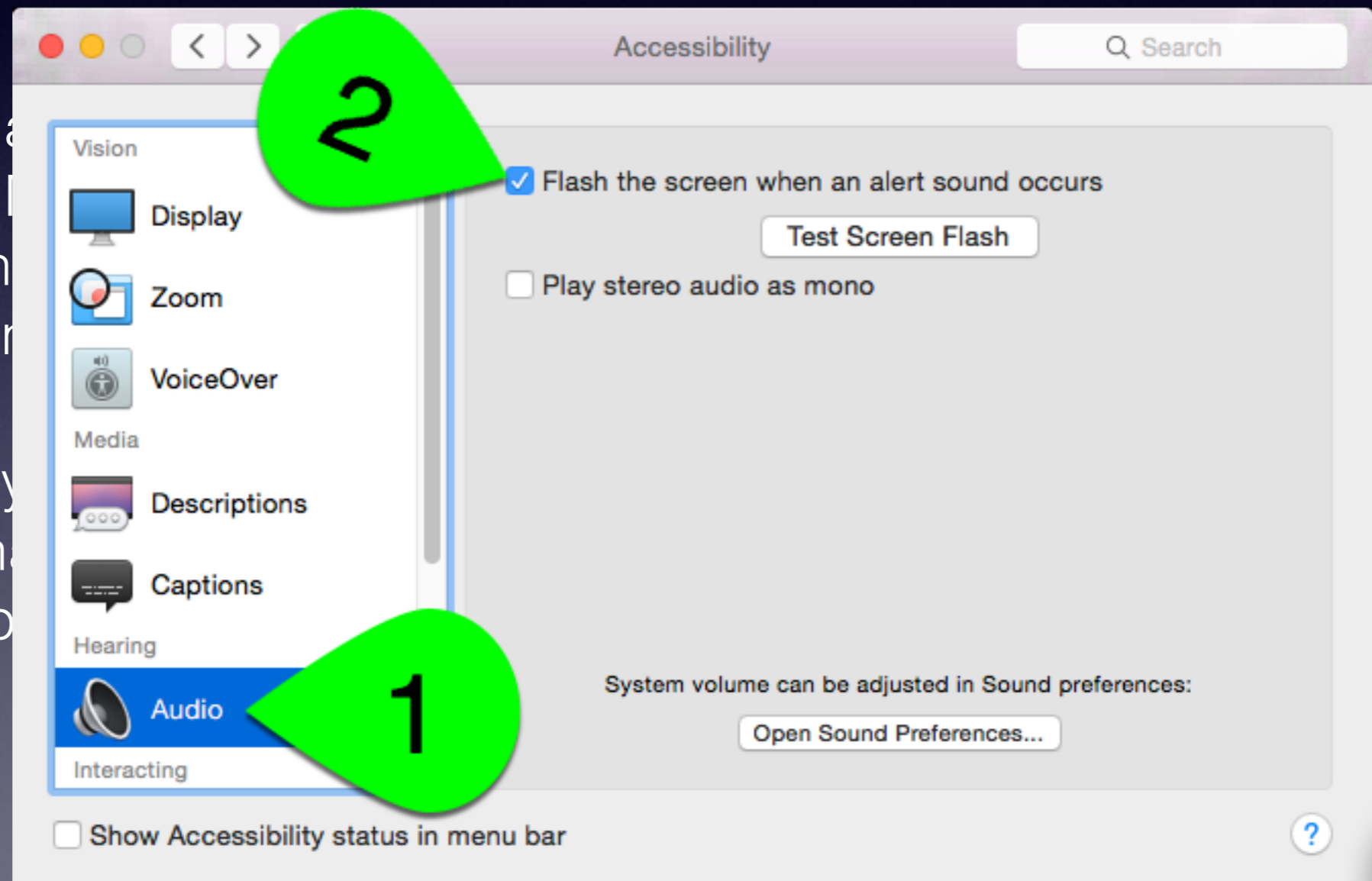
# Message with iMessage

Conversations  
without needing to  
say or hear a word.



# Screen Flash

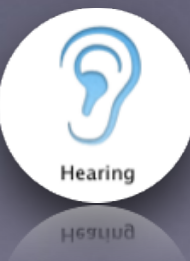
- Instead of playing a sound, your screen flashes when an alert occurs to draw your attention
- Automatically enabled for every app that supports it, so the system beeps





# Mono Audio

- When you're using headphones, you may miss some audio if you're deaf or hard of hearing in one ear.
- Stereo recordings usually have distinct left- and right-channel audio tracks.
- Play both audio channels in both ears.
- Adjust the balance for greater volume in either ear.



# Physical and Motor Skills



Physical and  
Motor Skills

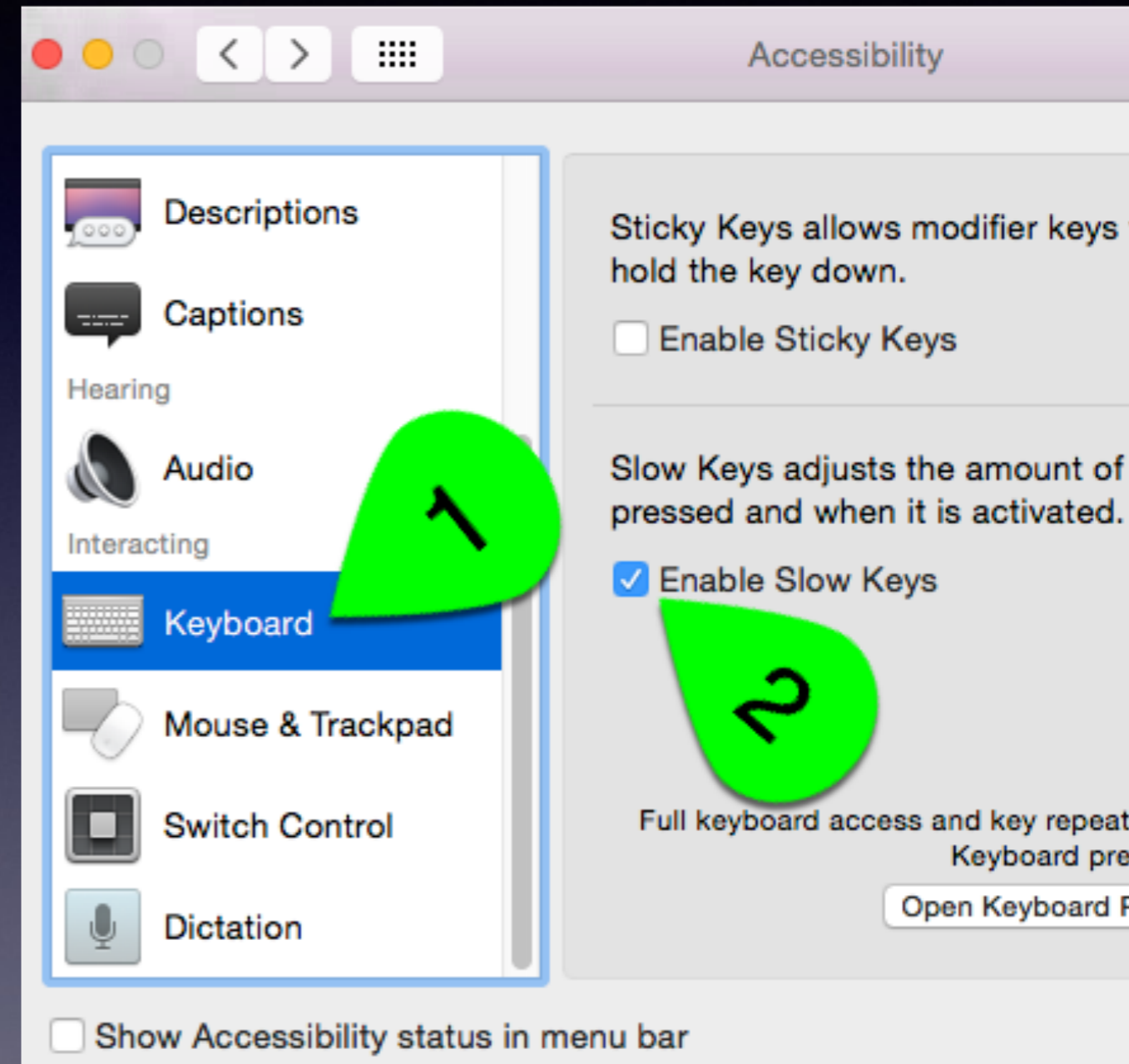
# Switch Control



- For anyone with significantly impaired physical and motor skills.
- Use a variety of adaptive devices such as a switch, a joystick, a keyboard space bar, or even a single tap on the Multi-Touch trackpad for easy control.
- Navigate onscreen keyboards, menus, and the Dock using a system commonly referred to as scanning.

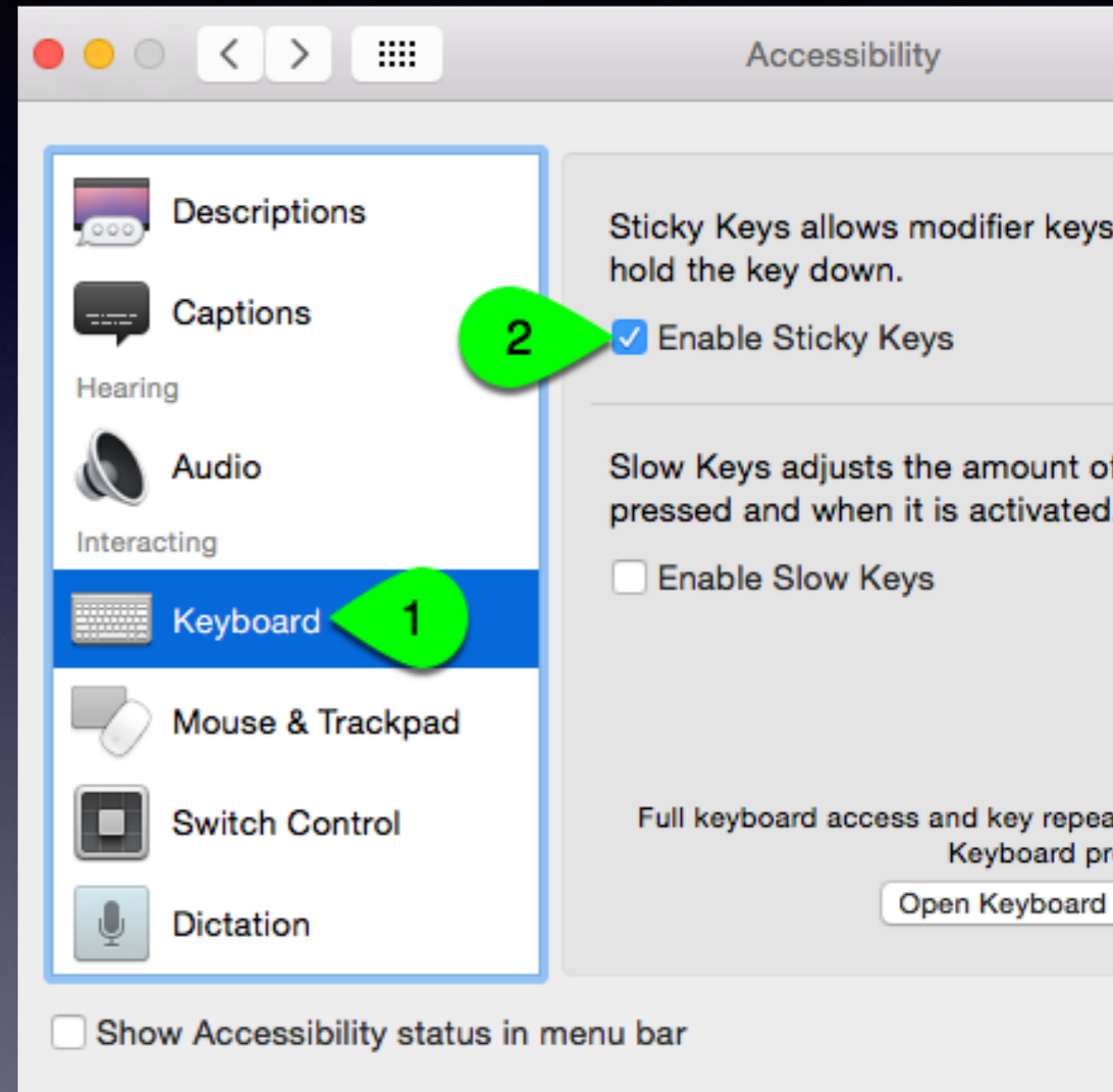
# Slow Keys

- Adjusts the sensitivity of the keyboard to process only the keystrokes you mean to make.
- Builds in a delay between when a key is pressed and when it's entered.
- Adjust the delay and choose to have a sound play when a key is entered.



# Sticky Keys

- Press keys one at a time, instead of simultaneously, to enter commands.
- Enter a key combination — such as Command-S (for Save)
- Each pressed key is displayed, accompanied by a sound effect, so you can make sure the right keys are entered.



# Dictation

More than 50 editing and formatting commands.

## Tell your Mac to:

- bold a paragraph
- delete a sentence,
- replace a word

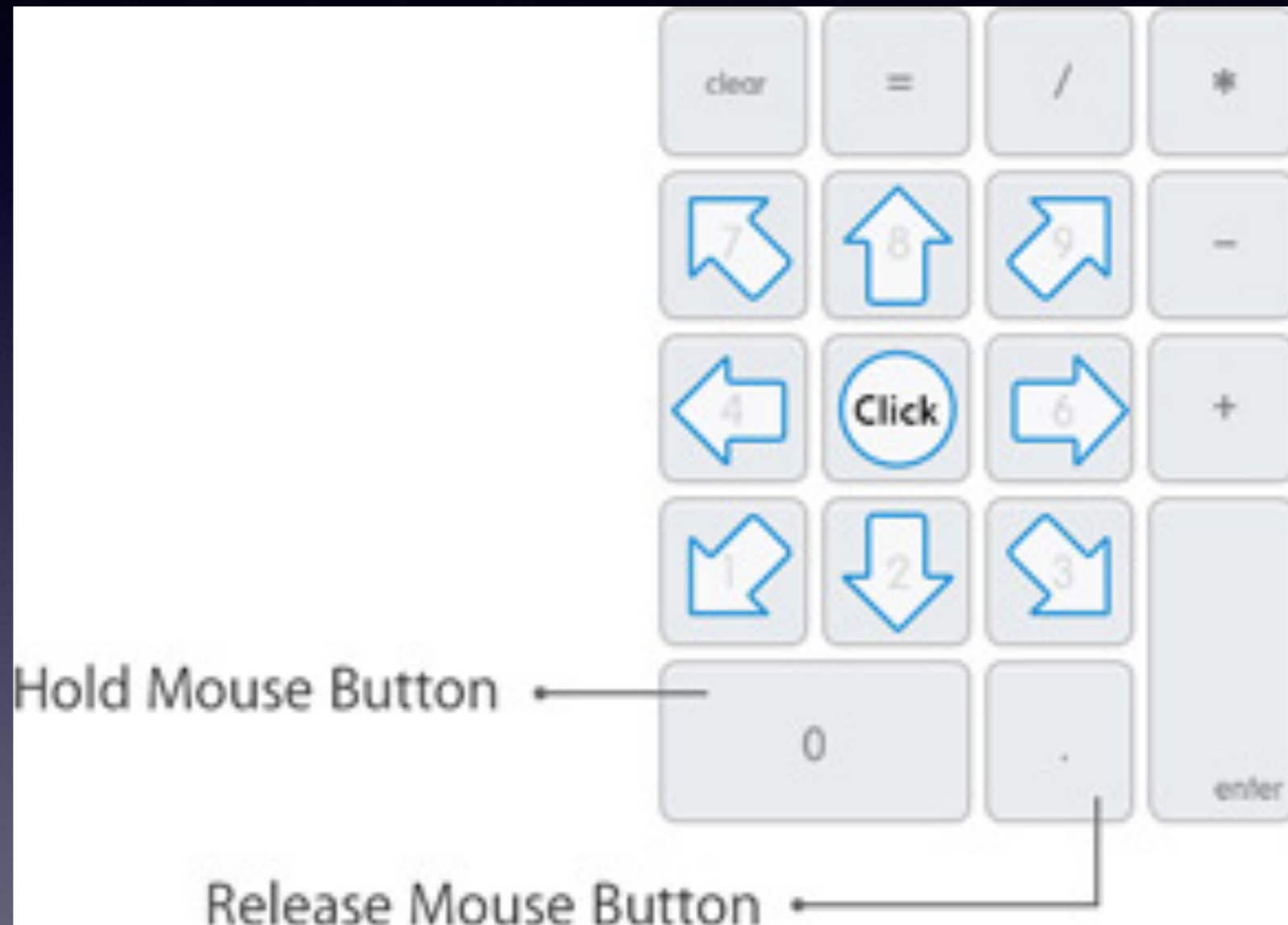
Create your own dictation commands with Automator workflows.



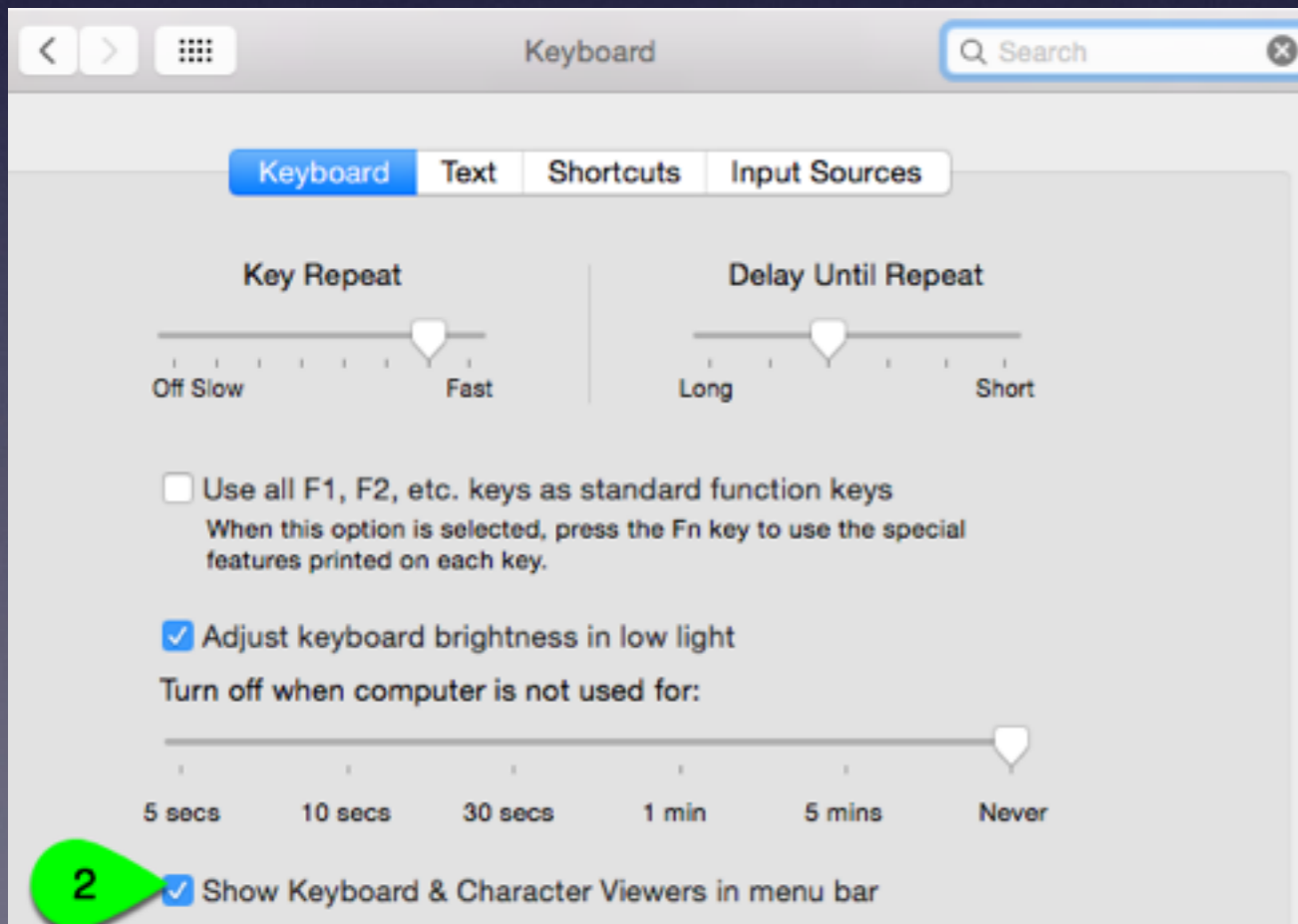
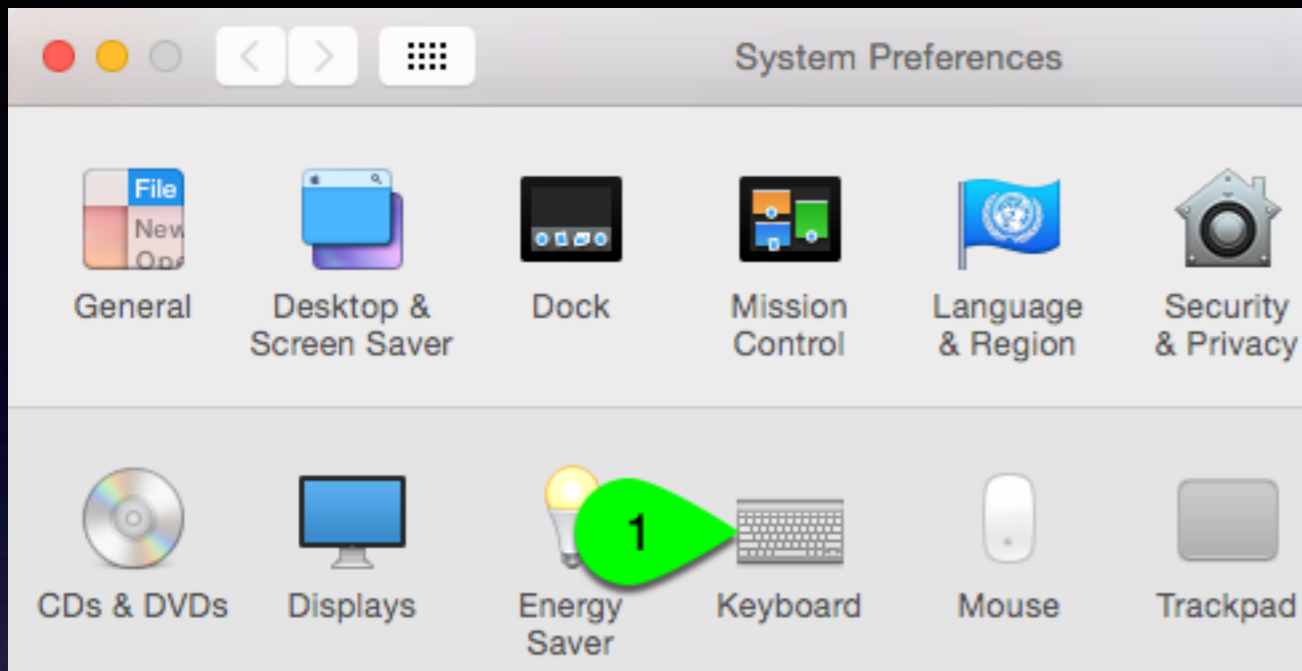
# Mouse Keys

## Difficulty using a mouse or trackpad?

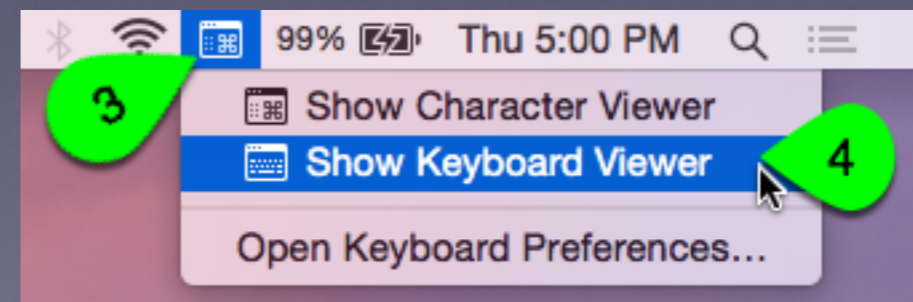
- Control the cursor with a numeric keypad.
- Press a number key as the mouse button.
- Use other number keys to move around the screen or to drag and drop items.



# Onscreen Keyboard



- Use a pointing device instead of a keyboard.
- A keyboard image floats above other applications
- “Type” using a mouse or other pointing device.
- Turn on Sticky Keys to enter keyboard shortcuts via the onscreen keyboard.





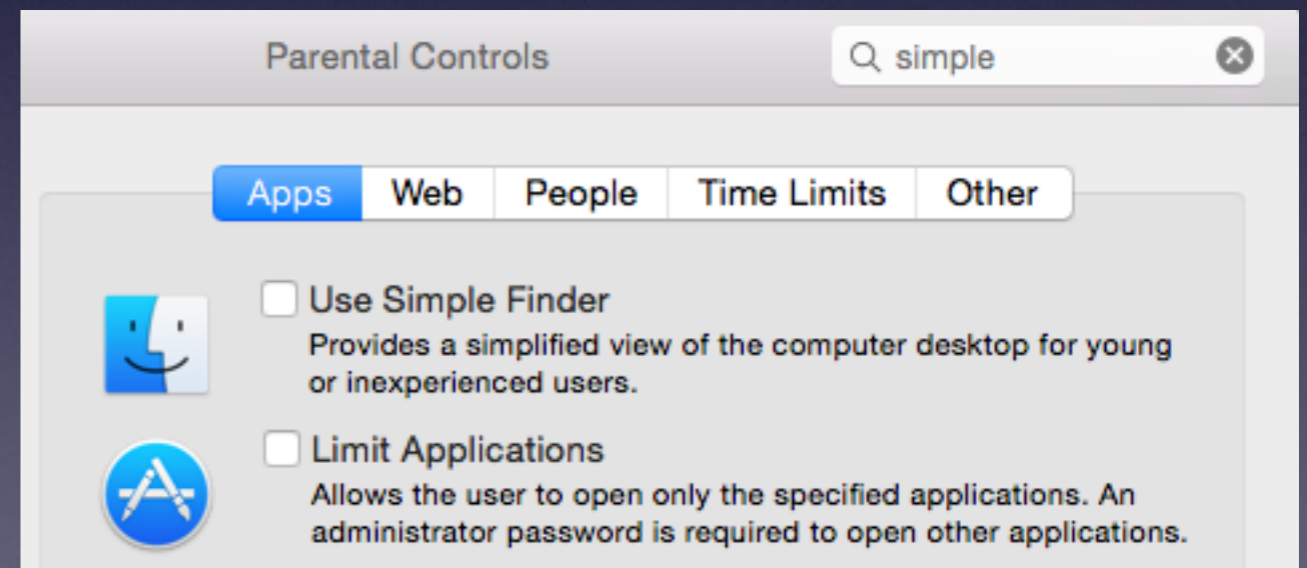
# Learning and Literacy



ΓΙΕΙΛΑΥ  
ΓΕΛΙΠΠΙ ΠΥ

# Simple Finder

- Reduces the Dock to just three folders.
- Limit the list of apps a student can open to only the ones you choose, so students can stay focused.
- Files, folders, and apps are displayed in a single window of neatly arranged icons so everything is easier to find.



# Dictionary

- Quick access to definitions and synonyms that help with grammar, spelling, and pronunciation.

## Two Ways:

- Two-Finger Click on a word and select “Look Up Word.”
- Three-Finger Tap on a word.

members of the LIGO group, a worldwide team of scientists, along with  
entists from a European team known as the Virgo Collaboration  
lished a [report](#)  
oo authors.

think this will  
e,” said Szab  
LIGO scienti

everything else  
nopoly of teles  
he electroma  
o space and t  
ore.”

ong-Awai

e discovery is  
ifornia Instit  
tute of Technology and Ronald Drever, formerly of Caltech and now  
red in Scotland — who bet their careers on the dream of measuring th  
st **ineffable** of Einstein’s notions.

**Dictionary**


ineffable | in'efəbəl | adjective  
too great or extreme to be expressed or described in  
words: *the ineffable natural beauty of the  
Everglades.*

- not to be uttered: *the ineffable Hebrew name that*

**Thesaurus**

ineffable adjective

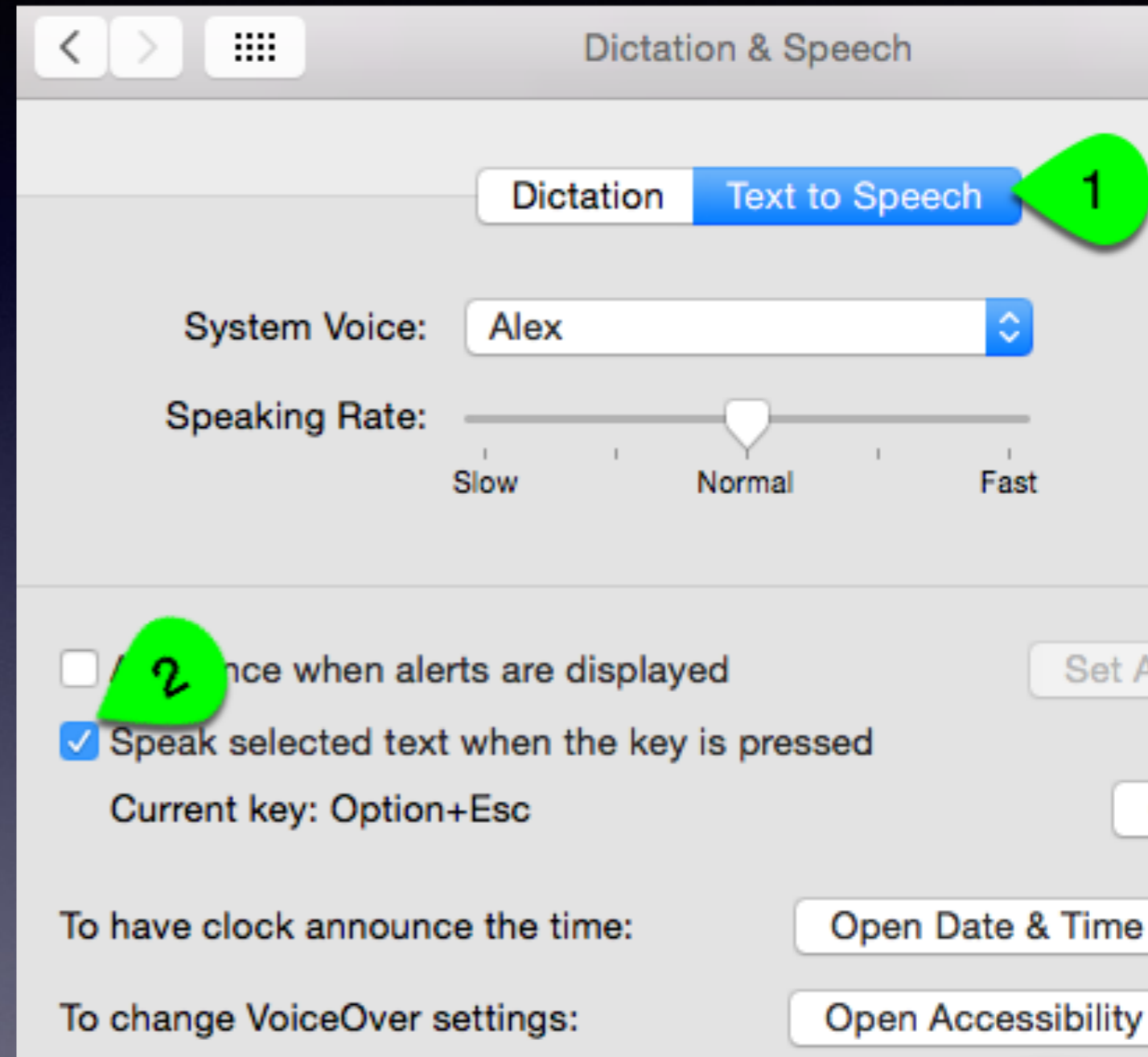
**1** *the ineffable, surging joy of the Beatles:*  
INDESCRIBABLE, inexpressible, beyond words,  
beyond description, begging description;  
indefinable, unutterable, untold, unimaginable; [more](#)

Open in Dictionary 

# Text to Speech



- Highlight any text, and Alex will read it aloud.
- Choose from other male or female voices.
- Adjust the speaking rate.
- Choose from over 70 voices spanning 42 languages.



# Word Completion

- Help with vocabulary and word-building skills.
  - Available in apps such as TextEdit and Pages.
1. Type a few letters, press the Escape key and OS X suggests words.
  2. Select the word you want, and OS X completes it for you.

I love word completion

complete  
completely  
completed  
complaining  
compliments  
complaints  
complicated  
complicating  
completing  
compliment  
complex  
complain  
complimentary  
completion  
complained  
complications  
complexity  
complains  
compliance  
complaint

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