

Using the SMARTBoard to Differentiate Instruction:

Best Practices and Solutions for Students with Special Needs

| Best Practice | Tips | SB/NB Tools to Use | Students Who Will Benefit |
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| <p>#1 Provide a clear view of the SMARTBoard and your face.</p> | <p>Face the audience at all times. Stand to one side of the SB to allow clear view and clear voice projection and view of your face. Avoid creating shadows from the projector. Use window blinds in the classroom to control light. Installation Considerations: Wall mounted SB with short arm throw projector is best set-up. Wall amounted SB with ceiling drop projector is next best. SB on wheels with projector on cart is least desirable. Keep computer near SB for easy use of keyboard or ensure wireless keyboard will have needed range.</p> | <p>In Full Screen Mode, drag Toolbar to desired location. Use the double arrows on the side of the NB page to move the Toolbars from one side of the page to the other so you don't have to walk in front of the SB. Use double arrows to move top toolbar to bottom to access toolbar when you are seated.</p> | <p>All students, especially those with visual or hearing impairments.</p> |
| <p>#2 Address different learning styles.</p> | <p>Use multiple media in your presentations. Supplement text with visuals. Provide verbal descriptions for all visuals. Use external speakers to ensure good sound quality.</p> | <p>Use multimedia items from NB Gallery: pictures, sounds, videos, flash games. Create links from objects to external media.such as websites and video. Attach sounds to objects that will play by corner icon or whole object if a larger target is needed. When playing a video, pause the video, make annotations with the pen tool, and capture the frame and annotations to Notebook using the Capture Tool. Or use the SB video player to pause and annotate videos with digital ink.</p> | <p>Students with various learning styles (auditory, visual, and kinesthetic). Students who have visual or hearing impairments.</p> |

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| <p>#3 Limit the amount of information on each Notebook page.</p> | <p>Hide toolbars to limit distraction in NB and in other applications. Link to additional information on separate pages. Use various hide and reveal techniques to limit amount of information on a page.</p> | <p>Use Full Screen Mode to eliminate toolbar and side panels. Use Screen Shade to hide non-essential information on pages and in Tables. Use Link feature to link to additional information on separate pages. Use Pull Tabs to hide information off to the side of your pages.</p> | <p>All students, especially those who are easily distracted or overwhelmed by visual clutter.</p> |
| <p>#4 Choose your fonts and font sizes carefully.</p> | <p>Limit the number of different fonts on each page. Sans Serif fonts better on screens. For general classroom, 36 size text; Arial, Comic Sans, or Century Gothic fonts are recommended. For a student with a visual impairment, set font and properties in consultation with vision teacher. When viewing web pages or using other applications on the SB, adjust the zoom so the text is large enough for students to read.</p> | <p>Use the Properties Tab to change the defaults for text tool.</p> | <p>All students, especially those who are easily distracted or overwhelmed by visual clutter. Students with visual impairments.</p> |
| <p>#5 Choose your pen, line, shape, text, and background colours carefully.</p> | <p>For general classroom use, a light pastel background is recommended over white or dark/bright/intense colours. For a student with a visual impairment, set properties and page background colour in consultation with vision teacher. Use background colours to unify sections of your presentation.</p> | <p>Set pen, shape, text, and line properties with the Properties Tab. There are several background choices provided in the NB Gallery. You can create your own custom background and save it to the My Content folder for repeated use.</p> | <p>Students who need larger sizes or particular colours of lines, shapes, text. Students who have difficulty with glare. Students who have preferences for or difficulty with particular text and background colour combinations.</p> |

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| <p>#6 Provide different ways of accessing the SB.</p> | <p>Use different tools for interacting with or writing on the SB (tennis ball, magic wand, paint brush, pointer hand, squoosh ball, wireless keyboard and mouse, tablet computer, AAC device.) Optionally mount board lower for primary classrooms. Optionally install a special adjustable track to move SB up and down. Optionally install an anchored bench.</p> | <p>Once a pen has been removed, that pen slot becomes active regardless of the tool used to write. The computer can control the SB, so any special keyboards, joysticks, switches, AAC devices that can control a computer can also control the SB. The built-in onscreen keyboard has click and character feedback. Use wireless keyboard, mouse, or Airliner Slate as an alternative to having students come to the board. Use the Senteo Response System for individual response. Use the double arrows on the side of the NB page to move the Use double arrows to move top toolbar to bottom to access toolbar when you are seated.</p> | <p>Students (and teachers) who like to have fun when they are learning! Students with fine or gross motor issues. Students with mobility issues. Students who have trouble reaching the top of the SB. Students who need help staying on task.</p> |
| <p>#7 Focus your students' attention.</p> | <p>Include your learning intentions in your NB lessons. Provide verbal commentary, drawing attention to key points. Focus on one key point at a time.</p> | <p>Temporarily enlarge particular visuals or text boxes using object handle. Use pen tool, highlight pen tool, creative pen, line tool to underline/circle/highlight important information. Use spotlight tool, magic pen circle and square to highlight and/or enlarge important information. Use Screen Shade to focus attention on one concept at a time. Use hide and reveal techniques to focus on one concept at a time. Use the "grow" object animation to enlarge one key point at a time. Use SB video player when showing videos so you can pause video, make annotations to screen and save as screen captures. Use the Senteo Response System for individual response.</p> | <p>All students, especially those who have trouble staying focused. Students who have trouble identifying main ideas or key points. Students who have trouble seeing visual details.</p> |
| <p>#8 Ensure that ALL of your students interact with the SB.</p> | <p>Allow students to use the SB during practice or centre times. Pair students for SB activities. Some teachers set up their classroom with the SB on the long side of the room and desks arranged chevron style to facilitate viewing and easy access for all students.</p> | <p>Use manipulatives from the NB Gallery. Use easily-edited flash games from NB Gallery. Students who cannot participate in academic activities can control flash activities such as games, dice, and spinners. NB Gallery contains lined pages for writing and special pages for printing and handwriting practice. Use Senteo Response system to keep all students engaged. Link to extension or alternative activities on separate pages. Use Pull Tabs to house extension or alternative activities.</p> | <p>All students (and teachers) who like to have fun when they are learning! Students who are difficult to include or engage. Kinesthetic and visual learners. Students who have difficulty with pencil and paper activities. Students who are finished early and would like to do an extension activity. Gifted students who require more challenge.</p> |

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| <p>#9 Ensure your lessons flow smoothly.</p> | <p>Build in links to external media to avoid searching downtime. Download videos that are not too large in case they are not available during class time. Play videos ahead of time if possible to load them in the buffer.</p> | <p>Use the Attachments Tab for storing files and urls to eliminate downtime searching for these items. Use the link tool to link objects to other NB pages or to external media. Use the lesson templates in the Gallery to create a uniform look to your lessons. Use timers from NB gallery to time classroom activities.</p> | <p>All students, especially those who have difficulty staying on task. Students who need predictability and structure.</p> |
| <p># 10 Facilitate access and review of lesson by students and support network. (parents, tutors, etc.)</p> | <p>Leave lessons and recordings on the SB so they are available to students during practice time, e.g. how to solve a math problem or step-by-step instructions for an activity. Provide lessons to students for home use. Make sure that support network is aware of the options for access or NB materials. Send home download instructions for NB software and include product code for activation. Demo use of NB software at parent/teacher open house events.</p> | <p>The NB software can be loaded onto student and home computers. Provide copy of NB file to student or export as .pdf. Save screen captures of annotations made on websites and applications with digital ink. Record your lesson using SB Recorder and microphone for later viewing, e.g. how to solve a math problem. Export NB files as .pdf for conversion to Braille, use with screen reader or thermaform. Use Bridgit conferencing software made by SB for remote real-time viewing of lessons. SMART download page: http://www2.smarttech.com/st/en-US/Support/Downloads/default.htm?WT.ac=Sitecore_HPdownloads SMART Notebook Express: http://express.smarttech.com SMART Exchange: http://exchange.smarttech.com/</p> | <p>Students who are absent. Students who require more repetition and practice. Students who have memory issues. Students who have difficulty taking notes. Students who have visual impairments. Parents who want to help their child at home.</p> |