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## **Educational Uses for Livescribe Smartpens** **Updated on 2/14/2011**

*In an effort to help categorize the educational uses of Livescribe smartpens, we used headings such as Student Use, Teacher Use, Parental Use and Administrative Use. It will become obvious that some activities will cross over between categories.*

### **Student Uses:**

1. **Assistive Technology for Note-Taking:** A student with an auditory processing problem may take incomplete notes. Physical and hearing impairments may also limit speed and make note-taking difficult. A note-taking accommodation is intended to provide information that the student would have gotten on his own, if not for his disability. Livescribe should be the first line of support to provide note-taking accommodations.
2. **Search your handwritten notes:** Want to find where you have written a particular term to study or review? Type the word in the search portion of Livescribe Desktop, and it will highlight every place the term was used.
3. **Testing Accommodations:** If the student's IEP requires that test directions be read orally and/or the reading of the test direction is repeated as needed, the Livescribe pen can be used for these purposes. Also, if the student's learning disability is in written language and a scribe is writing student responses, the pen can be used to record them, assuring accuracy. [Blog post 1 with video](#) [Blog post 2 with video](#)
4. **Slow Down (or Speed Up) Audio:** Students can slow down or speed up their teachers' recorded lectures, improving comprehension
5. **For Students without Computer Access:** Level the playing field. Every child with a Livescribe smartpen and paper can hear his/her teachers' explanations over and over, anywhere and anytime. No computer needed.
6. **Collaborative Oral Project:** Create a collaborative oral project showcasing the sights and sounds of the rainforest. Put each student in charge of researching one of the rainforest elements and recording the information as an oral report. Parents or other students can then listen to each recording. [Blog post with video](#)
7. **Auditory Flashcards:** Each flashcard can "talk" to the student, giving not only the words, but pronunciation hints, etc. [Blog post with video](#)
8. **Oral Book Report:** Print the dot paper pattern onto blank labels to create *audio* labels that can be attached to virtually anything. A student can do an oral book review and attach the review to an audio label on the book they read [Blog post with video](#)
9. **Cornell Note-Taking Plus:** The Cornell Note-Taking system uses six basic steps: record, reduce or question, recite, review and recapitulate. Students who can't keep up with the pace of the lecture are not disadvantaged any longer. They have complete audio recordings of their teachers' lectures. The "Record" step of the Cornell system is enhanced with the ability to play back the lecture at any place. Students can write questions in their Cue columns without the fear of losing their places in the lectures. Handwritten notes may be studied selectively, as the audio is attached to notes. See Livescribe Teaching Strategy Guide (available with training)
10. **Center-Based Instruction – Student Use:** The students record their activities at each center and the teacher can then listen to hear if each student fulfilled his/her role/obligation. This eliminates the need for a teacher's immediate presence at each activity to assure that the activities are done. This helps keep students on-task. The teacher can at any time check for understanding and adjust his/her instructional conversation with students in order to tap into higher levels of critical thinking.
11. **Articulation Practice for Speech Impaired:** Not only can the student take home the perfect model of the words produced by his SLP, but each time he practices the word, he can document it. [Blog post with video](#)
12. **Personal Pronunciation Practice:** Teachers/SLP's can record the model, student can listen, record themselves, and then compare the pronunciation to the model.

13. **Augmentative Communication:** Augmentative communication devices that provide a voice for those without speech are expensive and cumbersome. With the smartpen, you have an inexpensive system that can combine letters, words and sentences to provide the best balance of efficiency and flexibility for communication. Instead of a 2.5 lb obvious device, the student carries pen and paper, just like everyone else, and caregivers can change their messages, thoughts, daily. The paper can take on personality, while the \$2,000 device can't. [Blog post 1 with video](#) [Blog post 2 with video](#)
14. **Pencast Your Homework to Your Teacher:** Students use their pens to complete assignments, pencast them, and send the links to their teachers. A teacher can listen to a math "think-aloud" from anywhere, and then discuss the student's process with them.
15. **Pencast Your Test to Your Teacher:** An innovative teacher in NY, (whose students each have a smartpens) has his students take their tests at home with their pens. They must solve the problems out loud. At the completion of their test, students upload them and email them to the teacher, who grades the tests before the students come to class the next day. The teacher is then able to group his students by a common missed thread in instruction and review that with them in small group instruction.
16. **Create a Tactile, Talking Test:** Using tactile markers or a "Tong" tool, bumps can be added to Livescribe paper; dots are drawn and the audio questions are recorded. Students locate the bumps with their fingers and tap next to them, on the "talking dots," to hear the questions. [Blog post with video](#)
17. **For the Visually Impaired:** A talking address book or prescription book. In large letters, the name of the pharmacy and other important information is written and recorded. The user touches a dot to hear the phone number, touches others to access the prescription number, name of the medication, when to take it, how much, etc. All can be recorded by the caregiver or the client. [Blog post with video](#)
18. **Basic Piano Skills:** Students can learn the basic piano chords, with both sharps and flats. [Blog post](#)
19. **Learn the Sounds of 8 Different Musical Instruments:** Draw the piano and hear the different instruments.
20. **Paper Calculator:** Each pen comes with a fully-functional scientific calculator. You can even do quick, simple calculations without the paper calculator. Turn the pen on draw a "c," then write out your equation, such as  $72 \times 34 = ?$  The pen will give you the answer on the LED read out.
21. **Music Composition:** Student can compose their own songs and play them for the class.
22. **Art Projects:** Students can do their preliminary art sketches on Livescribe paper, email to their teacher and get immediate feedback before putting them to canvas. Students can also add their thoughts, indicate colors, and even add voice to caricatures. With the Echo smartpen, any Livescribe paper, and the Paper Tablet application, students can also use their Echo smartpen and paper as a graphics tablet.

#### [Student and Teacher Uses:](#)

23. **Sharing Lessons with Absent Students:** Teachers can email the pencasts of the lessons that day to students who are absent, in alternative schools, hospital/homebound programs, etc. These students can actually hear how the teacher taught the lesson. Teachers can embed the pencast into their websites or blogs. [Blog post with links to many pencasts](#)
24. **Talking Study Guide and/or assessment:** For example, print out an outline map of a continent, skeleton or other visual on Livescribe paper. Attach audio to a description of each country, bone or element in the visual. Slip that in a plastic protector sheet or laminate and have a Talking Study Guide. For an assessment that uses student's voice for answers, print the same study guide and give students a certain amount of time, and ask them to add ink with audio to each element. [Blog post 1 with video](#) [Blog post 2 with video](#)
25. **The Talking Word Wall:** Add voice (or sounds) to any document or object using Livescribe dot paper shapes (rectangles, etc) and then attaching them to your word wall document or other object. The Word Wall can even be expanded to include definitions, Latin root words, use the word in a sentence, etc. [Blog post with video](#)
26. **Read for 10 minutes Out Loud:** A student can write the name of the book and the page he/she began reading on. They then make a mark next to the name of the book and begin reading. After 10 minutes, they can stop recording. The teacher (or parent!) can check to see that they read for 10 minutes.
27. **International Class Pen-pals:** We had a group of 4<sup>th</sup> & 5<sup>th</sup> graders (in the Digital Natives Project we are running in New York City) who came up with this idea .... They were doing a poetry unit of study. They are using the Pulse smartpen and notebook to create their poem, but they are then going to record the poetry because, as one little girl told us, "You know, the words in the poem can have different meanings by using your voice differently." They plan to share the oral recitation of the with their pen-pal class in Costa Rica, via pencasting. It is their way of helping their pen pals learn English.

28. **Make-Up Work:** Teacher records his pop-quiz or spelling test, and students who are absent get the exact same quiz or instruction, but the teacher's presence and undivided attention isn't necessary. [Blog post \(make up spelling test\) with video](#)
29. **Auditory Modeling for English as Second Language Students:** Instructor records words, phrases, sentences using Livescribe pen and paper. Audio is attached to each word so that the student can practice one word, phrase, or sentence at a time.
30. **Verifiable Articulation Practice for ESOL or Students with Speech Impairments:** Students can hear the perfect model, and each time they practice the new sound, it can be recorded with a check mark. Practice can be verified by the parent or instructor.

#### Teacher Uses:

31. **Homework Help:** Teachers post interactive pencast videos on a range of topics. Teachers (expert in their fields) post for student review.
32. **Create Talking Tests:** Teachers can turn any test into a *talking* test by printing it on Livescribe paper and then recording the questions, answers, etc. [Blog post 1 with video](#) [Blog post 2 with video](#)
33. **Substitute Plans with Detail:** Add as much auditory detail as you want to your plans left for your sub. You can talk far faster than you can write and email it to the sub or individual in charge of getting the subs. [Blog post with video](#)
34. **Fluency Assessment:** Teacher records the student reading, scores the passage later, and shares the results with student, parent and staff. [Blog post 1 with video](#) [Blog post 2 with video](#)
35. **Formative Assessment:** Math teachers have students take tests and record how they reached their answers. Teachers grade the tests taken on the students' Livescribe paper with their students' pens. Students turn in the pen with the paper, and when the teacher sees a wrong answer, he can touch the student pen to the problem and hear every step the student took to arrive at their answer. The teachers then can call the student up and address where the problem went wrong. [Blog post with students' pencasts](#) The teacher could also record the feedback on the test themselves. When students get their tests back, they can all get individualized feedback, but at the same time, saving class time for other instruction.
36. **Center-Based Instruction:** Teacher puts the instruction for the center-based activity on the pens and has a notebook at each center. Teacher can define the role of each person in the group, assuring that each student knows his/her role. As the students rotate from center to center, the teacher does not have to repeat the instructions, and each group hears the exact same instructions.
37. **Replacing the Overhead Projector:** Write out definitions and examples ahead of time, but have them show up "live" (animated) during the lesson, as if you were writing it yourself! Create one pencast over several pages, wherein introductions, definitions, and graphs would already be "recorded" but would appear only when the instructor is ready for them (by hitting play, then pause again). Turn the sound on the computer off, so that you can speak through the lesson in person. This would free instructors up to read the definitions and explain the examples while they were being written magically on the board behind them! Teachers will save time by being able to talk through everything that was already written, without having to stop and write it all out. [Blog post](#)
38. **Fluency - Repeated Reading with an Auditory Model:** The research is firm; repeated reading with a good auditory model improves reading fluency. Teacher reads the passage to the student; they record with their pen and then practice. Students can hear the model and touch each word to hear just that word. There are some excellent (albeit very expensive) programs out there that do this, but none that can do it "on the fly" like the smartpen can.
39. **Auditory Record of Student Participation:** For teachers who require classroom participation as part of their grade - Use the Livescribe smartpen to capture an audio recording of a classroom discussion and "tag" time-coded student comments to a seating chart. After class, evaluate each [student's](#) comments quickly and easily against his class-participation rubric, reviewing the quality of all of the students' comments. This also gives the teacher a record of what was said in case there is a question of how the participation grade was arrived at.
40. **Music Composer Lessons:** Teachers can record classical music pieces for the student to listen to and then identify the correct composer or the instruments they hear in the musical piece. [Blog post with video](#)
41. **Validate that Students have Read For 10 minutes Out Loud:** Have student write down the name of the book and the page they began reading on. Have them make a mark next to the name of the book and begin reading. Instruct them to watch their pen's timer and make a mark after 10 minutes.

### Administrative and Teacher Uses:

42. **IEP Data Collection and Analysis:** By adding audio to data collection, it not only frees the observer up from tedious note-taking but allows for higher-quality information that can be used to shape the child's program
43. **Date and Time Stamp:** Each time you use your pen, you can take advantage of the date and time stamp. When doing IEP data collection, sometimes it is important to document the duration of an observed behavior. With the pen, it's no longer a guess.
44. **Auditory Progress Monitoring for Speech Services:** Never before has there been a tool that allows the SLP to record the speech production of the student, archive it to a computer, and then retrieve at-will. Record the child when they first receive services, compare as the student progresses.

### Administrative Uses:

45. **Mentoring Programs:** Experienced teachers are explaining concepts, sharing ideas, and creating lesson formats and then sharing them via pencasts with novice teachers they are mentoring. Want the mentees to learn via self-discovery? Have the observer just leave the pen and paper behind, and the mentee can go back and look and listen to the observer's notations. No confrontation – just self-discovery.
46. **Staff Development Archive:** Smartpens are a great way to archive all staff development notes so that other teachers can benefit from seminars, or teachers can start collaborating on similar topics.
47. **Low-key Observations:** Laptops and Netbooks, when brought in for classroom observations, can often be intimidating, but the Livescribe Pulse smartpen does not have that same connotation. It's a low-key observation device. Don't turn the record function on, but write notes with the pen on; all that was written can be loaded to a computer and can be shared or even transcribed into text, if appropriate. [Blog post](#)
48. **Administrator Walk-Through:** Any evaluation format can be printed on Livescribe paper. Administrators can make notes and record audio information in conjunction with the forms. [Blog post with video](#)
49. **Extended Assessment Feedback from Teachers:** Teachers who grade essays often want to give students extended responses on elements in their papers. With a 100 papers to grade, it is impossible for teachers to write out much feedback. If the students hand in their pens with their essays, the teacher can record her evaluations far quicker than she can write responses, and with more clarity.
50. **Credit Recovery:** In Corsicana, TX, the assistant superintendent is very concerned about the district's high rate of drop-outs, especially for minority students. When some of these students have difficulty and don't pass a class, they are assigned to a credit recovery class in which students use well-known software program and workbooks, and they have an assigned teacher. The issue in Corsicana is the software is not aligned to what is happening in the regular classes. The students may also have learning differences and not be engaged on the computer or with the workbooks, so they just zone-out. The solution? Pens are assigned to strong teachers at the high school, in core subject areas. They teach their lessons using the smartpen and notebook and then upload those lessons to the district website. Lessons are indexed by subject, grade and state standard. Now, when they have a child in credit recovery for say, Algebra, - the student can access instruction from a variety of teachers. Perhaps he needs to hear it explained differently - He will have access to the regular curriculum via teachers who teach those subjects, and his credit recovery teacher now serves as facilitator. Corsicana intends to build a full repertoire of lessons in all subject areas, all taught by some of the strongest teachers in their district. They are completely redesigning their website to accommodate this new approach. They will also phase-in a program into which all teachers upload their lessons each day to their district blog sites, so that parents and students will have access to the lessons taught that day. This is exactly the same type of program that Johnson City, NY has implemented. [Blog post with video](#)

### Parent and Teacher Uses:

51. **Sharing lessons with parents:** Wouldn't you like to have access to how your child's teacher introduced the math lesson in class today? If the teacher records "How to Simplify a Fraction" and sends it out as a pencast, students and parents can access the lesson on-line. No computer or Internet access? No problem if the student has a LS pen and paper. They can record and re-listen repeatedly.

### Administrative, Parent, Teacher, Student Uses:

52. **Penmail (Voicemail Created & Shared via smartpen):** is an effective and efficient way to improve school – home communications. It requires very little training and yet is very inexpensive and easily allows teachers and parents to exchange short messages without requiring interpreter or phone access. It can also help break down language and literacy barriers. Penmail (smartpen + voicemail) can easily be recorded by a teacher with a smartpen on a page in a student's Livescribe notebook and sent home with a student, where a parent can listen to it and potentially respond with their own penmail. If parents need to hear the penmail in a language other than one spoken by the teacher, then the teacher can simply hand the notebook and smartpen to someone who can translate the message. [Blog post with video](#)

### ESOL/ELL

53. **Word Study with Translation** can be expanded to an infinite number of words and to any language. The various types of Spanish, such as Cuban-Spanish, Columbian-Spanish, Mexican- Spanish can be accommodated, as long as you have a community member who speaks the language.
54. **Auditory Practice and Verification** – "Now let's compare what *you* said to what *I* said." The perfect model is always available for practice.
55. **Modify the Language of Test Questions** For the ELL students, for instance, avoid jargon on unnecessarily-complex sentences in your auditory recording.
56. **Create a Common Visual Language** for students, which would help them transfer their patterns of thinking from their native languages to English.
57. **Note-Taking** by the student can now be in both linguistic and non-linguistic forms, such as sketches, a combination of words and schematics, with the attached audio. This would not be possible with a computer alone.
58. **Notes Review and Revision** Students can review and revise their notes taken in class by going back and listening to the teacher again and again. When students review and revise their own notes, the notes become more meaningful and useful.
59. **Focused Practice** leads to mastery over days or weeks. With the pen, practice can occur over a span of days, weeks or months, if necessary, and specific words/terms can be searched for in the notes.
60. **Memorization Practice** Recording of basic rules, algorithms, or laws in both auditory, visual forms allows the skill to be practiced until it becomes rote.
61. **New Enrollments.** Office staffers who enroll new arrivals from foreign countries have pens in their hands. They write out the standard questions that they ask and have those sentences translated into the various languages they need and include the probable answers. The parents can then indicate their response. For example: Has your child been enrolled in a school here in the US before coming to our district? Yes or No. If yes, what was the name of the school? What grade level was your child enrolled in? 1,2,3,4,5,6 etc. The pen will do the talking, recorded by community members who speak the language needed.
62. **Book Study.** Choose any book in the library and the staff will either put strips under the words/letters or a dot of Livescribe paper at the end of sentences so that it can be read by the pen. (Levels the playing field for group discussions.)