



Educational Uses for the Livescribe Pulse Smartpen

In an effort to help categorize the educational uses of the Livescribe Pulse Smartpen, we have placed the activities under the 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. **FOR STUDENTS WITHOUT COMPUTER ACCESS:** Level the playing field. Every child with a Livescribe Pen and paper can hear their teacher's explanation over and over, any where and any time. No computer needed.
2. **Pencast your homework to your teacher:** Students use their pens to do an assignment then pencast it and send the link to their teacher. Teacher can listen to a "math think aloud" from anywhere then discuss the student's process with them.
3. **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 their role/obligation. This eliminates the need for a teacher to have their immediate presence at each activity to assure that the activities are done. This helps keep them on task and on time. The teacher can at any time check for understanding and adjust their instructional conversation with students in order to tap into higher levels of critical thinking.
4. **Augmentative Communication:** Augmentative Communication devices that provide a voice for those without speech are expensive and cumbersome. With the pen 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.
5. **Cornell Notetaking Plus:** The Cornell Notetaking system uses 6 basic steps: record, reduce or question, recite, review and recapitulate. Students that can't keep up with the pace of the lecture are not disadvantaged any longer. They have a complete audio recording of their teachers lecture. The "Record" step of the Cornell system is enhanced with the ability to play back the lecture at any place. Student can write questions in their Cue column without the fear of losing their place in the lecture.
6. **Assistive Technology for Note Taking:** A student with an auditory processing problem may take few or unclear 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 it were not for his disability. Livescribe should be the first line of support to provide note taking accommodations.
7. **For the Visually Impaired:** A talking address book or prescription book. In large letters the name of the pharmacy is written then the user touches a dot to get the auditory phone number, touch another and get the prescription number, what is the medication, when to take it, how much, etc. All can be recorded by the caregiver.

8. **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 they practice the word they can document it.
9. **Personal Pronunciation Practice:** Teachers/SLP's can record the model, student can listen, record themselves, then compare the pronunciation to the model.
10. **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.
11. **Basic Piano Skills:** Students can learn the basic piano chords both sharps and flats for keys c,d,e,f,g,a,b and c sharp, d sharp, f sharp, g sharp and a sharp.
12. **Learn the Sound of 8 different Musical Instruments:** Draw the piano and hear the different instruments.
13. **Create a Tactile Talking Test:** Using a "Tong" tool, bumps can be added to Livescribe paper, dots are drawn and the audio question is recorded. Students touch the bumps with their pen and hear the audio of the question.
14. **Slow Down Speed Up Audio:** Students can slow down or speed up their teachers lecture so comprehension is better.
15. **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 and within 5 seconds 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.
16. **Oral Book Report:** Print the dot paper pattern on to blank labels to create audio labels, which can be attached to virtually anything. Student can do an oral book review attach an audio label on books they have read with a review of the book, what they thought about it, what they liked/disliked about the book.
17. **Auditory Flashcards:** Each Flash card can talk to the student giving not only the words, but pronunciation hints, etc.
18. **Music Composition:** Student can compose their own songs and play for the class.
19. **Art Projects:** Students can do their preliminary art sketches on Livescribe paper, email to their teacher and get immediate feedback before putting it to canvas. Students can also add their thoughts, indicate colors, even add voice to caricatures.

Student and Teacher Uses:

20. **Sharing lessons with students who are not in class:** Teachers can email the pencast of the lesson that day to students that are absent, in alternative schools, hospital/homebound programs. These students can actually hear how the teacher taught the lesson. Teachers can embed the pencast into their website or blog.
21. **International Class Pen-pals:** We had a group in the Digital Natives Project we are doing in New York City who came up with this idea (and these were 4th and 5th graders...). 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." So they are then going to take their written poem and their oral recitation of the poem and share it with their pen-pal class in Costa Rica via pencasting. It is their way to help their pen pals learn English.
22. **Make Up Work:** Teacher records their pop quiz or spelling test and students who are absent get the exact same quiz or instruction and the teacher's presence and undivided attention isn't necessary.

23. **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 the student can practice one word at a time, the phrase or the sentence.
24. **Verifiable Articulation Practice for ESOL or Speech Impaired Students:** Students can hear the perfect model and each time they practice the new sound it can be recorded with a check mark and their practice verified by the parent or instructor.
25. **Talking Study Guide:** Print out a skeleton on Livescribe paper. Attach audio to a description of each bone. Slip that in a plastic protector sheet or laminate and have a Talking Study Guide.
26. **The Talking Word Wall:** Add your voice (or sounds) to any document or object by adding your voice (or sound) to small Livescribe dot paper shapes (rectangles, etc) and then taping/gluing them to your word wall document or other object. The Word Wall can even expand to include definitions, Latin root words, use the word in a sentence, etc.

Teacher Uses:

27. **Formative Assessment:** Math teachers are having students take a test and record how they reached their answer. Teacher grades the test taken on the students Livescribe paper with their student pens. Student turns in his 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 hone in on where the problem went wrong.
28. **Center Based Instruction – Teacher Use:** Teacher puts the instruction for the center based activity on the pen and students have a notebook at each center. Teacher can define the role of each person in the group assuring that each student knows their 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.
29. **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 programs, albeit very expensive program out there that do this, but none that can do it on the “fly” like the pen can.
30. **Fluency Assessment:** Teacher records the student reading, scores the passage later and shares the results with student, parent and staff.
31. **Auditory Record of Student Participation:** For teachers that 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.
32. **Homework Help:** Teachers post interactive pencast video on a range of topics. Teacher’s expert in their field post for student review.
33. **Create Talking Tests:** Teachers can turn any test into a talking test by printing it on Livescribe paper and then record the questions, answers, etc.
34. **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.
35. **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.

Administrative and Teacher Uses:

36. **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 a higher quality of information that can be truly be used to shape the child's program, to asses the efficiency of the chosen activities and teaching styles and to look for trends in the child's behaviors and learning.
37. **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.
38. **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, then retrieve at will. Record the child when they first receive services, compare as the student progresses.

Administrative Uses:

39. **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 newbies to do self-discovery? Have the observer just leave the pen and paper behind and the newbie can go back and look and listen to the observer's notations. No confrontation – just self-discovery.
40. **Staff Development Archive:** The pens are a great way to archive all staff development notes so other teachers can benefit from seminars or teachers can start collaborating on similar topics.
41. **Low-key Observations:** Laptops and Netbooks when brought in for classroom observations can often seem intimidating and threatening 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 shared or even transcribed into text if appropriate.
42. **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.
43. **Extended Assessment Feedback from Teachers:** Teachers who grade essays often want to give a student an extended response on elements in their paper. 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 essay, the teacher can record his/her evaluation far quicker than they can write a response. The student also does not loose the tone and inflection of the teacher's voice, missing from the written word.

Parent and Teacher Uses:

44. **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 on their pen how to "Simplify a Fraction", and sends it out as a pencast, students can access 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:

45. **Penmail (voicemail created & shared via Smartpen):** is an effective and efficient way to improve school – home communications. It requires very little training and yet it very inexpensively and easily allows teachers and parents to exchange short messages without requiring interpreter or phone access. It can also help break down language & 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 or parents 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.