Lesson plan for the patient with a new hearing aid

Week	Games	Voices	Comments/Notes
1	* pEARI Crunch, in quiet * EARonaut, in quiet	Male Male	
2	* ShakespEARe * pEARI Crunch, in light noise	Male Female	
3	* EARonaut, in light noise * MountainEAR	Female Male	
4	* MountainEAR * FarmEAR in the Dell	Female Male	
5	* FarmEAR in the Dell * Treasure EARland	Female Male	
6	* Treasure EARland * pEARl Crunch, in moderate noise	Female All types	
7	* EARonaut, in moderate noise * ShakespEARe	All types	
8	* MountainEAR * FarmEAR in the Dell	Child Child	
9	* Treasure EARland * EARonaut, in high noise	Child All types	
10	* pEARI Crunch, in high noise * MountainEAR	All types All types	
11	* FarmEAR in the Dell * Treasure EARland	All types All types	
12	* pEARI Crunch, in high noise * Patient's choice	All types Patient's choice	

	Goals	Tips
Week 1	Play pEARI Crunch at least 10 minutes twice this week with a male talker in quiet.	"pEARI Crunch forces you to pay attention to those endings of words that add subtle meaning, such as the plural "s" on a word such as boys or the negative "n't" in a word such as can't. These endings are often hard to hear and easy to ignore."
		"During every day listening, we tend to listen for the 'meat' of the word and not subtle nuances. For instance, we often do not distinguish between the word <i>smile</i> and <i>smiles</i> . pEARI Crunch forces you to pay attention to word endings. Think about it: There's a big difference between the sentence, "I <i>can</i> pick you up from the airport" and "I <i>can't</i> pick you up from the airport."
		"Try playing a few rounds of EARonaut, first with your hearing aids turned on and then with your hearing aids turned off. You will likely find that you are much more relaxed and confident when you are playing with your hearing aids turned on. Hearing aids can reduce the 'mental effort' associated with listening with a hearing loss."
	Play EARonaut at least 10 minutes twice this week with a male talker in quiet.	"Especially early in your training, it is easier if you try and remember where 3 or 4 pictures are when they are presented on the screen instead of attempting to memorize all of them."

Week 2	Play ShakespEARe at least 10 minutes	"This game may help develop your ability
WEER Z	twice this week with a male talker.	to remember the details of a story. ShakespEARe exercises your 'auditory memory', which is the brain's ability to hold in memory words and sentences that you have recently heard."
		"Try playing a few rounds of ShakespEARe with your hearing aids turned on and then play a few rounds with your hearing aids turned off. You will likely find that you do much better with your hearing aids turned on. There are two reasons for the better performance: 1) You are hearing more of the words so you can better select the sentences in the correct order and 2) you are using less 'perceptual effort' to recognize the words. As a result, your brain can concentrate more deeply on remembering the paragraph.
	Play pEARI Crunch at least 10 minutes twice this week with a female talker in light noise.	"You can determine what is "light noise". Start by playing the game in quiet. On the second trial, bump up the noise just a little. On each subsequent trial, bump up the noise just a little more until you reach a point where you are getting four pearls for every necklace. Do not move the bar again but train at this noise level." "Try to ignore the noise and pay attention to which picture matches the word you've
		just heard. This activity will develop your 'auditory attention', which is the brain's ability to focus on one auditory stimulus and ignore other auditory stimuli that are irrelevant and distracting."

		"Female voices are often harder to hear than male voices. Many times a new hearing aid will make female voices easier and more pleasant to hear. Try playing a few rounds with your hearing aids turned off and then play a few rounds with your hearing aids turned on. Do you notice a qualitative difference in how the voices sound?"
Week 3	Play EARonaut at least 10 minutes twice this week with a female talker in light noise.	"Female voices are particularly difficult to hear in background noise, even when you have optimally-fitted hearing aids. Try playing a few rounds of EARonaut with the noise bar set to quiet. Over the next rounds of the game, gradually increase the level of background noise and try to determine the maximum amount of noise that can be present during the game and yet allow you still to hear the female voice. You might find that you are using a lot more 'mental effort' when you are listening in noise than when you are listening in quiet. This is a very natural phenomenon.
	Play MountainEAR about 10 minutes twice this week with a male talker.	"This game may help you to recognize words quickly, which is important when you are listening to connected speech. The typical talker of English speaks between 110 and 150 words per minute. This means that you must have good 'auditory processing speed' to understand speech, which is the brain's ability to quickly process the meaning of words." "This game may help you to listen more effectively in the presence of background noise because it forces you to pay attention

to the target word and ignore competing speech."

"If the noise seems to be getting louder, that means that you are actually getting better at listening in noise because the better you perform, the more noise is introduced into the training task. The game is programmed to add more noise after you make consecutive correct answers and less noise after you make consecutive incorrect answers."

Week 4

Play MountainEAR at least 10 minutes twice this week with a female talker.

"Listening to talkers in a noisy environment can take some adjusting when you have a new hearing aid. You might find that you are more aware of background sounds and that you are hearing some sounds that you had not noticed before. clEAR auditory training will accelerate the adjustment phase."

"Hearing aids can help you to recognize words faster because your brain can allocate more mental resources to understanding the meaning of the word as opposed to simply trying to figure out what word your ears just heard. Try playing a few rounds with your hearing aid turned on and then play a few rounds with your hearing aids turned off. Do you notice a difference in your speed of responding?"

"If the noise seems to be getting louder, that means that you are actually getting better at listening in noise because the better you do, the more noise is introduced into the training task. The game is programmed to add more noise after you make consecutive correct answers and to

	Play FarmEAR in the Dell at least 10 minutes twice this week with a male talker.	"clEAR teaches you to recognize common words that occur frequently in everyday conversation. Over time, this kind of training will make listening easier for you." "If the noise seems to be getting louder, that means that you are actually getting better at listening in noise because the better you do, the more noise is introduced into the training task. The game is programmed to add more noise after you make consecutive correct answers and to subtract noise after you make consecutive incorrect answers."
Week 5	Play FarmEAR in the Dell at least 10 minutes twice this week with a female talker.	"You may find that some of the pictures are a little ambiguous and that it takes some thought to match the word that you hear with the pictures that you see. This ambiguity is intentional. Research has shown that when listening tasks which force the brain to focus on meaning and it requires the brain to think of different possibilities, learning occurs more quickly." "Hearing aids often improve people's confidence in their listening skills. Try playing a few rounds of the game with your hearing aids turned on and then play a few rounds with your hearing aids turned off. Do you notice a difference in how confident you feel about your responses? Do you bet more coins when the hearing aids are turned on?"

	Play Treasure EARland at least 10 minutes twice this week with a male talker.	"One purpose of Treasure EARland is to increase your confidence in your ability to recognize words. Research has shown that when you doubt your ability to hear words correctly, you actually don't hear them as well as when you have high confidence in your ability. The mind becomes distracted by the doubt."
Week 6	Play Treasure EARland at least 10 minutes twice this week with a female talker.	"This game may help you learn to recognize common, everyday words more easily. This is important because during everyday conversations, we tend to speak and hear many of the same words over and over again. For example during a typical day, you are likely to hear someone say the words girl, boy, table, and chair. These are all examples of 'frequently spoken words'." "Female voices are often harder to hear than male voices. Many times a new hearing aid will make female voices easier to understand and more pleasant to hear. Try playing a few rounds with your hearing aids turned off and then play a few rounds with your hearing aids turned on. Do you notice a qualitative difference in how the voices sound when listening with the aids versus without the aids? "Try playing a few rounds of the game with your hearing aids turned off and then a few rounds with your hearing aids turned off and then a few rounds with your hearing aids turned on. You will likely find that the different talkers are much more distracting to your performance when your hearing aids are turned off than when they are turned on. One advantage of using hearing aids is that they allow you to better acclimate to the speech of 'multiple talkers'."

Play pEARI Crunch at least 10 minutes twice this week with all types of talkers in moderate noise.

"Even though listening to all types of talkers is more difficult than listening to a single type of talker, such as a male voice, research has shown that training with all types mixed together leads to faster learning and to better generalization into everyday listening than does training with a single talker type."

"You can determine what is "moderate noise". Start by playing the game in quiet. On the second trial, bump up the noise just a little. On each subsequent trial, bump up the noise just a little more until you reach a point where you are getting between three and four pearls for every necklace. Do not move the bar again but train at this noise level."

Week 7

Play EARonaut at least 10 minutes twice this week with all types of talkers in moderate noise.

"You can determine what is 'moderate' noise. Start by setting the noise bar to its midway setting. If this makes it too difficult to hear the words, decrease the noise where you can hear the talkers, but you are still aware of noise. If in the midway setting, you can still easily hear the talkers, adjust the noise to be louder. During this process, you will not only exercise your 'auditory attention', or the brain's ability to focus on a single speech stimulus, but you will also develop an awareness of the levels of noise that you can tolerate. This awareness will be helpful when you have to assess whether you will have to make accomodations for a particular setting, such as asking for a quiet section of a noisy restaurant."

	Play ShakespEARe at least 10 minutes twice this week with all types of talkers.	"Try to ignore the sound of the talkers' voices and to focus on the meaning of the sentences that they are speaking. This will develop your ability to understand spoken stories."
		"At first you may have a hard time remembering which sentence came first, second, third, fourth and fifth. Try to get at least three sentences in the correct order for each paragraph."
Week 8	Play MountainEAR at least 10 minutes twice this week with a child talker.	"The voices of children are typically more difficult to understand than those of adults, especially for people who have hearing loss. This is because children's voices have a high pitch and people with hearing loss often lose their ability to hear high pitches. In addition, some children do not enunciate their words as clearly as adults do, so they might sound as if they are mumbling." "Background noise will make children's voices especially difficult to understand. This is because children tend to talk more softly than adults and because noise is especially detrimental to high pitched voices."
	Play FarmEAR in the Dell at least 10 minutes twice this week with a child talker.	"Children's voices are often the most difficult types of voices to hear. Try playing a few rounds of the game with your hearing aids turned on and then play a few rounds with them turned off. Do you notice a difference in how the voices sound?"

Week 9	Play Treasure EARland at least 10 minutes twice this week with a child talker.	"This game is difficult, especially when listening to children's voices. Pay attention to how confident you feel in your responses as you play this game with children's voices." "Even though this game is designed to develop your phoneme discrimination, which is your ability to decide whether two sounds are the same or different, it is also developing your ability to focus on the meaning of words and developing your sense of self-confidence in your listening abilities."
	Play EARonaut at least 10 minutes twice this week with all types of talker in varying noise.	"Try first playing the game with your hearing aids turned off. See how much noise you can tolerate and still feel as if you are performing well. Next, try playing the game with your hearing aids turned on. Are you able to tolerate more noise and still feel that you are performing as best you possibly can?"
Week 10	Play pEARI Crunch at least 10 minutes twice this week with all types of talkers in varying noise.	"Try first playing the game with your hearing aids turned off. See how much noise you can tolerate and still feel as if you are performing well. Next, try playing the game with your hearing aids turned on. Are you able to tolerate more noise and still feel that you are performing as best you can?"
		"If you feel that the training is getting too hard, go ahead and turn down the noise with the noise bar. If you feel that the

	Play MountainEAR at least 10 minutes twice this week with all types of talkers.	training is getting too easy, turn up the noise." "You may not realize it, but you will likely be just a little bit slower in playing this game now that you are playing with many types of voices. The reason for this is that when you listen to multiple talker types, the brain has to use more 'mental effort' to process the meaning of words than when you listen to the same talker type speak the words. As a result of increased mental effort, the brain has to take more time to process meaning, and this will slow down your response time."
Week 11	Play FarmEAR in the Dell at least 10 minutes twice this week with all types of talkers.	"Training with all types of talkers is the most difficult training task. However, research shows that training with a mix of talker types is most effective in training the brain to recognize common, everyday words."
	Play Treasure EARland at least 10 minutes twice this week with all types of talkers.	"Playing with all types of talkers is more effortful than playing with a single type of talker. Try playing a few rounds with your hearing aids turned off and then play a few rounds with your hearing aids turned on. Do you feel more relaxed when you are playing with your hearing aids turned on? One goal of Treasure EARland is to reduce the amount of mental effort you need to recognize speech."

M. J. 40	Die FADI Consilius Insul 40 miles in 1	(())
Week 12	Play pEARI Crunch at least 10 minutes twice this week with all types of talkers in high noise.	"You can determine what is "high noise". Start by playing the game in quiet. On the second trial, bump up the noise just a little. On each subsequent trial, bump up the noise just a little more until you reach a point where you are getting only two or three pearls for every necklace. Do not move the bar again but train at this noise level." "When background noise is present, often the first thing a person with hearing loss will notice is that word endings seem to 'disappear'." pEARI Crunch is designed to focus your attention specifically on these word endings and let you experiment with how your ears and brain respond to the presence of background noise." "Even with hearing aids, listening in noise may always be difficult. However, do you feel like you have become better at listening in noise during the past twelve weeks?"
	Your choice of game, at least 10 minutes twice this week.	