Supporting Success
for Children with Hearing Loss

Mission: To improve the futures of children with hearing loss.

An Informal Evaluation of Auditory Comprehension of Information with and without Accommodations

Teachers, parents and students are often unfamiliar with the affects that even a moderate hearing loss can have on their ability to keep up in a fast-paced classroom. To improve understanding we can share handouts like *The Cascading Impact of Hearing Loss on Access to School Communication* or information about the relationship of the students' specific types of hearing loss to their learning needs.

Nothing is as persuasive as individual student data, however. An informal evaluation of how well the student *understands* what is said in the classroom is important for planning appropriately. An evaluation that also provides data about the academic benefit of specific accommodations is essential to the student's IEP team.

Conducting the Evaluation. The steps for conducting an informal evaluation of auditory comprehension with and without accommodations are described as follows. The procedure described compares comprehension with and without captioning, such as the use of Streamer™. The same procedure could be used to obtain data for student comprehension with and without hearing aids, bone anchored devices, or cochlear implants; with and without remote microphone technology (FM/DM), with and without ASL interpreter or transliterator, etc.

After the exercise, a percentage of information that the student correctly understood and recalled in both conditions can be calculated. **Comparing the student's scores with and without the accommodation can contribute to an understanding of the benefit received.**

STEPS TO TAKE PRIOR TO THE EVALUATION

Measure Typical Classroom Noise Level and Obtain Background Noise Recording. When conducting this evaluation, consider the typical listening environment of the student's classrooms. Fan noise from heating/ventilation/air conditioning systems, computers, projectors and other types of technology are likely to be present, as is noise from adjoining classrooms, outdoors and the typical noises within an occupied classroom (voices, rattling papers, scraping chairs, etc.). An app to measure classroom noise can determine the level of noise in the student's classrooms. Make a note of your measurements. The same app can then be used to set the volume of the noise to be played during evaluation. Ten minutes of classroom noise is available here, complements of Supporting Success for Children with Hearing Loss.

Identify Your Location. Ideally the student's classroom could be used during a period when the rest of the class is absent. If this is not possible, select a room approximately the same size as the student's classroom. It should have similar materials covering the wall, floor and ceiling. This functional assessment will provide an estimate of comprehension. The more similar the test situation is to the child's everyday listening situation the more accurate the resulting estimate.

Select Age/Ability Appropriate Texts. Four texts are provided at two language / vocabulary levels: basic and more advanced. The Lexile™ levels and text statistics were determined using the Free Lexile Analyzer™ . After selecting the appropriate text level for your student, use the first text at that level for assessment without the accommodation and the second text at that level for assessment with the accommodation. If using a text not provided here, identify at least 10 key points the student should understand from the text and plan questions to prompt those points.

Grades	CCSS Lexile Text Range
11-12	1185L-1385L
9-10	1050L-1335L
6-8	925L-1185L
4-5	740L-1010L
2-3	420L-820L

ADMINISTERING THE EVALUATION
With and Without Streamer Automatic Captioning

Set Up.

1. Choose a location in the room that reflects the typical distance of the teacher from the student. A distance of 12 to 15 feet is recommended. This is where the administrator will stand.

2. Place the source of background noise, if used, behind the student. Use an app to measure the noise level at the student's seat. Adjust the volume of the noise as needed, according to the level of classroom noise measured in your preparation steps.

3. Explain to the student that you will read an informational text and the student will be expected to tell you the main points of the text. Noise will be played to simulate a noisy classroom. For the first trial, the student will listen without the accommodation. For the second trial, you will read a different text while the student is using the accommodation.

4. Check comprehension of essential vocabulary or change the text to use language familiar to the student. The assessment should be testing listening comprehension of known vocabulary. Suggested vocabulary terms to review with the student are highlighted in the provided text. To prevent drawing attention to key details the student might not otherwise recall, unfamiliar terms should be discussed casually, in another context. For example, when checking for comprehension of *named after,* discuss whom the student is named after, or places that are named after a person.

5. Begin the background noise at the appropriate volume which simulates typical classroom noise levels.

6. Read the entire text aloud.

7. Ask the student to recall as many key details as possible. Use a checkmark in the first column of the Key Points Scoring Table to record key points the student **correctly** recalls. Terms in bold text are suggested as information the student be required to include. Unless noted, the language and vocabulary may vary.
    - If the student does not include a key point, ask only the question(s) provided to prompt the information. Note how many total prompts were used during the assessment by writing a P in the P column of the table. Do not use additional prompts to elicit a key point.
    - If the student does not recall a key point after prompting, mark an X in the first column.
    - If the student recalls additional information (not included in the Key Points Scoring Table), write that information on the lines provided in the Key Points column.

8. To administer with the accommodation of automatic captioning (i.e., Streamer™), select a different text. Begin the Streamer™ app after Step 4. Repeat steps 5 through 7.

Variations

Hearing and understanding the comments and questions of other students in a noisy classroom is a common challenge. To simulate this, make a comment or ask a question while the FM is muted, and possibly from a seat near the back of the classroom. Consider directing the student not to turn to look at you when you ask the question. IMPORTANT: If this variation is used, it must be used for administration both with and without accommodation.

STEPS TO TAKE AFTER ADMINISTERING THE EVALUATION

Scoring Student Responses. Calculate a percentage of information recalled by counting the number of checkmarks and divide by the number of key points in the Key Points column.

Sample Scoring and Calculation

Key Points for Text 1: **A Bear Celebrates a Birthday!**

✔	Key Points	P	Prompts
X	1. **Smokey Bear** is having a birthday.	P[2]	Who is having a birthday? (name required for credit.)
✔	2. He is 75 years old.	P	Tell me how old he is.
✔	3. He tells people not to start forest fires.	P	What does he tell people?
✔	4. There is a Smokey Bear Facebook page.		Tell me (more) about Facebook. .
✔	5. The Facebook page wants people to sing Happy Birthday.	P	
X	6. The Facebook page wants people to make/share videos.	P	
✔	7. Some videos have a talking Smokey Bear.		Tell me (more) about videos
✔	8. Some videos use TV stars.		
X	9. Smokey Bear started in 1944.	P	When did Smokey start?
✔	10. Firefighters found a baby bear.	P	Tell me about the firefighters.
✔	11. The baby bear was burned in a fire.		What happened to the baby bear?
X	12. They named the baby bear Smokey.	P	What was the bear's name?
X	13. Smokey was a fire chief's name.	P	Why did the firefighters choose the name Smokey?
✔	**14. He was in ads.**[1]		
	15.		
	16.		

9 items recalled (✔) ÷ 14 key points[1] = 0.642 = 64% correct

Notes:

[1] In the sample, the student offered the information that Smokey was in ads. This was written in at line 14 because it wasn't included in the key points provided. This increased the number of possible key points from the original 13 to a total of 14.

[2] The use of a prompt is not considered in the calculation. The amount of prompting required could be an indicator of the student's confidence in their understanding of the information, but not in their ability to recall the information.

An Informal Evaluation of Auditory Comprehension of Information

Student _____ Evaluator _____ Date _____

with / without (circle one) Accommodation (describe) _____

Basic Language, Lexile 400L-500L

A Bear's Birthday

Smokey Bear is having a birthday. He is turning 75 years old.

Smokey was in ads in the U.S. The ads have gone on for a long time. He tells people not to start fires. He wants to save trees and forests.

Groups are having birthday parties for Smokey in August. There are messages online, too. They share his words about being safe.

Smokey has a Facebook page. The government and another group run the page. They share Smokey's message online. The page asks people to sing "Happy Birthday" to Smokey. It wants people to share the videos.

There are other videos online. They use a talking Smokey. They use the voices of TV stars, too. One is Stephen Colbert. He is the host of "The Late Show."

Smokey Bear got started on August 9, 1944. That is when the U.S. Forest Service and an ad group said that a bear should be in the ads. The idea would be to prevent fires.

Later, firefighters found a real baby bear. It had been in a fire. Its paws and legs were burned. The fire was in New Mexico's Capitan Mountains. They named the bear Smokey Bear. He was named after a fire chief. The chief's name was "Smokey" Joe Martin.

✔	Key Points	P	Prompts
	1. **Smokey Bear** is having a **birthday**.		Who is the text about? What is happening?
	2. He is **75** years old.		Tell me how old he is.
	3. He tells people **not to start forest fires**.		What does he tell people?
	4. There is a Smokey Bear **Facebook** page.		How can you learn about it online? Tell me more about Facebook.
	5. The Facebook page wants people to **sing Happy Birthday.**		
	6. The Facebook page wants **people** to **make**/share **videos**.		Tell me (more) about videos.
	7. Some videos have a **talking Smokey Bear**.		
	8. Some videos use **TV stars**.		
	9. Smokey Bear started in **1944**.		When did Smokey start?
	10. Firefighters found a **baby bear**.		Tell me about the firefighters.
	11. The baby bear was **burned** in a fire.		What happened to the baby bear?
	12. They named the baby bear **Smokey**.		What was the bear's name?
	13. Smokey was a **fire chief's** name.		Why did the firefighters choose the name Smokey?
	14.		
	15.		
	16.		

An Informal Evaluation of Auditory Comprehension of Information

Student _____ Evaluator _____ Date _____

with / without (circle one) Accommodation (describe) _____

Basic Language, Lexile 500L-600L

Who is at School After Dark?

Children are at school in the daytime. What happens at their school at night?

Kids around the world worked on a special project. The project took four years. Students used cameras and got some wild answers!

Students in the country of India set up a camera. The cameras showed that tigers visit their school at night! Students in the country of Kenya saw a jaguarundi cat on the camera. This wild cat finds food at their school. A jaguarundi is almost never seen by people.

The students were 9 to 14 years old. Some students were from the countries of India, Kenya, Mexico and the United States. Scientists in the United States worked with the students. The scientists were surprised by the pictures.

Stephanie Schuttler is one of the scientists. She thought the pictures would be of cats and dogs. She said she was "really shocked." The students saw so many kinds of animals!

The pictures were of 83 different types of mammals. Mammals are animals that have hair or fur. They have live babies. They do not lay eggs. Humans, dogs and horses are mammals. Of the 83 mammals photographed, 15 are endangered. That means there are not many of them left on Earth.

Many scientists do not study animals in cities and parks. "But we really need to," Ms. Schuttler said. People live near parks (and schools) so we need to know what animals do in these places. This project helps scientist learn about wild animals that live near humans.

✔	Key Points	P	Prompts
	1. Students wonder what happens at **school at night**.		Tell me about this project. What did students want to learn?
	2. Students are using cameras to take **pictures**.		How will they answer the question?
	3. Students are from **India, Kenya, Mexico** and **the U.S.**		Where are these schools? What countries did the article talk about? (Should name 3 of 4 places in bold.)
	4. Schools are working with **scientists**.		Whole else is working on this project?
	5. Scientists were **surprised**.		How did scientists feel when they saw the photos?
	6. In India they saw pictures of **tigers**.		Tell me about the pictures. What animals did they see?
	7. In Kenya, pictures of a **wild cat** / jaguarundi.		
	8. Photos were of **mammals**.		What was similar about all the animals?

	9. Mammals have **fur**, have **live babies** and **don't lay eggs**.		What did the text say about mammals? (should include 2 of 3 bolded characteristics for credit.)
	10. Endangered means few are left alive.		What does endangered mean?
	11. The project helps scientist learn about wild animals that live near humans.		Why do scientists want to work on this project?
	12.		
	13.		
	14.		

An Informal Evaluation of Auditory Comprehension of Information

Student _____ Evaluator _____ Date _____
with / without (circle one) Accommodation (describe) _____

Advanced Language, Lexile 900L-1000L

Students and Scientists Hopeful Oysters will Clean New York Harbor

Many people in the world think of New York Harbor as home to the Statue of Liberty. To the people living in New York, however, the New York Harbor is polluted and dirty. Some people are hoping to change this opinion by bringing in more oysters.

Their project's name is the Billion Oyster Project. The scientists, high school students and teachers in the Billion Oyster Project aim to re-establish oyster reefs, which are large groupings of oysters that form a reef, or wall.

New York City's waters were once clear. Four hundred years ago, the harbor was full of plants and animals, including oysters.

All that changed as fisherman harvested too many fish and oysters out of the harbor to sell as seafood. As the oyster reefs disappeared, the water became polluted. New Yorkers no longer had pride in their polluted harbor. Oysters could change this, scientists say.

Oysters are more than just food - they also filter, or clean, the water. Living oysters filter harmful minerals from water, so the water is often clearer near oyster reefs.

At the Urban Assembly New York Harbor School, students raise oysters then place them into the harbor. Their goal is to have 1 billion oysters in the harbor by 2035.

The Billion Oyster Project hopes to teach more New Yorkers about the harbor and return it to clean, clear waters full of life.

✔	Key Points	P	Prompts
	1. **New York Harbor** is home to the **Statue of Liberty**.		Tell me (more) about the harbor. (Should say **names** in bold at least once for credit.) (2) (one bold concept required for credit.)
	2. New York Harbor is **polluted** / **dirty**.		
	3. The people (scientists, students and teachers) want to make **oyster reefs**.		What can solve the problem?
	In the **past**, the water was **clean,** had **plants** and **animals**.		Describe the water in NY Harbor in the past. What lived there?
	4. **Fisherman** caught **too many oysters.**		What happened to the oysters?
	5. The water became polluted.		Explain how the water changed.
	6. Oysters **clean / take / filter the harmful minerals out of** the water.		How can oysters help? (1 bolded concept required for credit).

	7. Students **raise oysters**.		How are students helping?
	8. They put the **oysters** in the **harbor** to make a **reef**.		Tell me more about what students are doing.
	9. They wanta reef of **1 billion oysters** by 2035.		What is their goal? (9) How will they make the water cleaner? (10) Explain how the oysters will help.
	10. They want to make the **water cleaner.**		
	11.		
	12.		
	13.		
	14.		

Raft of Rock will Revive the Great Barrier Reef

A vast mass of volcanic rock drifting through the Pacific Ocean toward Australia could help revive the Great Barrier Reef, according to scientists. Scientists are concerned for the future of the ecosystem in response to climate change.

The Queensland University of Technology (QUT) in Australia said the floating sheet of pumice rocks, called a raft, is predicted to hit Australian shores in about eight months. Along with the raft of rocks, will be "billions of marine animals who attach themselves along the way." The raft stretches about 58 miles.

The rock raft was likely produced by an underwater volcano near Tonga that erupted sometime around August 7, 2019, according to NASA. Pumice, the rock that forms the raft, is a lightweight rock and is produced when magma is cooled rapidly.

In a statement, Scott Bryan, one of the geologists studying the samples provided, said the raft was going to "bring new healthy corals and other reef dwellers to the Great Barrier Reef."

He later told the Australian Broadcasting Corporation (ABC) that when the rock mass arrives at the Great Barrier Reef, it will be "covered in a whole range of organisms of algae and barnacles and corals and crabs and snails and worms," he told ABC.

The Great Barrier Reef has been described as the most extensive and spectacular coral reef ecosystem on the planet. It has suffered extensive damage in recent years, however, with rising water temperatures killing off large swaths of coral.

✔	Key Points	P	Prompts
	1. A large **raft** of **rock** is **floating** toward **Australia**.		What is the article about? What is the rock doing? What does the text call the rocks? Where is it going?
	2. The rocks will be at Australian shores in about **8 months**.		When will it get to Australia?
	3. The rocks are **pumice**.		What kind of rocks are they?
	4. The rocks are carrying billions of sea **animals**.		Tell me what is on or in the rocks.
	5. The raft is **58 miles** long.		How long is it?
	6. It was probably made by an underwater **volcano**.		How was it made?
	7. Pumice is a **light** rock made when **magma cools** quickly.		What is pumice? What is special about it? (lightweight) How is it made?
	8. The raft will bring **new** healthy **creatures** to the **Great Barrier Reef**.		How will it help the Great Barrier Reef?

	9. It will be covered in **algae**, **barnacles**, **corals**, **crabs**, **snails** and **worms**.		What kinds of creatures will it bring? (Should name 4 of 6)
	10. The Great Barrier Reef is the **largest** / **most spectacular** coral **reef on earth**.		Tell me why the Great Barrier reef is special. (1 descriptor required for credit.)
	11. It has been **damaged** by **warmer water** temperatures.		Why are scientists concerned about it?
	12. The rising water temperatures are **killing** lots of **coral**.		How is climate change affecting the reef?
	13.		
	14.		
	15.		