

## Features Analysis Chart—Sound

Teacher Name: \_\_\_\_\_

Circle One:    PRE    POST

**Describe the assessment item:** Question 1 on the pre-post assessment for the Sound unit: You’re sitting on a dock at the lake. You hear your mom call you for dinner. Your mom is far away. Explain how you can hear the sound of her voice. Use pictures and words. Here are some words you can use: air, ear, eardrum, loud, quiet, vibrate, big, small, brain, message. You don’t have to use all of these words. You may use other words, too.

**Describe the ideal response:** Students may use a combination of words and pictures as follows:

1. Show/explain that sound is coming from the mom and spreading out in all directions.
2. Show/explain that the soundmaker cause the air and the boy’s eardrums to vibrate.
3. Show/represent sound as a wave.
4. Show/explain that the boy’s eardrums send a message to the brain that the vibrations are sound.

Features of a Complete, Accurate Response	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1. The soundmaker vibrates when it make a sound.																												
2. Sound moves away from the source (in all directions).																												
3. The air vibrates.																												
4. The eardrums vibrate.																												
5. The brain receives a message that the vibrations are sound.																												

Features Consistent with Misconceptions/Problems	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1. Sound only goes from the source to the receiver.																												
2. Sound is a thing that moves. <i>[No reference to vibrations.]</i>																												
3. Sound makes the air <i>[not vibrations]</i> move from the source to the receiver.																												
4. No mention of vibrations. / Only the soundmaker vibrates.																												