THE CLIBURN

CLIBURN KID

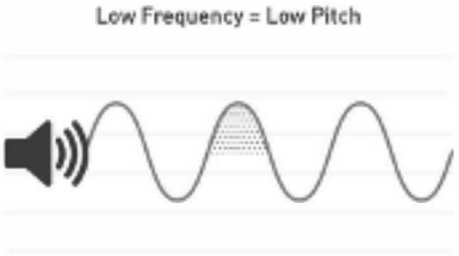
with Buddy Bray

EPIDSODE 4: PICTURES YOU CAN HEAR, PART 3
MUSSORGSKY "The Ox-cart" from Pictures at an Exhibition

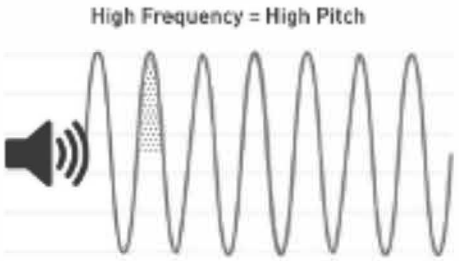
TODAY'S WORKSHEET

BYDLO is the Polish word for cattle. The painting it is based on shows a large cart pulled by an ox. Based on the music, do you think the cart is full and heavy, or empty and light? Does the ox seem to be struggling under the weight of the cart, or is he happily pulling the cart with little effort? You decide, and be sure to explain why!

THE SCIENCE OF SOUND



Can you hear how the music begins quietly, growing louder as the cart moves closer, and then becoming softer at the end? Have you ever noticed how sounds do this? Think of a firetruck or ambulance siren you've heard go by. Why do think this happens? Let's find out!



Sound travels through the air to your ears as soundwaves. The soundwaves can be small, like the picture on the top, (softer sounds) or tall, like the bottom image (louder sounds). How fast the soundwaves move is called frequency, and how high or how low you hear a sound is called pitch. Higher frequency sounds are higher in pitch, and lower frequency sounds are lower in pitch. Waves that are closer together move faster, so they make a higher sound (bottom), and waves that are farther apart move more slowly, producing a lower sound (top).

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YOU TELL US!

1. Can you name some animals that make high pitch sounds?

   _____

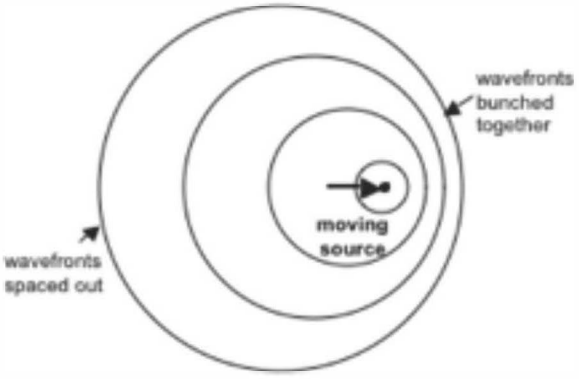
2. What animals make low pitch sounds?

   _____

3. Does the ox and cart make high or low sounds?

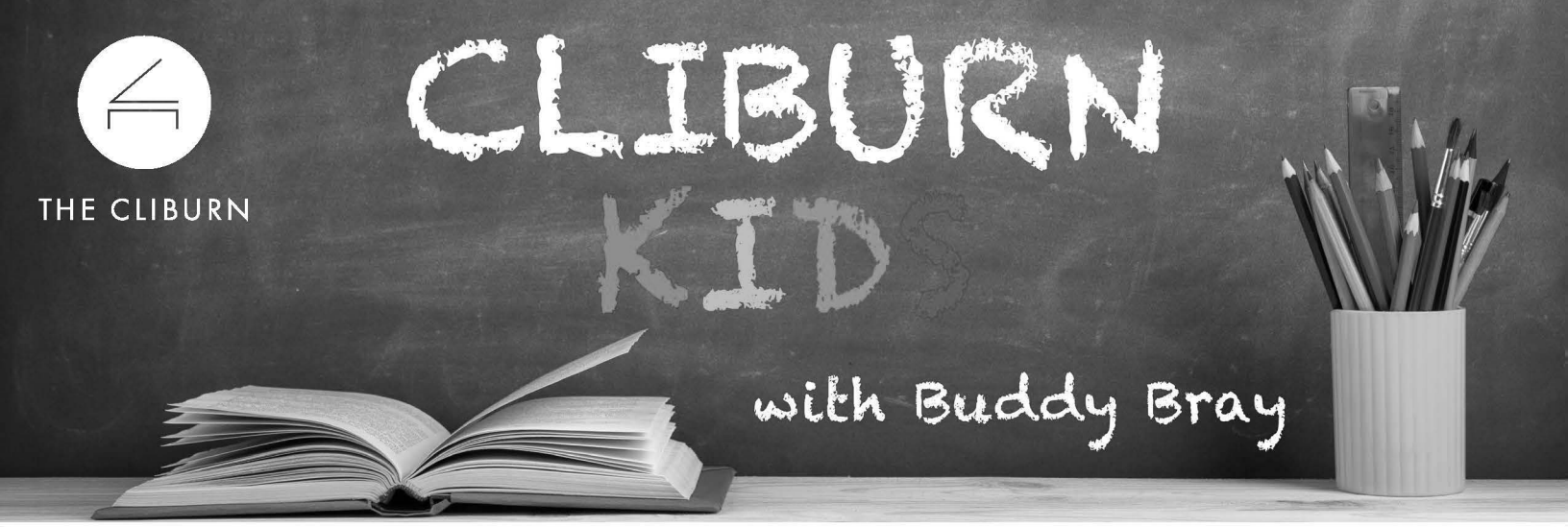
   _____

Now imagine throwing a rock in a pond; you will notice that the waves in the water get smaller and further apart as it moves away from where the rock was thrown. Similarly, soundwaves spread out and get smaller the further away they travel from the source of the sound.



When the source of the sound moves closer to you, the soundwaves become compressed (or squeezed together), reaching your ears quickly. This means the wave is higher in frequency, creating a higher / lower [circle one] pitch. When you move away from the source of the sound, it takes longer for the sound to reach your ears, so the frequency becomes lower. This makes the sound higher / lower [circle one] in pitch. This is known as the Doppler effect.

Watch THIS VIDEO to learn more about it!



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NOW DRAW!

Now it's time to get creative! Think about how you described the ox and his cart in your earlier answer, and imagine the scene around him. Is he far away, or very close? Is it hot or cold outside? What about raining or sunny? Are there trees, people, or other animals? Use the space below (or another sheet) to create your own picture!

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LEARN ABOUT THE COMPOSER!

MODEST MUSSORGSKY 1839–1881

Modest Mussorgsky was born in Russia in 1839. He began studying the piano with his mother and later took lessons. He was a very talented pianist as a child and became interested in composing at an early age. Despite his musical talent, Mussorgsky went to military school and joined the army.

Mussorgsky was what we might call a "part-time" composer. He did not always have a lot of time to write music, because he was so busy working. He became an army general and later worked in the Russian civil service.

He is sometimes called a "nationalist" composer, because he tried very hard to make his music reflect the sights and sounds of his native land. Much of his music was based on Russian folk songs, history, and philosophy. Besides *Pictures at an Exhibition*, one of his finest compositions is a Russian opera called *Boris Godunov*, which is based on the life of a great Russian king.