

Orchestral Explorations with Max and Zara

Learning objective: To identify and classify orchestral instruments into the four main families: woodwind, brass, percussion, and strings.

Use your knowledge of musical instruments to answer the following questions. Max the monkey is looking for patterns in how sound is produced, while Zara the zebra is interested in the visual structure of these instruments. Use the word bank to help you.

Word bank: Strings · Woodwind · Brass · Percussion · Vibration · Resonance · Acoustic · Mouthpiece

1. Max identifies an instrument where the player blows across a reed to create a sound. Identify this instrument family and explain why it is categorised as such, even if some are made of metal. (3 marks)

2. Compare and contrast the way a cello and a snare drum produce sound. Use the terms 'vibration' and 'percussion' in your response. (3 marks)

3. Zara is observing a trumpet. Justify why the trumpet belongs to the brass family rather than the woodwind family, focusing on how the player interacts with the instrument. (2 marks)

4. Explain why a harp is classified as a string instrument even though it is very different in shape and size from a violin. What physical property must the strings have to produce different pitches? (2 marks)

5. What might happen to the sound produced by a timpani drum if the tension of the drum head were significantly increased? Explain your reasoning. (2 marks)

Draw: Draw your own original musical instrument that combines features from two different families (e.g., a string instrument played with a percussion mallet). Label the parts of your instrument and name the families you have combined.



Extension challenge: Research a less common orchestral instrument, such as the bassoon or the celesta. Write a short paragraph justifying which family it belongs to and describe how its unique design affects the timbre of the sound it creates.