

Max's Orchestral Investigation: Instrument Fact-File

Learning objective: To identify and describe the characteristics of different musical instruments, classifying them by their method of sound production (strings, woodwind, brass, percussion).

Choose an instrument you find interesting. Use Max's guide below to conduct your research. Think carefully about how the instrument creates sound and its role within an ensemble. Use descriptive vocabulary to explain your findings.

Word bank: Vibration · Resonance · Timbre · Pitch · Ensemble · Acoustic · Frequency · Articulation

1. Instrument Identification and Classification: Name your chosen instrument and state which family it belongs to (e.g., woodwind, brass). Explain why it is categorised in this group. (2 marks)

2. The Physics of Sound: Describe exactly how this instrument produces sound. Focus on what causes the initial vibration and how the player alters the pitch. (3 marks)

3. Timbre and Texture: Describe the quality of the sound (the timbre). If this instrument were a colour or a texture, what would it be and why? (2 marks)

4. Ensemble Role: Explain the role this instrument plays within an orchestra or band. Does it usually play the melody, the harmony, or provide the rhythm? (2 marks)

5. Comparative Analysis: Compare this instrument to another instrument from a different family. What are the key similarities and differences in how they are played? (4 marks)

6. Justification: Max thinks that percussion instruments are the most essential part of a musical composition. Do you agree or disagree? Justify your answer using musical vocabulary. (4 marks)

Extension challenge: Design your own original instrument. Write a short paragraph explaining what materials you would use to make it, how a musician would create a vibration, and what kind of sound it would produce. What might happen to the sound if you changed the size or material of the instrument?