Lesson Plan: The Architecture of Music

Materials Needed:

- Access to "A Theory of Proportion in Architecture & Design, with Steve Bass" videos (Parts I, II, III)
- Piano or keyboard
- Copy of Hanon-Faber's "The Virtuoso Pianist"
- Large sketchbook or multiple sheets of unlined paper (11x14" or larger recommended)
- Pencils, eraser, and ruler
- Optional: Colored pencils, markers, or fine-line pens
- Optional: Access to free 3D modeling software (e.g., SketchUp Free, Tinkercad)
- Optional: Graph paper

Subject: Interdisciplinary Study (Music, Architecture, Art, Mathematics)

Grade Level: High School (Designed for a 16-year-old student)

Time Allotment: 2.5 - 3 hours (can be broken into smaller sessions)

1. Learning Objectives

By the end of this lesson, the student will be able to:

- Analyze the structure, rhythm, and patterns within a Hanon piano exercise.
- Identify and explain at least two principles of architectural proportion as presented by Steve Bass (e.g., repetition, hierarchy, golden ratio).
- Synthesize concepts from music and architecture to create an original architectural design (sketch or model).
- Articulate how specific musical elements (like melodic contour and rhythmic patterns) are visually represented in their architectural design.

2. Alignment with Standards (Example High School Arts Frameworks)

- **Creating:** Conceiving and developing new artistic ideas and work. The student will generate an original design by combining concepts from two distinct disciplines.
- **Responding:** Understanding and evaluating how the arts convey meaning. The student will interpret a musical piece and translate its meaning into a visual/spatial form.
- **Connecting:** Relating artistic ideas and work with personal meaning and external context. The student will build a relationship between their personal practice in music and theoretical concepts in architecture.

3. Instructional Activities & Strategies

Part I: The Connection (30 Minutes) - "Finding the Blueprint"

1. **Review Architectural Principles:** Briefly re-watch or discuss key segments from the Steve Bass videos. Focus on how architects use **rhythm** (spacing of columns, windows), **pattern** (repeating motifs), and **hierarchy** (making one element more important than others) to create harmony and interest. Discuss the idea of a "guiding principle" in a design.
2. **Analyze the Music Physically:** Go to the piano. Choose one of the early Hanon exercises (No. 1 is perfect for this).
    - Play the exercise, but don't just focus on the notes. Pay close attention to the *physical*

gesture. What is the shape your hand makes? How does it move up and down the keyboard?
    - Now, analyze its structure. Identify the core pattern of notes. How many times does it repeat before it shifts? Notice the steady, machine-like rhythm. This is the "musical DNA" we will be working with.
3. **Brainstorming Session:** On a piece of paper, create two columns labeled "Hanon Exercise" and "Architecture." List the core concepts for each. For Hanon, you might write: "steady rhythm," "ascending/descending," "repetition," "symmetrical hand motion." For Architecture: "columns," "windows," "facade," "floor plan," "staircase," "proportion." Now, draw lines between the concepts that feel connected. How could a "staircase" represent the "ascending/descending" nature of the scale? How could "windows" represent the "steady rhythm"?

Part II: The Design Phase (60-90 Minutes) - "Composing the Structure"

1. **Translate Music to a Visual Rule:** The main creative task begins. You are going to design a building, a room, or just a facade based on your chosen Hanon exercise. First, establish your "translation rules."
    - *Example Rule 1 (Rhythm):* The eight 16th notes in each measure will be represented by a group of eight narrow windows.
    - *Example Rule 2 (Contour):* The ascending and descending pattern of the exercise will be represented by a grand, sweeping staircase or a jagged roofline that moves up and down.
    - *Example Rule 3 (Gesture):* The way the right hand crosses over the left could be represented by an overpass, a bridge between two sections of the building, or an overlapping architectural element.
2. **Incorporate a Principle of Proportion:** Choose one key idea from the Steve Bass videos to be the foundational rule for your design. For instance, you could decide that the main facade of your building must adhere to the proportions of the Golden Ratio (approximately 1:1.618). This will provide a sense of visual harmony to your music-inspired structure.
3. **Start Sketching:** Using your sketchbook and drawing tools, begin bringing your ideas to life. Don't worry about perfection. This is about exploring the concept. You could create:
    - **An Elevation:** A flat, front-on view of the building's facade.
    - **A Floor Plan:** A top-down view showing the layout of rooms, where the pattern of Hanon might dictate the size and sequence of spaces.
    - **A Perspective Drawing:** A 3D view of your creation.
4. **Challenge Option (Digital):** If you are comfortable with technology, try building a simple version of your design in a free 3D modeling program. This can help you visualize the space and form more clearly.

Part III: The Review (15 Minutes) - "The Architect's Statement"

1. **Present Your Design:** Explain your creation as if you were an architect presenting to a client. Point to specific parts of your drawing and explain the "why" behind them.
2. **Use the Shared Vocabulary:** Explicitly connect your design choices back to the source material. For example:
    - "The constant rhythm of Hanon is shown here in the unbroken line of columns along the base..."
    - "...and the ascending melodic sequence is visualized in this staircase that gets progressively wider as it rises."
    - "I used the principle of the Golden Ratio, from the Bass video, to set the height and width of the main entrance to ensure it felt balanced and welcoming."

4. Differentiation and Inclusivity

- **For Support:** Focus only on one concept, such as translating the rhythm of Hanon into the spacing of windows on a simple, one-story building facade. Use graph paper to make spacing and proportions easier to manage.
- **For an Advanced Challenge (Extension):** Instead of Hanon, use a more complex piece with counterpoint, like a Bach Two-Part Invention. This will require designing a building with two interacting elements or wings. Alternatively, write a detailed one-page "Designer's Statement" that formally explains your conceptual process, citing specific ideas from both the Bass videos and your analysis of the musical piece.

5. Assessment Methods

- **Formative (During the Lesson):** The quality of the brainstorming list and the verbal discussion of connections between music and architecture will show initial understanding.
- **Summative (End of Lesson):** The final architectural sketch and the student's verbal presentation will be the primary assessment. The goal is not artistic perfection, but the clarity and creativity of the connection between the two subjects.
    - **Criteria for Success:**
        1. Does the design clearly represent at least one element from the Hanon exercise (rhythm, contour, pattern)?
        2. Does the design consciously incorporate at least one principle of proportion from the Bass videos?
        3. Can the student clearly articulate the connections between their design choices and the source material?