Wood Selection for Acoustic Guitars

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**Description of Activity**

* + With a little knowledge of acoustic guitars and wood species this will help you understand an important variable in the quality of the guitar.
  + An important factor of a guitar is the wood selection. Selecting the proper wood species will improve the quality of the guitar.

**Learning Objectives:**

1. Students will learn the importance of proper wood selection for acoustic guitars and instruments.
2. Students will be able to select proper wood species for an acoustic guitar.
3. Students will understand common woods used in industry for acoustics.

**Standards**

CCSS.Math.Content.HSG.MG. A.1  
CCSS.Math.Content.HSG.MG. A.3  
CCSS.Math.Content.HSG.GPE. B.7

**Materials Required:**

* + Wood samples would be helpful to look at
  + Wood samples to tap test for tone quality
  + Acoustic guitars to observe and play

**Safety:**

**safetys:**

Safety glasses should be used while testing wood samples

**References:**

* + <http://acousticguitar.com/a-tonewood-primer-how-to-pick-the-right-materials-for-your-optimal-sound/>
  + <https://www.martinguitar.com/features-materials/tonewood/>
  + <https://www.taylorguitars.com/guitars/acoustic/features/woods/body-woods>
  + <https://www.taylorguitars.com/guitars/acoustic/features/woods/top-woods>
  + <http://solutionsfordreamers.com/articles/endangered_woods_what_you_need_to_know_before_you_buy_your_next_acoustic_gu/>
  + <https://www.gearnews.com/cites-2017-guitars-new-regulations-rosewood-species/>
  + For tap tones –
  + <https://www.youtube.com/watch?v=B-1z51VIbnA>
  + <https://dogwoodguitars.com/voicing-and-tap-tuning/>

**Activity:**

* + Have students research guitar woods
  + Have students examine different woods
  + Have students tap test several different species of wood
  + Have students tap test a specific wood species of different thicknesses
  + Have students research acoustic woods and design and build an acoustic instrument from woods that were selected.

**Wood Selection for Acoustic Guitars**

**1. What two woods are commonly used for the soundboard and back of an acoustic guitar.**

**Select the two.**

**A- Mahogany**

**B- Sitka Spruce**

**C- Maple**

**D- Koa**

**2. What wood species is considered as the finest quality for acoustic guitars for sides and backs. This results in an outstanding sound and being a high-priced guitar. This is the holy grail or most sought-after species for acoustic guitars.**

**A- Mahogany**

**B- Redwood**

**C- Brazilian Rosewood**

**D- Ebony**

**3. The most common species for the soundboard is-**

**A- Douglas Fir**

**B- Redwood**

**C- Sitka Spruce**

**D- Adirondack Spruce**

**4. The most common species for the sides and the back of an acoustic guitar –**

**A- Genuine Mahogany**

**B- Tiger Maple**

**C- Black Walnut**

**D- Pennsylvanian Cherry**

**5. Adirondack Spruce is one of the best quality soundboards for an acoustic guitar. For the spruce to be considered as true Adirondack Spruce it must come from the Adirondack mountains in New York.**

**A- This statement is true**

**B- This statement is false**

**6. What two characteristics are often found in an affordable guitar, select two.**

**A- Durable wood species**

**B- Solid Wood**

**C- Layered wood or veneer**

**D- Wood listed on CITES**

**7. Select two imported woods often used in acoustic guitars**

**A- Sapele**

**B- Black Walnut**

**C- Cocobolo**

**D- Birdseye Maple**

**8. Select two domestic woods that are often used in acoustic guitars**

**A- Blackwood**

**B- Figured Maple**

**C- Sitka Spruce**

**D- Ovangkol**

**9. What factors affect the quality of the tap tone**

**A- Wood species**

**B- Thickness of the wood**

**C- Density of the wood**

**D- Flexibility of the wood**

**E- All the above**

**10. The lumber used to build a guitar needs to be expensive in order to a good sounding guitar.**

**A- This is a true statement**

**B- This is a false statement**

**Please check the appropriate box:**

**-Select the part of the guitar the wood is used for**

**-If the wood is domestic or imported**

**-Cost of the wood species**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Wood Species** | **Soundboard** | **Sides and Back** | **Domestic** | **Imported** | **Average Cost** | **High Cost** |
| **Adirondack Spruce** |  |  |  |  |  |  |
| **Blackwood** |  |  |  |  |  |  |
| **Cocobolo** |  |  |  |  |  |  |
| **Ebony** |  |  |  |  |  |  |
| **Engelman Spruce** |  |  |  |  |  |  |
| **European Spruce** |  |  |  |  |  |  |
| **Koa** |  |  |  |  |  |  |
| **Mahogany** |  |  |  |  |  |  |
| **Maple** |  |  |  |  |  |  |
| **Ovangkol** |  |  |  |  |  |  |
| **Redwood** |  |  |  |  |  |  |
| **Rosewood** |  |  |  |  |  |  |
| **Sapele** |  |  |  |  |  |  |
| **Sitka Spruce** |  |  |  |  |  |  |
| **Walnut** |  |  |  |  |  |  |
| **Western Red Cedar** |  |  |  |  |  |  |