



## STEM Guitar Building

### Lesson Plan

**Instructor:** Ailen Borres

**Week:** 1

**Subject:** Science

### Guitar Anatomy

#### Description of Activity:

The guitar is a stringed instrument that you play with either your fingers or a pick, and you wear it over your shoulder or lay it on your lap. If it's loud, it's probably an electric guitar, and if it's not, it's perhaps an acoustic guitar. The typical guitar has six strings, typically because that's the most common number of strings. But guitars do come with 4, 7, 10, 12, or any number of strings you want; make final selection decisions for each part and identify each component of the electric guitar anatomy.

#### Learning Objectives:

- Students will be able to know the guitar's theory, as told by a former punk rocker: Electric, acoustic, and all the ways we can make some noise.
- Students will be able to recognize and name the parts of the guitar.

#### Standards:

<b>Standard 1</b>	Students inquire about states, properties, and transformations of matter.
BENCHMARK: GS 1.2	Observe a variety of materials, and describe their physical or chemical properties
Standard 1	Students inquire about states, properties, and transformations of matter.
BENCHMARK: PS1.1.2	Relate physical and chemical changes and properties using graphic organizers and diagrams

#### Materials Required:

- Computer or Tablet
- Microsoft Excel, or a comparable spreadsheet application
- Web browser with internet access for each student

**Safety:**

- N/A

**References:**

- Website: [www.guitarbuilding.org](http://www.guitarbuilding.org)

**Learning Activities:**

-LAB – Guitar anatomy/**Analogy**

-Hand out the A HISTORY OF THE GUITAR

-Vocabulary and Terms:

- Body
- Neck
- Headstock
- Fret
- Tuners
- Bridge
- Nut
- sound hole
- fret board
- position markers

**Procedures:**

- What is Anatomy? Anatomy is defined as the study of the structure of organisms and their parts. In short, we'll be talking about the structure of the guitar, its components, and its functions.
- Discuss the HISTORY OF THE GUITAR (pdf copy)
- Ask students to repeat after you while you point to and name the different guitar parts. Remind students that they are never to touch the tuners on their guitars.
- After several repetitions, ask students which part you are pointing to until you are confident, they understand. Ask for volunteers from the class to quiz the rest of the course on the guitar parts.
- A “Simon Says” game is a fun way to reinforce this information once they’ve got it down. “Simon says, touch the headstock with your left hand. Simon says touch the fretboard with your left hand. Touch the bridge with your right hand. Who’s out?!”

**Assessment:** *Formative/Summative*

- History of the Guitar Worksheet
- Parts of the Guitar diagram and worksheet for beginner guitar students.

## **Reviewing Faculty Cohort Members**

Include at least two names and schools of reviewing faculty cohort members (refer to email list for faculty cohort member email addresses).

[Kenneth Jagon](mailto:kenneth.jagon@doe.as) NVTHS, Construction Trades [kenneth.jagon@doe.as](mailto:kenneth.jagon@doe.as)

[Seanette Thompson](mailto:seanette.thompson@doe.as) NVTHS Mathematics [seanette.thompson@doe.as](mailto:seanette.thompson@doe.as)

[Abigail Talifa-Maga](mailto:abigail.talifa-maga@doe.as) NVTHS English [abigail.talifa-maga@doe.as](mailto:abigail.talifa-maga@doe.as)

Ailen Borres NVTHS Science [ailen.borres@doe.as](mailto:ailen.borres@doe.as)