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| **This is an example course: This outline is designed to be flexible and changed to meet the needs of individual classrooms** | | | | |
| **Week** | **Material to be covered** | **Online activities** | **Assignments Due** | **Video Reviews** |
| 1 | Guitar parts Overview, shop safety, guitar cost | Cost estimate, guitar anatomy activity | Guitar Kit price list and Online Anatomy quiz |  |
|  |  |  | Online Anatomy Quiz Link |  |
| 2 | CAD tools for headstock design Select Bodies , start headstock design | Tolerances in Engineering activity | Guitar Video Review – Body sculpting Headstock design | <iframe height="315" src="http://www.youtube.com/embed/1gmqLbRAA8Y" frameborder="0" width="560" allowfullscreen=""></iframe></p> |
|  |  |  | Online Tolerances Quiz Link |  |
| 3 | Body modification, Finish headstock design | Guitar Geometry | Video File review – Wood repair  Video File review – Swirl dipping from down under  Guitar Body shapes - Research project | <iframe height="315" src="http://www.youtube.com/embed/gAxKsT2ejvw" frameborder="0" width="560" allowfullscreen=""></iframe>  <iframe height="315" src="http://www.youtube.com/embed/BVc6kdJF1PE" frameborder="0" width="560" allowfullscreen=""></iframe> |
|  |  |  | Online Guitar Geometry Quiz Link |  |
| 4 | Swirl painting chemistry – Importing Case Study  Online CAD/CAM activity | Online CAD/CAM activity | Research paper - Case Study  Video File review – Hole Drilling | <iframe height="315" src="http://www.youtube.com/embed/\_KLrOfYpwyU" frameborder="0" width="560" allowfullscreen=""></iframe> |
|  |  |  | Online CAD/CAM Activity Quiz Link |  |
| 5 | Neck assembly Neck fabrication  Material Properties of Wood for Guitars activity | Material Properties of Wood for Guitars activity | Video File review – Neck Assembly Video 1, 2, 3 | <iframe width="560" height="315" src="http://www.youtube.com/embed/pVJ1LvmTIJk" frameborder="0" allowfullscreen=""></iframe>  iframe width="560" height="315" src="http://www.youtube.com/embed/yV5hNQ6dY6w" frameborder="0" allowfullscreen=""></iframe>  <iframe width="560" height="315" src="http://www.youtube.com/embed/oSmm-HlNqi0" frameborder="0" allowfullscreen=""></iframe> |
|  |  |  | Online Material Properties of Wood for Guitars activity Quiz Link |  |
| 6 | Neck fretting and math behind fret positions,  Neck and Body finishes | Fret Spacing Calculation | Video File review – Neck Assembly Video 4  Video File review – Painting | <iframe height="315" src="http://www.youtube.com/embed/GjXEZpofyuI" frameborder="0" width="560" allowfullscreen=""></iframe>  <iframe width="1280" height="720" src="//www.youtube.com/embed/oNh-DB-DF84" frameborder="0" allowfullscreen></iframe> |
|  |  |  | Online Fret Spacing Calculation Quiz Link |  |
| 7 | midterm |  | Parts and Fretting locations |  |
| 8 | Tuning and gear ratios  Guitar setup activity – Bring in a guitar and strings |  | Tuning and gear Ratios activity |  |
|  |  |  |  |  |
| 9 | Soldering and electronics | Online Electronics circuit path and pictorial activity | Video File review – Soldering | <iframe width="420" height="315" src="http://www.youtube.com/embed/POau0dF8vg8" frameborder="0" allowfullscreen=""></iframe> |
|  |  |  | Online Electronics circuit path and pictorial activity Quiz Link |  |
| 10 | Hardware Installation  Threaded Fasteners activity | Threaded Fasteners activity | Video File review Hardware Installation | <iframe height="315" src="http://www.youtube.com/embed/Bp\_RK6O45MQ" frameborder="0" width="560" allowfullscreen=""></iframe> |
|  |  |  | Online Threaded Fasteners activity Quiz Link |  |
| 11 | Hardware Installation  Pickup assembly  Scale Length, Frequency, & String Tension activity | Online Scale Length, Frequency, & String Tension activity | Video File review – Assembling Pickups  SOUND CHECK BODY! | <iframe width="640" height="360" src="http://www.youtube.com/embed/0qBOHdUr64w" frameborder="0" allowfullscreen=""></iframe> |
|  |  |  | Online Scale Length, Frequency, & String Tension activity Quiz Link |  |
| 12 | Neck attachment  Online Guitar Necks: The Compression and Tension of a Neck activity | Online Guitar Necks: The Compression and Tension of a Neck activity | Video File review – Buffing Guitars | <iframe width="1280" height="720" src="//www.youtube.com/embed/MTtTnOaw5xI" frameborder="0" allowfullscreen></iframe> |
|  |  |  | Online Guitar Necks: The Compression and Tension of a Neck activity Quiz Link |  |
| 13 | Intonation basics | Intonation activity |  |  |
|  |  |  | Online Intonation activity Quiz Link |  |
| 14 | Final assembly , Stings, String Nut  Setup of Guitars | Setup activity |  |  |
|  |  |  | Online Setup activity Quiz Link |  |
| 15 | Class Photo, final intonation |  | Final Setup |  |
| 16 | Final guitar evaluation |  | Final guitar evaluation - Rubric |  |