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| Lesson Plan: Cutting and Assembling a Splined Miter Joint | Date: January 2017 |
| Course: Wood 9-10 | Estimated time: 70 minutes |
| Lesson Objectives:* Big Ideas - Complex tasks require the sequencing of skills.

 - Complex tasks may require multiple tools and technologies* Curricular Competencies
	+ Identify and use appropriate tools, technologies, materials, and processes for production
	+ Demonstrate an awareness of precautionary and emergency safety procedures in physical environments
	+ Make a step-by-step plan for production and carry it out, making changes as needed
	+ Choose, adapt, and if necessary learn about appropriate tools and technologies to use for

tasks |
| Introduction |  |
| * Show students the woods they can use and what size boards they will need
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| Lesson Details | Important Points & Teaching Techniques/Strategies |
| * **Attendance**

5 min10 min10 min10 min10 min5 min20 min* **Introduction and question prior knowledge**
	+ Students have completed the table saw safety test and have used the table saw for ripping and cross-cutting
	+ Students have completed the band saw safety test and have experience using it for several projects
	+ Students have been taught about wood grain and the difference between end-grain, edge-grain, and face-grain
* **Review Safety**
	+ Wear safety glasses and hearing protection
	+ Secure long hair and loose clothing
	+ Ensure students have completed the safety tests
	+ Review table saw safety
* **Demonstrate procedure for cutting a miter on the table saw**
	+ How to set blade at 45 deg.
	+ How to set-up miter gauge
	+ How to safely make a cut with the miter gauge
* **Demonstrate procedure for cutting slots using the splined miter jig**
	+ How to complete the layout for spline slots
	+ How to set-up the jig
	+ How to secure work in the jig
	+ How to safely use the jig
* **Demonstrate procedure for cutting splines**
	+ What type of wood to use (something contrasting wood used for body)
	+ How thick should strips be? (width of table saw blade – 1/8 in.)
	+ Cut splines oversized on bandsaw then sand until flush
	+ Use only small amount of glue on both sides of splines
* **Students work on projects** (jewelry box)
	+ Students who are ready begin work on the splined miter joint processes
	+ Teacher will supervise and be available to help on table saws

**Materials:*** Wood – scrap for demo
* Teaching aid – demo jewelry box body
* Splined miter jig for table saw
* Splines ready to be used

**Adaptations for ELLs:*** Vocabulary handout and/or posted on board:
	+ Miter, spline, end grain, jig, kickback
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| Questions |  |
| * Why is end-grain a poor gluing surface?
* Where should you stand when using the table saw to reduce risk of injury due to kickback?
* Which table saw can the splined miter jig be used on?
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| Closure |  |
| * Review procedures and check-in with students re. their progress.
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| Reflection |  |
| * What went well? What might you change?
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