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| Teacher Candidate: Fred Hawley |  | Faculty Advisor: Jeff Lochbaum |  |
| Date: February & March 2017  Day/Block: Day 1, Block 2/3 |  | School Advisor: Chris Lee |  |

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| Subject + Grade  Wood 9/10 | | Introduction/Rationale:  The intent of this project is to introduce students to carving, carpentry, and joinery techniques while building on the skills that they have already developed. This will be most students’ first introduction to carving, so before they design and carve their box lid, they will practice with small relief carving designs. This project incorporates a design element with the traditional carpentry and joinery methods of the jewelry box.    This unit will focus on 4 principles;   * Joinery (spline miter joint) * Carpentry (measuring and cutting to dimensions) * Carving basics * Production skills | Prerequisite Skills:  Stock breakout: radial arm saw, jointer, planer, ripping on table saw |
| Title of Unit:  Jewelry Box with Carved Top | Length of Unit:  10 weeks  (5 classes every 2 weeks) X 70 min classes | Learning Intentions:  (What students will KNOW)   * How to use a table router * Basic relief carving * Layout skills * How to make a spline miter joint |
| Big Ideas:  (What students will UNDERSTAND)   * Complex tasks require the sequencing of skills. * Complex tasks require different technologies and tools at different stages. | | | Core Competencies:   * Communication * Critical Thinking * Creative Thinking * Positive Personal and Cultural Identity | Vocabulary: (New words and their Meaning)   * Miter joint: a joint made by cutting two pieces at a 45 degree bevel and then joining at 90 degrees. * Spline: a strip of wood, inserted into a cut across a joint, that adds strength to the joint. * Gouge: carving tool with a curved cutting edge |
| Curricular Competencies:  (What students will be able to DO)   * Identify and use sources of inspiration and information * Identify and use appropriate tools, technologies, materials, and processes for production * Make a step-by-step plan for production and carry it out, making changes as needed * Evaluate how the land, natural resources, and culture influence the development and use of tools and technologies | | Supporting All Learners:   * I will make and display examples of the project at each stage of completion that students can reference visually * I will include diagrams and graphics in the examples to make the instructions as visual as possible * I will demonstrate the skills that will be new to the students | Materials + Resources:   1. 1” poplar for boxes 2. Jelluton boards for carving 3. Yellow cedar for carved lids 4. Carving tools 5. Pre-made examples 6. Jig for Splines 7. Procedure handout 8. Relevant information and safety sheets |

Accommodations for Differentiated Instruction:

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| English Language Learner: | Provide texts from language of origin with pictures of tools, machines, equipment and materials. Encourage students to research their tools, machines, equipment and materials using native language sources. Utilize graphic organizers and create the assignment components to reduce text information and increase physical creation. |
| Gifted Student: | Gifted students will have the opportunity to take on more complex carving designs. |

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| TOTAL CLASSES: 25   1. Background information, project information, and introductory exercises (3 classes) 2. Stock breakout, design, and layout (3 classes) 3. Carving (5 classes) 4. Project work (9 classes) 5. Assembly and finish (5 classes)   Length of Unit: January 30 to Apr. 21, 2017 | Safety Considerations  Provide machine safety sheets for the following:   * Table saw (ripping) * Table saw (cross-cutting) * Table router   **Review safety for machines at each stage of the project**  **Review carving safety before students begin work on the box lid carving** |

Content and Approximate Duration:

|  | ◄ [January](http://www.wincalendar.com/January-Calendar/January-2014-Calendar.html) | **~ February 2017~** | | | | | [March](http://www.wincalendar.com/March-Calendar/March-2014-Calendar.html) ► |
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|  | **Sun** | **Mon** | **Tue** | **Wed** | **Thu** | **Fri** | **Sat** |
| 1 | 29 | 30  **Start Practicum**  WEEK 1: **Carving background and introduction exercises, begin design sketches** | 31 | 1 | 2 | 3 | 4 |
| 7 | 5 | 6 **Family Day** | 7  WEEK 2: **Introduction to project, stock breakout, and begin layout** | 8 | 9 | 10 | 11 |
|  | 12 | 15  WEEK 3: **Continue layout and preparing stock for box sides and bottom (poplar)** | 14 | 15 | 16 | 17 | 18 |
|  | 19 | 20  WEEK 4: **Stock breakout for top (yellow cedar)** | 21 | 22 | 23 | 24 | 25 |
|  | 26 | 27  WEEK 5: **Table saw demo for miter cuts and continue project work** | 28 |  |  |  |  |

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| ◄ [February](http://www.wincalendar.com/February-Calendar/February-2014-Calendar.html) | **~ March 2017 ~** | | | | | [April](http://www.wincalendar.com/April-Calendar/April-2014-Calendar.html) ► |
| **Sun** | **Mon** | **Tue** | **Wed** | **Thu** | **Fri** | **Sat** |
|  | WEEK 5: **Table saw demo for spline cuts and continue project work**  WEEK 6: **Demo for assembling the box and continue project work** |  | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13  SPRING BREAK | 14  SPRING BREAK | 15  SPRING BREAK | 16  SPRING BREAK | 17  SPRING BREAK | 18 |
| 19 | 20  SPRING BREAK | 21  SPRING BREAK | 22  SPRING BREAK | 23  SPRING BREAK | 24  SPRING BREAK | 25 |
| 26 | 27  WEEK 7: **Table router demo and continue project work** | 28 | 29 | 30 | 31 | 1 |

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| ◄ [March](http://www.wincalendar.com/March-Calendar/March-2014-Calendar.html) | **~ April 2017 ~** | | | | | | [May](http://www.wincalendar.com/May-Calendar/May-2014-Calendar.html) ► | | |  |
| **Sun** | **Mon** | **Tue** | **Wed** | **Thu** | **Fri** | | **Sat** | | |  |
|  |  | WEEK 8: **Table saw demo for splitting box** |  |  |  | | 1 | | |  |
| 2 | 3 | 4 | 5 | 6 | 7 | | 8 | | |  |
| 9 | 10  WEEK 9: **Continue project work – assembly and carving** | 11 | 12 | 13 | 14 Good Friday | | 15 | | |  |
| 16 | 17 Easter Monday | 18  WEEK 10: **Finish projects** | 19 | 20 | 21  **End of Practicum** | | 22 | | |  |
| 23 | 24 START of CFE | 25 | 26 | 27 | | **28** | | **29** |  | |

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| **LESSON TOPIC** | **SPECIFIC LESSON OBJECTIVES (SWBAT)** | **TEACHING METHODS + ACTIVITIES** | **STUDENT ACTIVITIES** | **MATERIALS & RESOURCES** | **DEMONSTRATION OF UNDERSTANDING**  **(Formative + Summative, Assessment for/of/as Learning & Performance Based)** |
| 1. Carving Background and Introduction | - Understand techniques and history of Haida carving  - Demonstrate basic carving techniques | Lecture w/examples and demonstration of techniques | Students do simple carving exercises | - Jelluton boards (4”x6”)  - Carving tools  - Visual examples | Formative: students will demonstrate basic carving techniques before beginning their designs |
| 1. Introduction to project | - Students demonstrate understanding of material and project in their design sketches | - Go over handout with project procedure  -Demonstrate carving design | Sketch designs for project | - Project procedure hand-outs  - Graph paper for sketching designs | Formative: students must show their sketches to teacher to verify that they will work |
| 1. Stock breakout and layout for box | - Understand how to layout a project to minimise waste | - Use examples for students to reference when doing their layouts | Stock breakout and layout | - Pre-cut 1” poplar boards  - Examples of unassembled parts | Formative: students must check layout plans with teacher |
| 1. Cutting a miter on the table saw | - Understand how to cut a 45-degree miter | - Demonstration  - Information and safety sheets | Make sides of jewelry box | - Examples of unassembled parts  - Information and safety sheets | Formative: supervision of student work |
| 1. Cutting slots for splines | - Be able to safely use the spline miter table saw jig | - Demonstration  - Information and safety sheets | Strengthen box with splines in the miter joints | - Strips of a contrasting wood for splines  - Spline jig for table saw  - Information and safety sheets | Formative: supervision of student work |
| 1. Using the table router | - Understand how to use the table router to create a decorative edge | - Demonstration  - Information and safety sheets | Work on bottoms and tops of jewelry box | - Examples of unassembled parts  - Information and safety sheets | Formative: supervision of student work |
| 1. Carving the lid | - Work with design sketches to complete a project  - Students will be able to use the carving techniques demonstrated in class to carry out their designs | - Demonstration with examples | Carving design into lid of box | - 1” cedar boards  - Carving tools | Formative: supervision of student work |
| 1. Assembling the box | - Be able to assemble a box using the demonstrated techniques | - Demonstration | Assembling jewelry boxes | - Glue, clamps, finishing nails  - Hinges, screws, and clasps | Formative: supervision of student work |
| 1. Finishing the box | - SWBAT use stain, oil finish, polyurethane finish | Demonstration with examples | Finishing jewelry boxes | Stain, Watco, polyurethane, rags/brushes, sample board | Formative: supervision of student work |

**Evaluation**:

* Evaluation will be based on the quality of students’ projects, which will be marked according to the following rubric.

**Rubric for Jewelry Box:**

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| Skill | Expectations for Quality of Work | Score |
| Assembly | - Box is centered on base and lid is centered on box  - Hinge works well  - Parts are aligned | /5 |
| Sanding | - No rough edges  - No unwanted grooves  - Smooth project surface | /5 |
| Finish | - Even with no drips  - Shows care & effort | /5 |
| Cutting & Layout | - No cutting errors  - Parts fit together  - No visible chip-outs | /5 |
| Carving | - Shows creativity in the design  - Shows care & effort | /5 |

Comments:

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