## Appendix B: App Inventor Unit

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Essential Question(s)</th>
<th>Learning Activities</th>
<th>IEFA Essential Understandings</th>
<th>Social Studies Standards</th>
<th>Computer Science Standards</th>
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</thead>
<tbody>
<tr>
<td>1: Food Sovereignty Review</td>
<td>What is food sovereignty, and why is it important to American Indian tribes in Montana? Why is traditional recipe restoration key to regaining food sovereignty? How could we use App Inventor to support the regaining of food sovereignty? How do I log into the App Inventor website and create a new project?</td>
<td>Food sovereignty discussion Showcase traditional food recipe app Create a new project in App Inventor and create a component</td>
<td>Essential Understanding 1 Essential Understanding 5 Essential Understanding 7</td>
<td>SS.H.6-8.3 Analyze how, since European contact, historical events and policies have mutually impacted American Indian and European societies</td>
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<tr>
<td>2: More about App Inventor</td>
<td>What do components do in App Inventor and how do I change their properties? What is a click event and how do I program a button to an event?</td>
<td>Learn how to create image, label, and button components Change the properties of components Create new screens Program a click event</td>
<td>Essential Understanding 1 Essential Understanding 5 Essential Understanding 7</td>
<td>CS.AP.6-8.4 decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs CS.AP.6-8.7 incorporate existing code, media, and</td>
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| 3: More about App Inventor (cont’d) | What are layout components and their functions?  
Why do we need to test our apps when we are creating them (live testing)? How do we do it? | Components recap activity  
Use layout components to rearrange elements on screen in App Inventor  
Testing the app | Essential Understanding 1  
Essential Understanding 5  
Essential Understanding 7 | CS.AP.6-8.4: decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs  
CS.AP.6-8.7: incorporate existing code, media, and libraries into original programs, and give attribution |
| 4: Traditional Recipe Application 1 | What is decomposition in computer science?  
What are conditional statements?  
What do the three conditional statement blocks do? | Unplugged decomposition activity  
Conditional statements challenges | Essential Understanding 1  
Essential Understanding 5  
Essential Understanding 7 | CS.AP.6-8.4: decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs |
| 5: Traditional Recipe Application 2 | SPARK principles for quality feedback  
Peer feedback in small groups | Essential Understanding 1  
Essential Understanding 5 | CS.AP.6-8.1: recommend improvements to the design of computing devices, based on an |
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<tr>
<th>Task</th>
<th>Description</th>
<th>Essential Understanding</th>
<th>Additional Information</th>
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<tbody>
<tr>
<td>6 &amp; 7: Traditional Recipe Application 3</td>
<td>Build and program home screen for recipe app, Create information screen and recipe screen for each ingredient</td>
<td>Essential Understanding 1, Essential Understanding 5, Essential Understanding 7</td>
<td>CS.AP.6-8.6: seek and incorporate feedback from team members and users to refine a solution that meets user needs.</td>
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<tr>
<td>8-12: Traditional Recipe Application 4</td>
<td>Create a map screen for each food ingredient</td>
<td>Essential Understanding 1, Essential Understanding 5, Essential Understanding 7</td>
<td>CS.AP.6-8.3: develop programs that combine control structures, including nested loops and compound conditionals. CS.AP.6-8.7: incorporate existing code, media, and libraries into original programs, and give attribution. CS.DA.6-8.2: represent data using multiple formats. CS.AP.6-8.3: develop programs that combine control structures, including nested loops and compound conditionals.</td>
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structures, including nested loops and compound conditionals

CS.AP.6-8.7: incorporate existing code, media, and libraries into original programs, and give attribution