<table>
<tr><td>Lesson Name</td><td>Rubber Duck Programming + Intro to HTML</td><td>Date</td><td></td></tr>
<tr><td>Grade level</td><td>10-12, introductory CS class</td><td>Unit</td><td>Introductions</td></tr>
<tr><td>Main Objectives</td><td colspan="3">Familiarize students with HTML DOM elements
Model Rubber Duck Programming</td></tr>
<tr><td>Standards</td><td colspan="3">Digital Fluency and CS Standards
9-12.DL.2: Communicate and work collaboratively with others using digital tools to support individual learning and contribute to the learning of others.
AP CSP Standards
CRD-2.F: Design a program and its user interface
Main pedagogical technique: Rubber Duck Programming</td></tr>
<tr><td>Part of Lesson</td><td colspan="2">Activity/Objectives</td><td>Materials</td></tr>
<tr><td>Intro (5 min)</td><td colspan="2">Pose student with question: What do you do to help you troubleshoot?
Create a student developed list of techniques and format into anchor chart</td><td>Whiteboard
Markers</td></tr>
<tr><td>Teacher Demo (20 min)</td><td colspan="2">Teachers will let students know that teacher will demonstrate a new troubleshooting technique and ask students to jot down what troubleshooting teacher is doing
After students have collected their technique, the teacher will conduct a live code demo of a basic html webpage as shown in the code snippet below.
The teacher will deliberately make mistakes and attempt to troubleshoot.
Teacher brings out rubber duck and talks to duck one on one explaining line by line.
Teacher spots the mistake and fixes it.
Teacher explicitly states that this is in lieu of talking with an actual human and to slow your thoughts down</td><td rowspan="2">Laptop
Whiteboard
projector</td></tr>
<tr><td>Student Work Time (30 min)</td><td colspan="2">Teacher shows the task to students: create a webpage detailing the background of their rubberduckies
Shows example on jkimbxv.github.io/rubberduckies</td></tr>
</table>

	• Gives students key links to resources on W3 schools • Student work time, teacher circulates but does not answer questions other than clarifying questions • Teacher keeps an eye out for a volunteer to help demo rubber duckies conversation	
Close (10 min)	• Asks for volunteer • Demo, hw is html element worksheet	

Finished desired student output: A web page for their “rubber duck”

Schnoot

Schnoot, otherwise known as Mr. Schnoot, has an extensive military history. He acted as the missile in a critical battle Operation Highjump during 1946. Since then he's retired to take on the role of a rubber ducky programmer. Despite not being a duck nor having the capability for flight, Mr. Schnoot bravely takes on the responsibility of listening to Jiyoon Kim's programming woes.

Declassified footage of Mr. Schnoot

Finished desired code:

```
<!DOCTYPE html>
<html lang="en" dir="ltr">
  <head>
    <meta charset="utf-8">
    <title></title>
  </head>
  <body>
    <h1 style="font-family:'Courier New'" >Schnoot</h1>
    <img width= "200"
src="https://m.media-amazon.com/images/I/61O6V1bK-3L._AC_SL1500_.jpg"
alt="penguin plushie">
    <p style="font-family:'Courier New'">Schnoot, otherwise known as
      Mr. Schnoot, has an extensive military history. He acted as the
      missile in a critical battle Operation Highjump during 1946.
      Since then he's retired to take on the role of a rubber ducky
      programmer. Despite not being a duck nor having the capability
      for flight, Mr. Schnoot bravely takes on the responsibility of
      listening to Jiyoon Kim's programming woes.
    </p>
    <a href = "https://www.youtube.com/watch?v=1ki6dCNQIt0"> Declassified
footage of Mr. Schnoot </a>
```

```
  </body>
</html>
```

Supporting Material:

- Slide show linked on github
- Hw review worksheet linked on github