Project Name: **Subject:** **Teacher:**

Time allotted:

Objectives:
Purpose of the project. How will students engage in technology and content?

Big Idea:

Essential Question:

Students will know:
Knowledge gained

Students will be able to:
Skills gained

Standards:

Assessment:
What does a successful project look like? How will success be measured?

Materials/Resources:

Learning Activities:

1. INTRODUCTION
   - Introduce the Hummingbird Duo Robotics Kit and explain how each part works. Discuss the definition of a robot and tie this back to the kit components.
   - Use the tutorial videos on hummingbirdkit.com to help you.
2. BEGIN THE CREATIVE PROCESS
   - Divide the class into teams of 2-4 students. Give students the project planning worksheet and instruct them to define their problem, brainstorm, and discuss their project.
   - Give the group access to library books, videos, media centers, and give ample time for students to unleash their imagination and creativity.
3. DESIGNATION OF TASKS
   - Allow each group to discuss, allocate, and divide tasks and responsibilities.
4. DESIGN AND DEVELOPMENT
   - Encourage students to sketch and label their prototypes on their planning worksheet. Gather art materials, recycled objects, and hot glue.
5. PROGRAMMING
   - Plan robot story board on the student planning worksheet. Students can program their robots and bring them to life using a variety of software. See the Programming guide at hummingbirdkit.com's software page to select the most age and skill appropriate program.
6. SHOWCASE YOUR CREATIONS
   - Students reveal and demonstrate their robot to the rest of the class. Discuss and explain all materials used, steps, challenges, and answers to any questions. Discuss what they liked about the project, what inspired their choices, and what they would do differently.