# Designing an Engineering Design Challenge (EDC)

**Challenge Title/Theme:** _____

**Real-World Problem** *(what real-world situation are your students experiencing in this unit? What real-world, or 21st Century, skills will they be practicing?):*

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**Goal** *(what is the end result they are trying to accomplish?):*

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**Background Knowledge** *(what do your students need to know about the real-world problem and any related information before they start this challenge?):*

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**Student Objectives** *(learning outcomes/activity goals for your students):*

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**Criteria** *(what are the requirements of the challenge?):*

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**Constraints** *(what are the limitations of the challenge?):*

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**Content** *(what math and science concepts will they need to know for the challenge?):*

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**Vocabulary:**

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|---|---|---|
| _____ | _____ | _____ |
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**Standards** *(what Preschool/VPK/Early Childhood standards are you addressing at this activity?):*

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- _____
- _____
- _____

**Activity Directions:** *(what are the steps you need to follow for the activity?)*

**1.** _____

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**2.** _____

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**3.** _____

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**4.** _____

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**5.** _____

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**6.** _____

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**7.** _____

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**8.** _____

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**9.** _____

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**10.** _____

**Questions to Ask Students During Activity**: *(how can you engage your students in the activity using STEM concepts, approaches, and teaching methods? What questions can you ask to encourage them to practice the Scientific Inquiry Process? What questions can you ask to help them make connections between the lesson, this activity, and the world around them?)*

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