

# DC Motors

Content Area: **21st Century Life & Careers**  
Course(s): **Generic Course, Level 1 Engineering Drawing**  
Time Period: **Marking Period 4**  
Length: **3-4 weeks**  
Status: **Published**

## Unit Introduction

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## Standards

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ARCH.9-12.9.4.12.B.(1).9	Develop technical drawings drafted by hand and computer-generated plans to design structures.
ARCH.9-12.9.4.12.B.(2).17	Use craft skills to meet or exceed teacher and/or employer expectations.
ARCH.9-12.9.4.12.B.75	Use and maintain appropriate tools, machinery, equipment, and resources to accomplish project goals.
STEM.9-12.9.4.12.O.(1).11	Demonstrate understanding of processes and concepts that are key to understanding the design process.
STEM.9-12.9.4.12.O.2	Demonstrate mathematics knowledge and skills required to pursue the full range of postsecondary education and career opportunities.
STEM.9-12.9.4.12.O.3	Demonstrate science knowledge and skills required to pursue the full range of postsecondary education and career opportunities.
STEM.9-12.9.4.12.O.5	Demonstrate use of the concepts, strategies, and systems for obtaining and conveying ideas and information to enhance communication.
STEM.9-12.9.4.12.O.17	Employ critical thinking skills (e.g., analyze, synthesize, and evaluate) independently and in teams to solve problems and make decisions.

## Essential Questions

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1. What can we learn by solving this problem?
2. How do you create the best solution to the problem?
3. How can team work improve your odds of successfully solving a problem?

## Content/Skills

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Students will design and build #1 or #3 using a battery powered DC motor as a means of propulsion.

- 1. Students design/build a device that will travel along a suspended wire efficiently.
- 2. Students will learn/apply Engineering Design Process to help create the best possible solution
- 3. Students will design/build an amphibious vehicle.

## **Skills (delete)**

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- Brainstorming
- Drawing plans
- Fabricating a model
- Model storming
- Team work
- Using design processes