

# Chandler situation the feeder will work electronically,

[Engineering](#)



**ASSIGN  
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Chandler Lifford, Austin KnappScience fair research paper1-10-18 Mr. Miller  
Automatic Dog FeederHow does an automatic pet feeder work? The main science behind an automatic dog feeder has to do with the Engineering design process. The engineering design process is when: you ask what the problem is, brainstorm ideas, plan and gather materials, create and test your design. If it works then your in good shape, but if not, you have to identify the problem and fix the issue or if it is a big problem one might opt to scrap the design and start again. In our case an example of the design would be; how are you going to feed your pet when you are gone for more than 2 days. You could imagine an idea of how you can feed your dog over that period of time, design or create this project. Then test it out, and lastly if it works fine then good, but if needed imagine ways to make it better and more efficient. An automatic dog or pet feeder is under the category of Mechanical Engineering.

This type of engineering “ Mechanical engineering is a diverse subject that derives its breadth from the need to design and manufacture everything from small individual parts and devices.” Ideas you could ask would be how much food will you want the feeder to release, what exact time will it release food, will it hang in the air or will it sit on the floor, what type of material will be used to design this project, ETC. An automatic pet feeder is designed based on the age of the animal. The feeders will work by the force of gravity or by electricity. In this situation the feeder will work electronically, but you will have to decide what ways your going to build the feeder that will work with your pet specifically. The things you will have to consider is the age of your pet, the size of your pet, money costs, time period of how long you will

be gone, how long it will take to build and test your design, ETC. There are also some steps you should follow leading up to building your design. Step one identify what size you want your feeder to be.

Step two Identify what kind of food you want to feed your dog this way you can calculate how the food might flow through your machine. Step three pick out the materials you want to use for your machine that will work properly with the food you want to use. For an electric machine the main things you will need a motor, wires, an open source electronics platform and a power source. An automatic pet feeder can be used to experiment on how the feeder will dispense the food correctly and give nourishment to your pet.

You can buy or create many types of pet feeders, " commercial automatic feeders for animal experiments are available which are specific to certain species and food types." The feeder that you choose to design, will have to be built upon the qualities of your needs. As well as with your amount of knowledge on the design and building process.

The design of an automatic feeder will have to also contain robotics as well as engineering. The use of an arduino which is a robotical device that will cause the machine to move and function properly if programmed correctly. " What Is Mechanical Engineering?" Mechanical Engineering, me. columbia. edu/what-mechanical-engineering." An Open Source Automatic Science Buddies Staff.

" Feeding Fido & Fluffy: Designing an Automatic Pet Feeder" Science Buddies. Science Buddies, 28 July 2017. Web.

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