

# Mechanical Lions, East Ouachita Middle, Reverse Engineering Project

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We chose the *Optiplex 7020 Mini Tower*. We chose this project because we wanted to learn about the devices we use on a daily basis. Some identifiable parts we found were the CPU, the GPU, the DVD, the GPU, the hard drive and motherboard. They also connect all the components to the processor. The case fan works to keep the computer cooled while the fan filter helps keep the cool air clean. The motherboard is the home to the central processing unit, graphic processing unit and the random access memory unit. The SATA Hard Drive holds all of the stored data from your files to your software. The RAM holds all of the short term data. The DVD player decodes the MPEG-2 encoded movie and makes it into a video signal. The GPU makes graphics processing faster. We learned a lot about the inner workings of a computer through this project.

# Parts list:

Case fan  
SATA Hard Drive  
Motherboard  
DVD player  
Power Supply  
Central Processing Unit (CPU)  
Graphics Processing Unit (GPU)  
Random Access Memory(RAM)  
Fan Filter

## Steps:

First, we unscrewed the case fan and took out the fan and its filter. The fan cools the machine so it does not overheat. The filter keeps dust from going into the fan and clogging it up.



Case Fan



Fan Filter

Second, We took out the SATA hard drive. The hard drive is the main data storage.



Hard drive without cover



hard drive with cover

Third, we took out the DVD which decodes the MPEG-2 encoded movie and makes it into a video signal.



DVD player with cover



DVD player without cover

Fourth, we took out the Motherboard and the CPU and RAM with it. The CPU also known as the central processing unit executes instructions and the motherboard is the circuit that connects the components to the processor. The RAM, Stores short term data.



(CPU)



Motherboard with RAM and CPU

Finally, we took out the power supply which converts high voltage current into direct current.



Power supply with cover



Power supply without cover