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## Hydraulic-Powered Robotic Arm from Simple Materials for Engineering Education

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*Have you ever seen a car lifted into the air at an auto repair place? Have you ever wondered how an elevator can lift a load of people up into the air? Well, the answer is hydraulic systems. Hydraulic systems use a liquid, usually oil, to transmit force. This system works on the same principles as other mechanical systems and trades force for distance. Hydraulic systems are used on construction sites and in elevators. They help users perform tasks that they would not have the strength to do without the help of hydraulic machinery. They are able to perform tasks that involve large amounts of weight with seemingly little effort.*

*This work illustrates a simple approach to demonstrate the principle of hydraulic power by manufacturing and operating a robotic arm model from simple and recycled materials.*