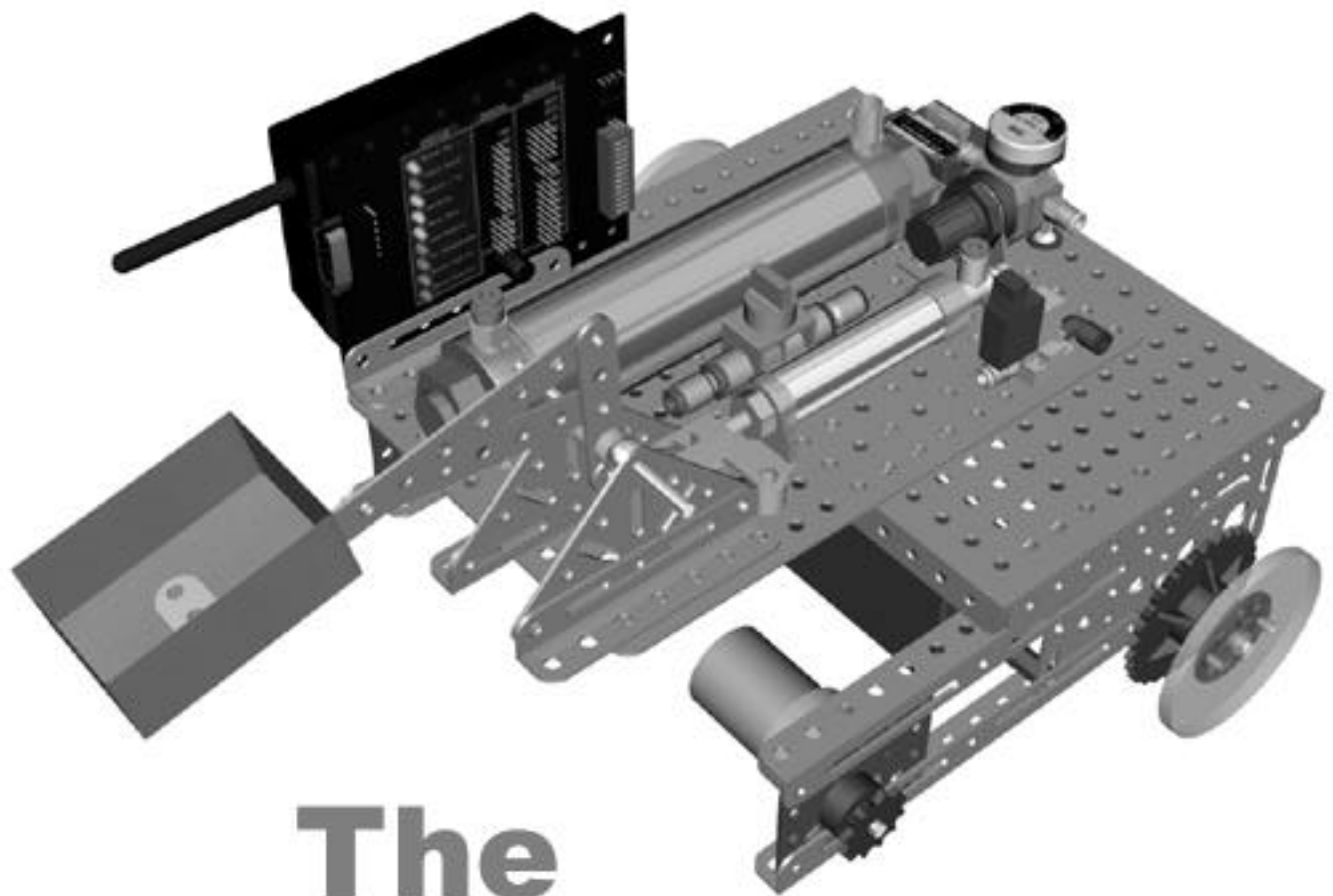


Table Top Robots™

A BattleBots IQ Education Activity



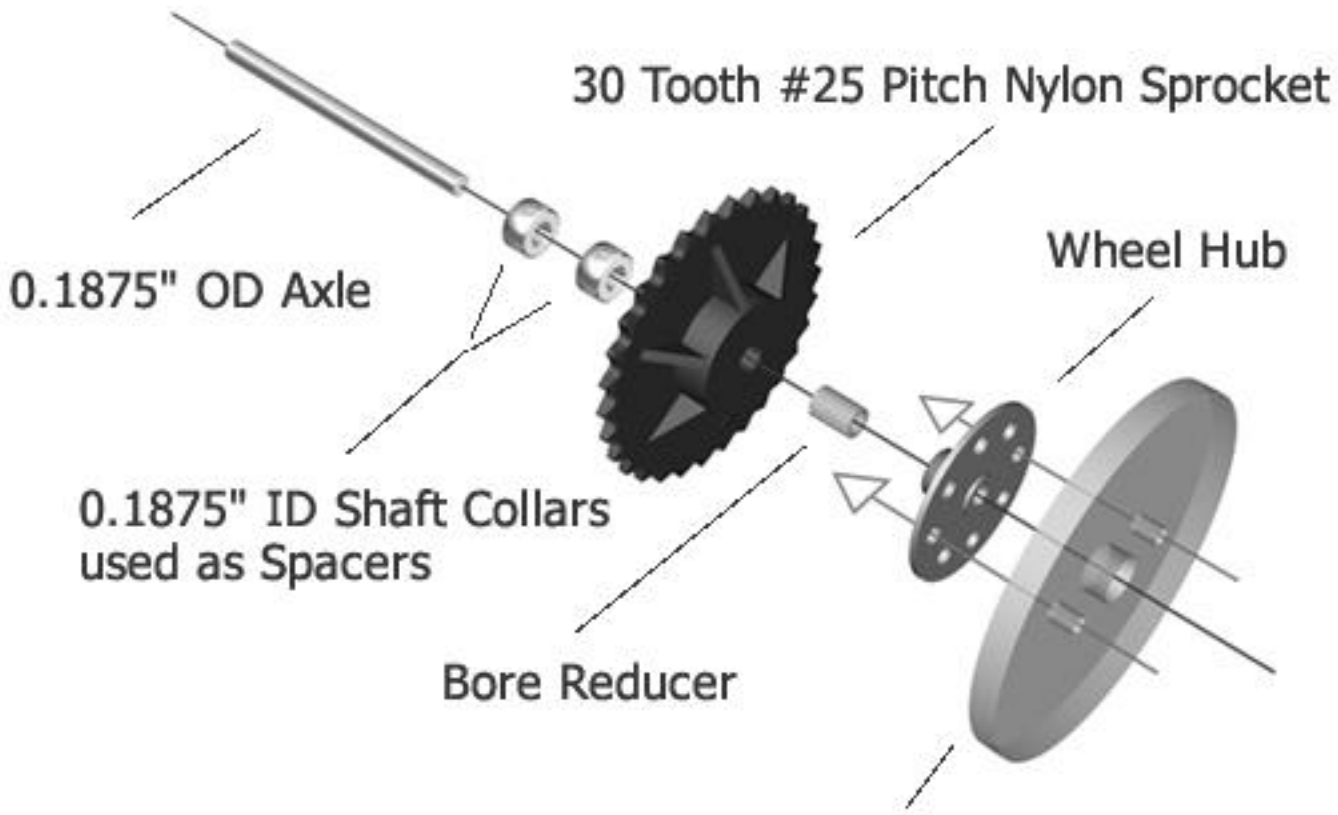
The Catapult Contest

An Exercise in Engineering and Design



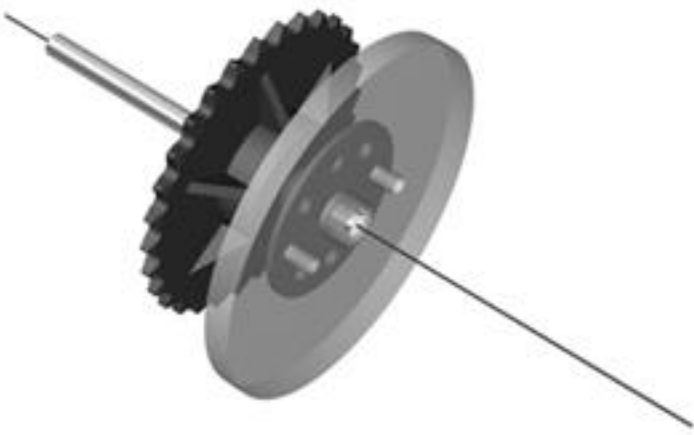
Educational Engineering System

Wheel Assembly



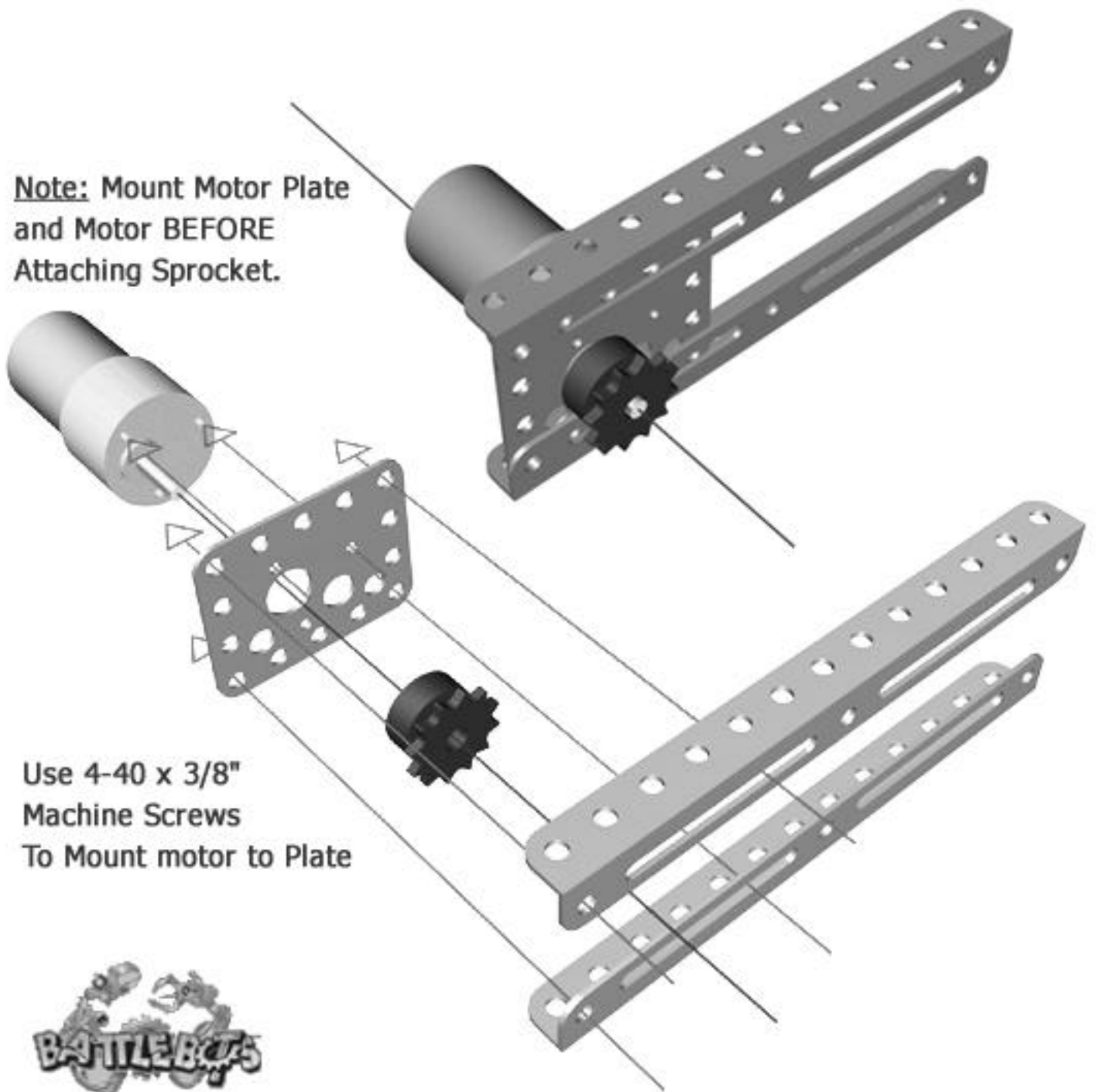
Note: Use 2 8-32 x 3/8" w/Nylon Lock Nut to Fasten Wheel to Hub

Polycarbonate Wheel



Motor Assembly

Note: Mount Motor Plate and Motor BEFORE Attaching Sprocket.

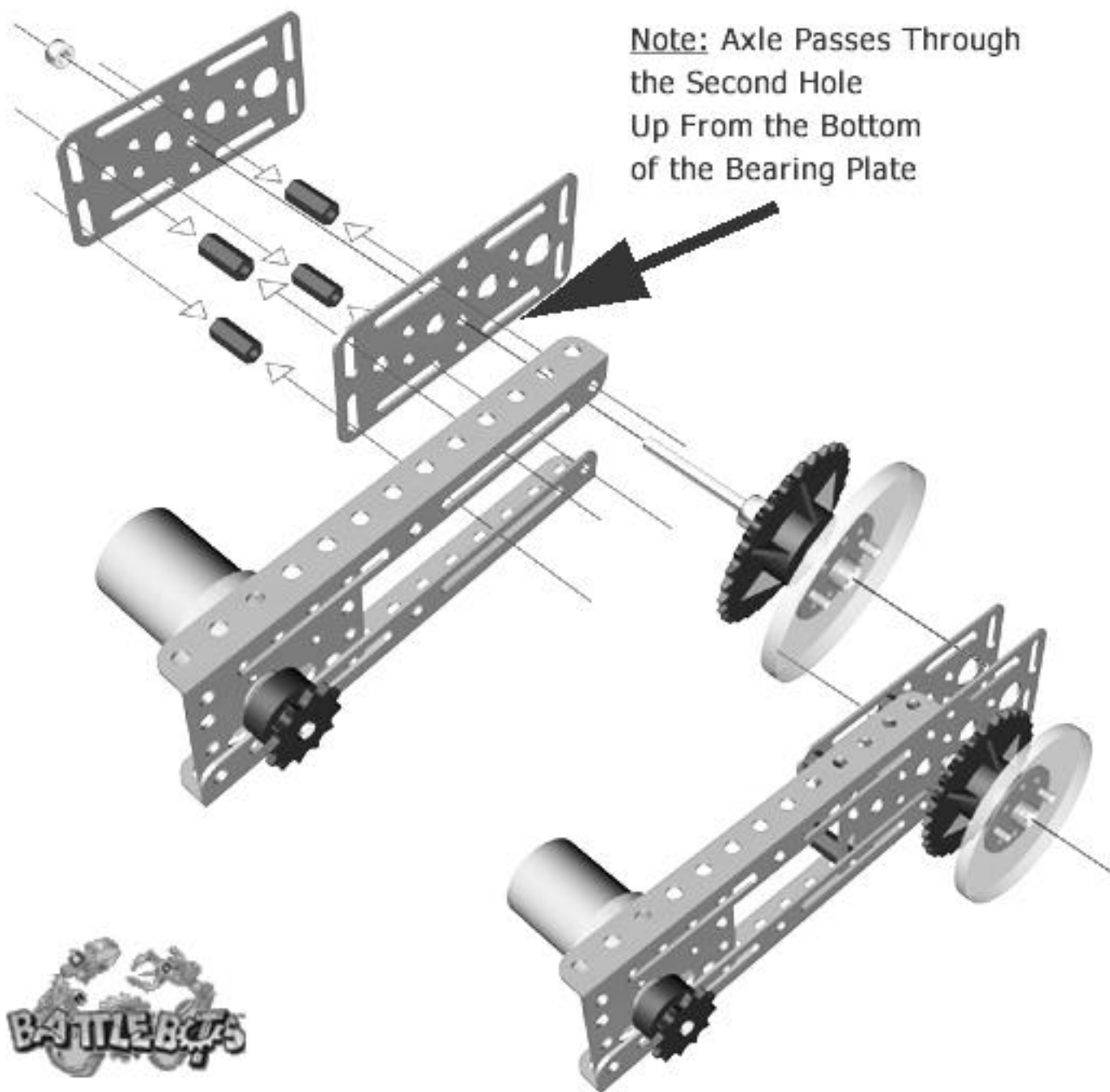


Use 4-40 x 3/8"
Machine Screws
To Mount motor to Plate



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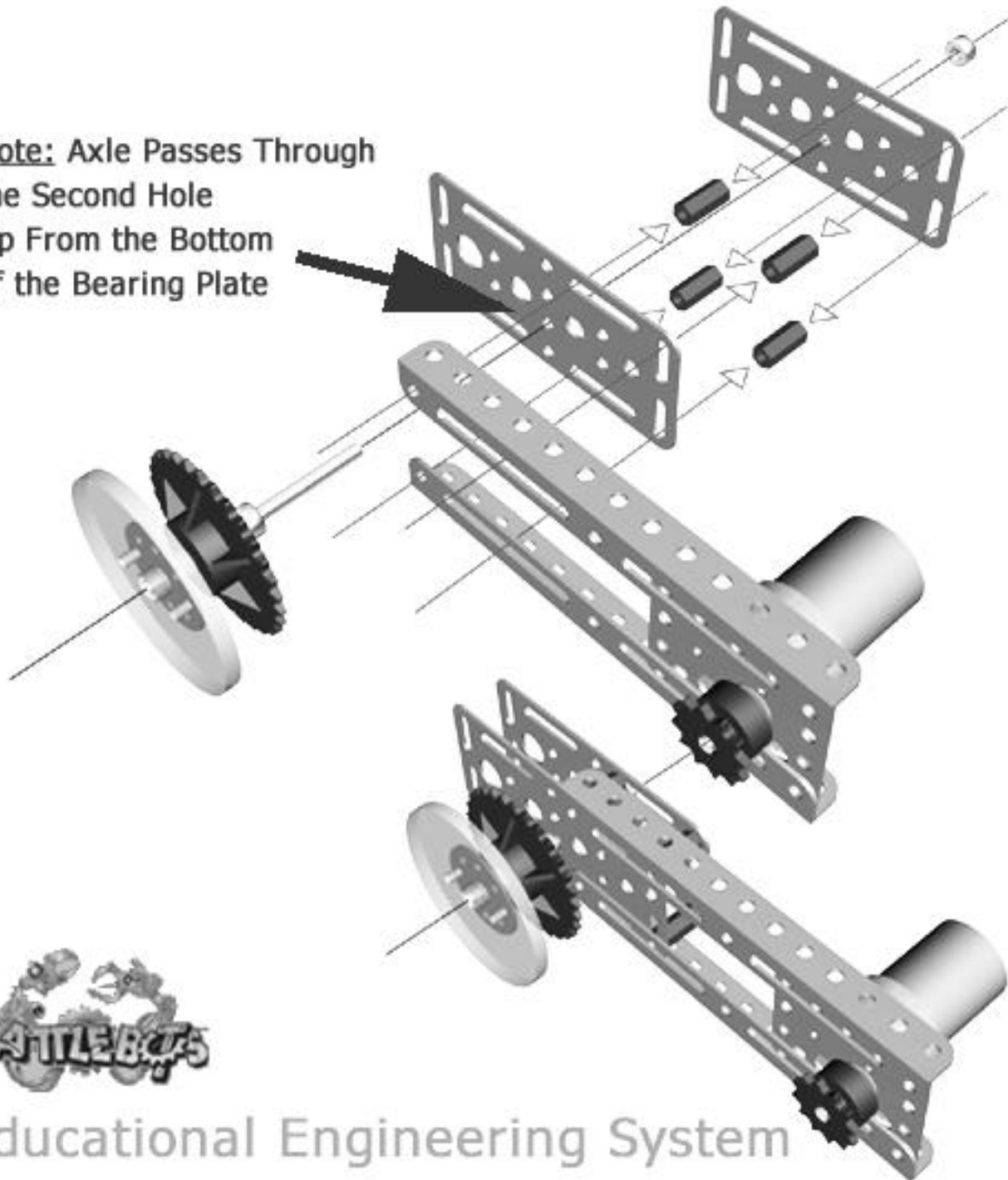
Right Drive System Assembly



Educational Engineering System

Left Drive System Assembly

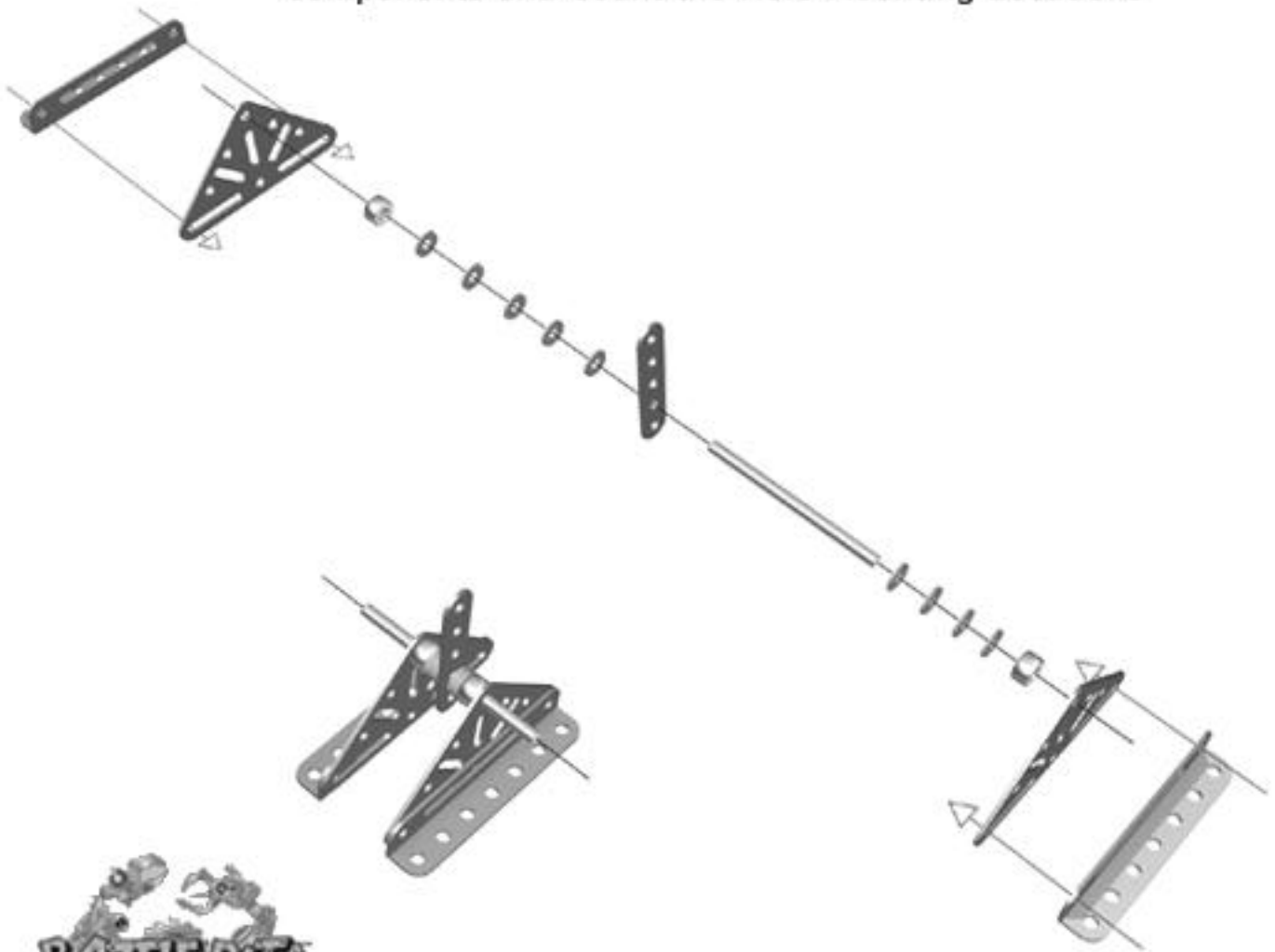
Note: Axle Passes Through
the Second Hole
Up From the Bottom
of the Bearing Plate



Educational Engineering System

Catapult Axle Assembly

Caution: Carefully Identify the Correct Components and Count the Hole Mounting Locations

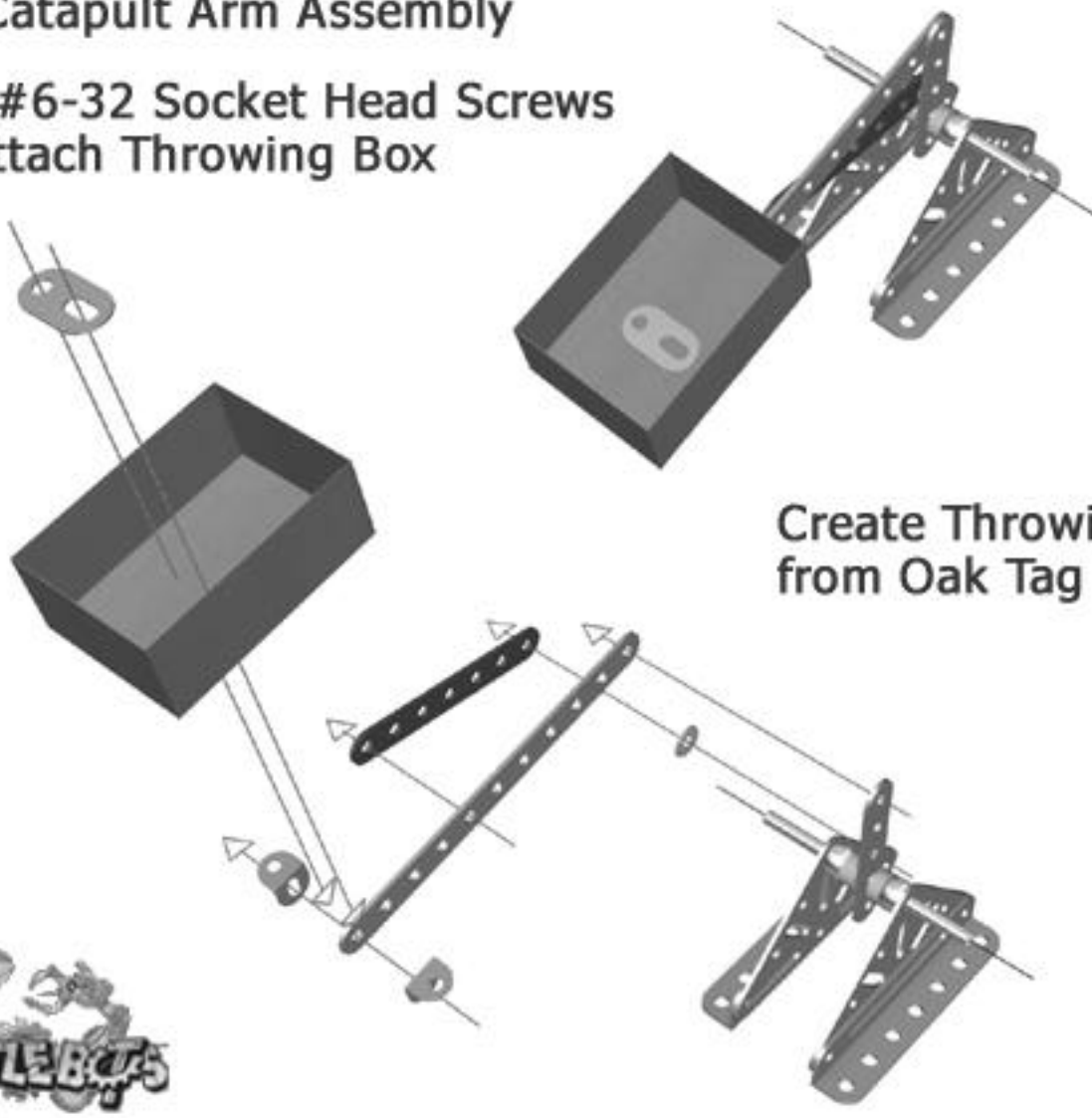


Educational Engineering System

Catapult Arm Assembly

Note: Use 8-32 x 3/8"
Machine Screws with Lock Nuts
For Catapult Arm Assembly

Use #6-32 Socket Head Screws
to Attach Throwing Box



Create Throwing Box
from Oak Tag



Educational Engineering System

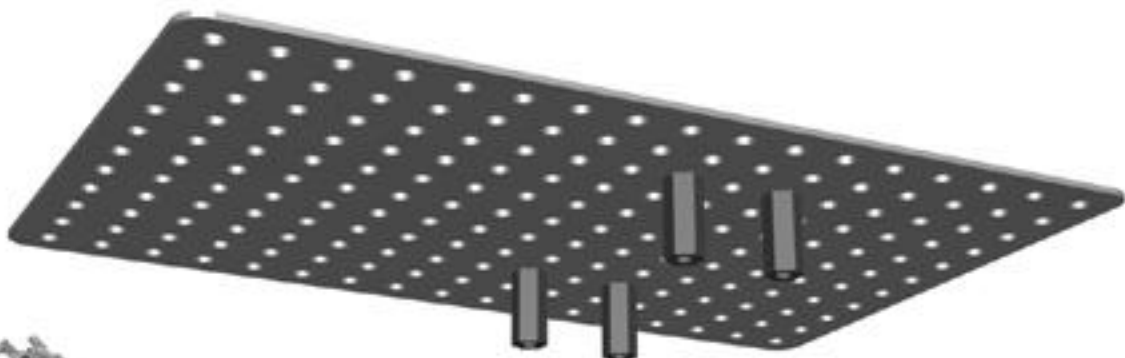
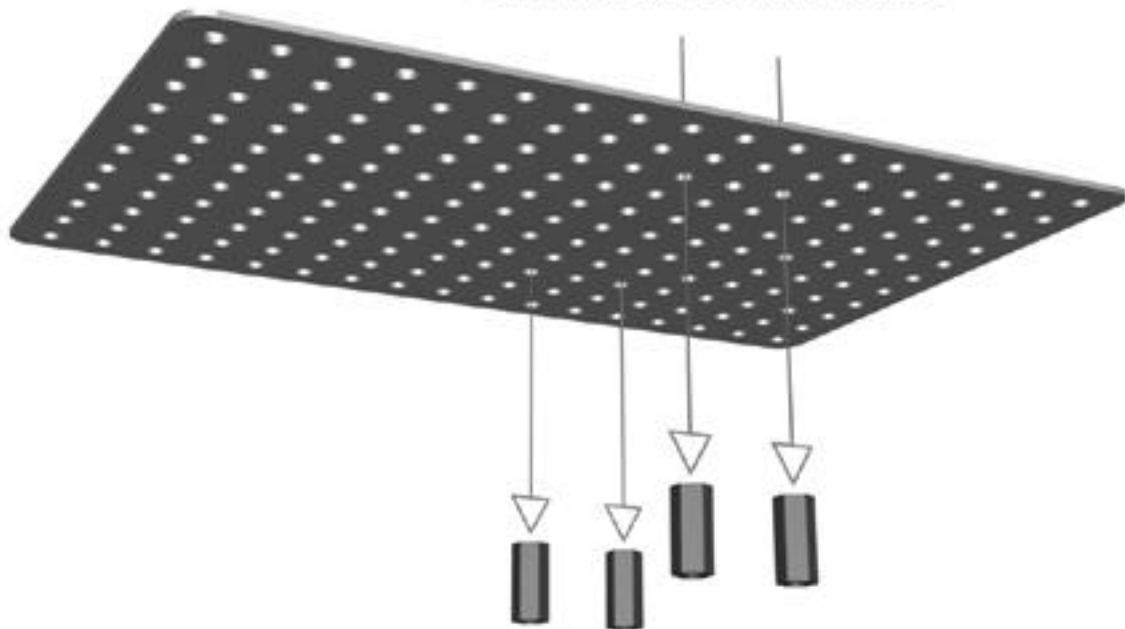
Catapult Cylinder Assembly



Educational Engineering System

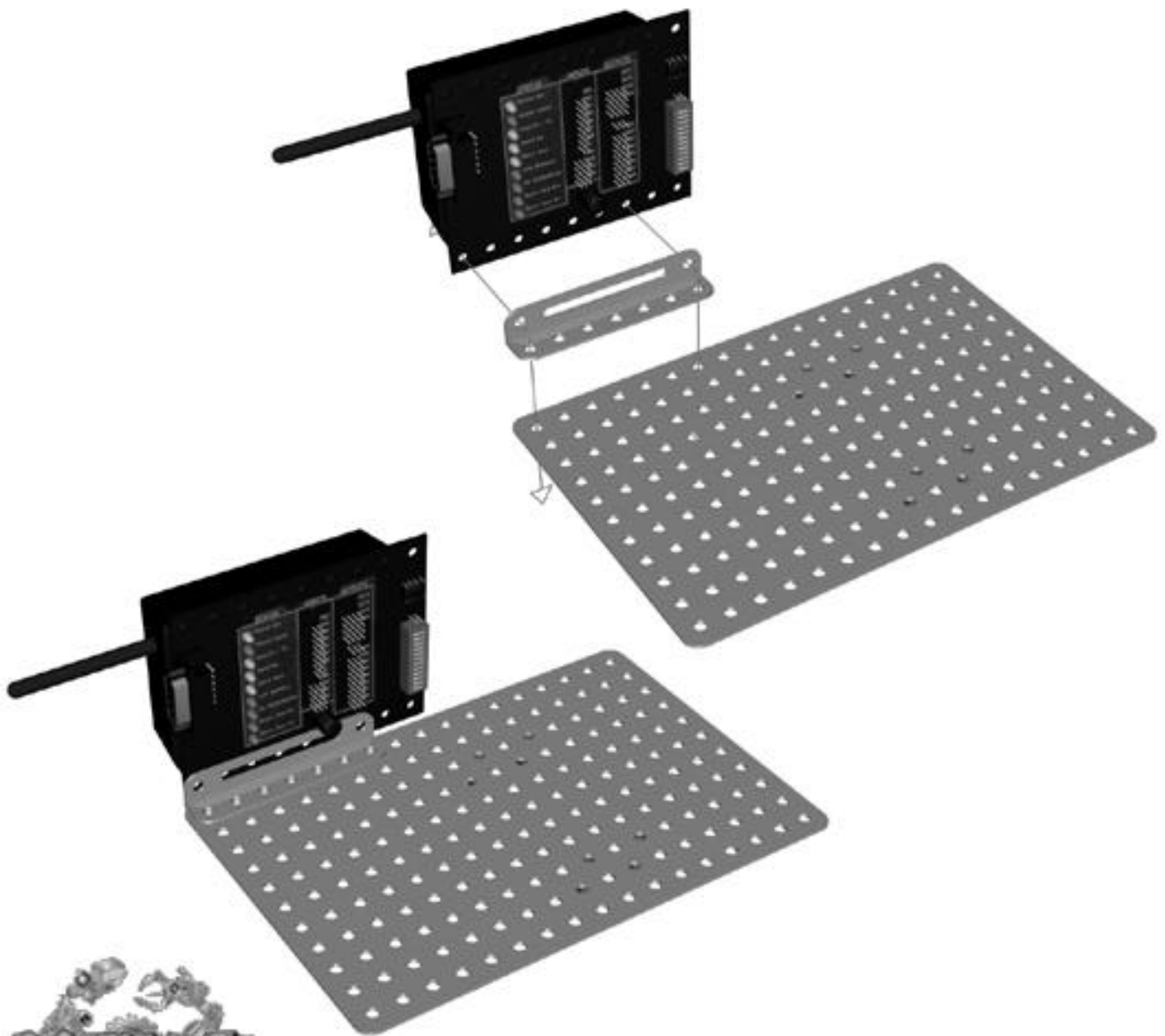
Top Plate **Standoff Assembly**

Use #10-24 x 3/8" Machine Screws
to Attach Stand Offs



Educational Engineering System

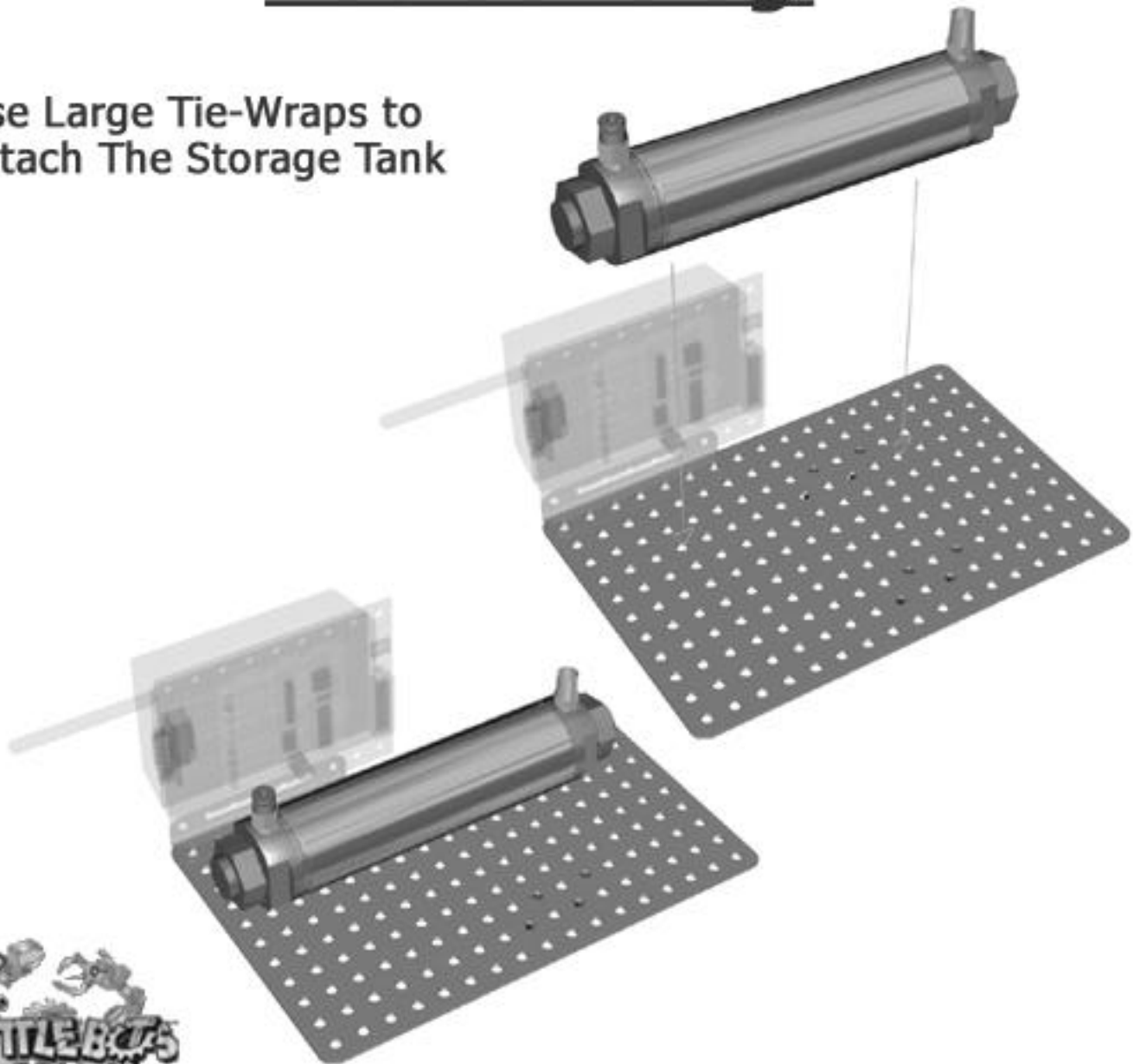
IFI Control System **Assembly**



Educational Engineering System

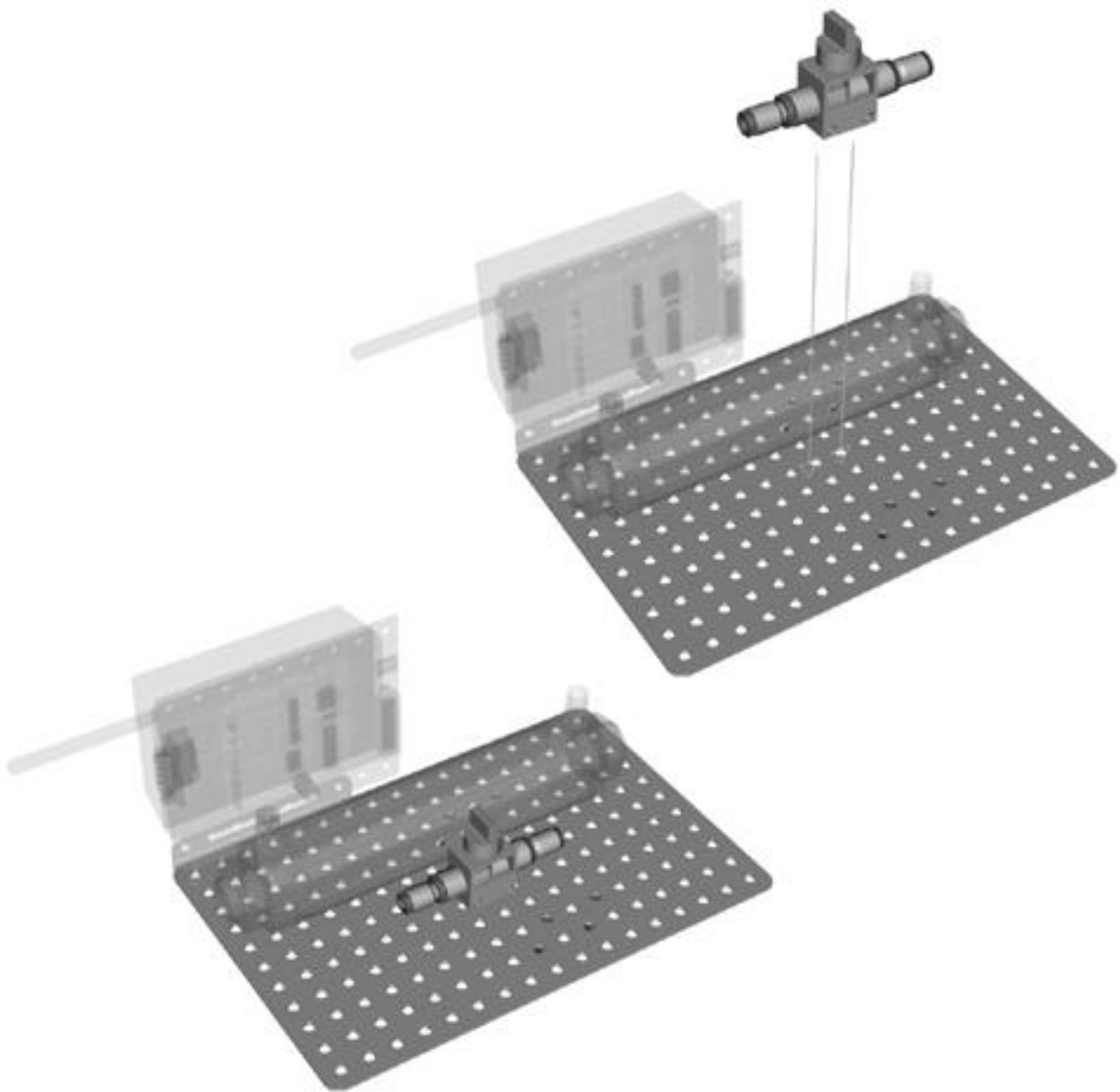
Compressed Air **Storage Tank** **Assembly**

Use Large Tie-Wraps to
Attach The Storage Tank



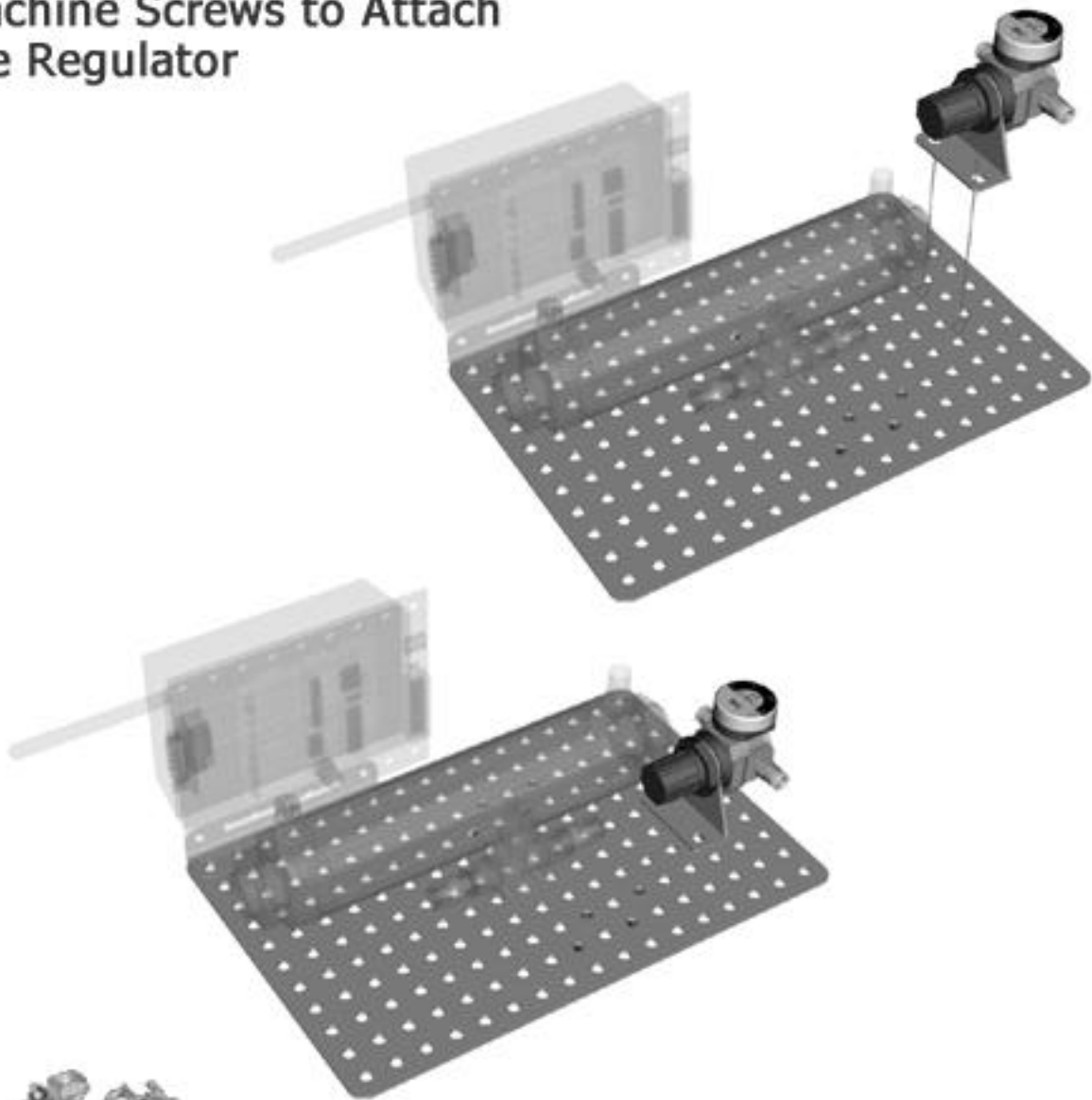
Educational Engineering System

Thumb Valve **Assembly**



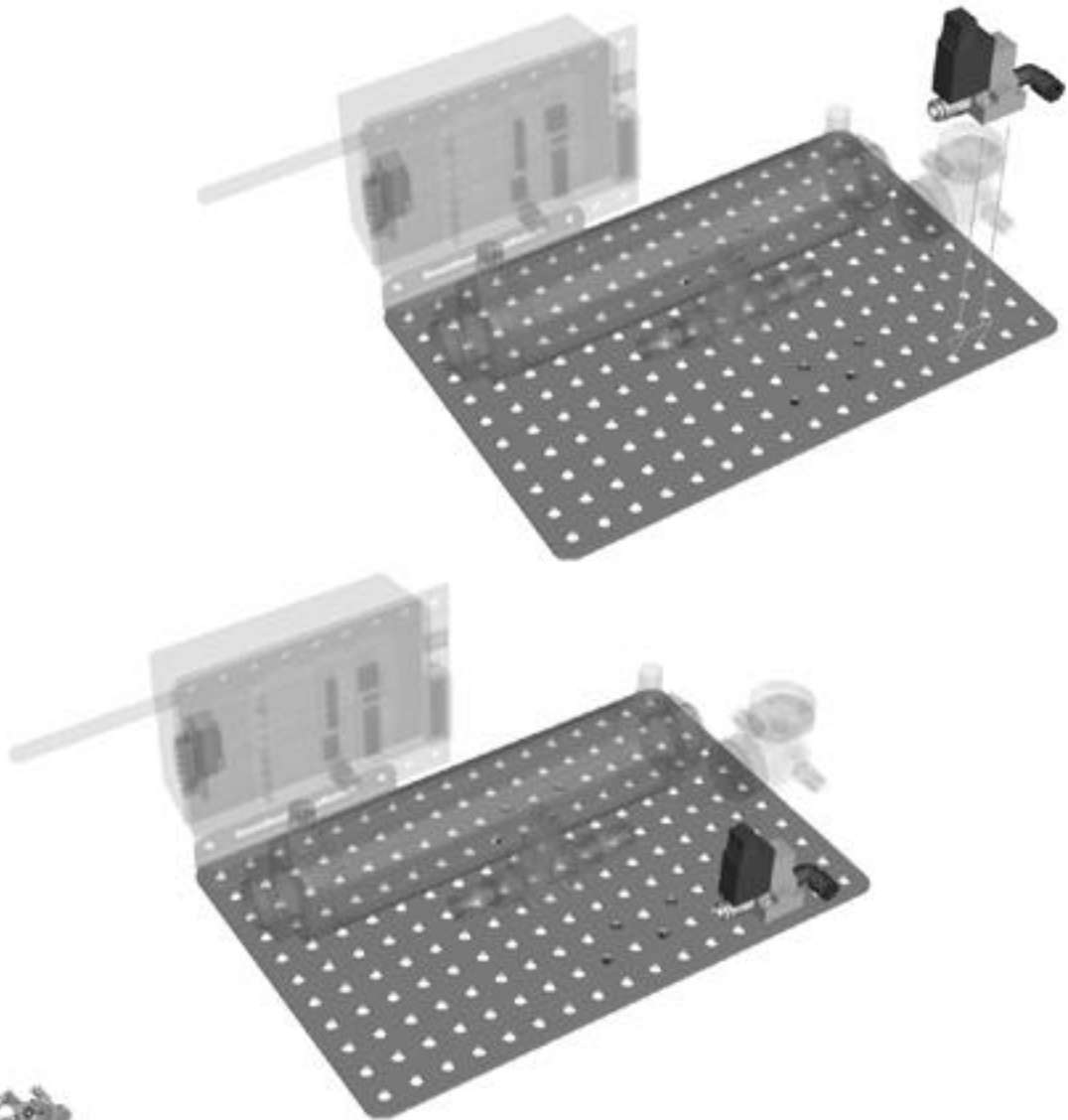
Regulator Assembly

Use #10-32 x 3/8"
Machine Screws to Attach
the Regulator



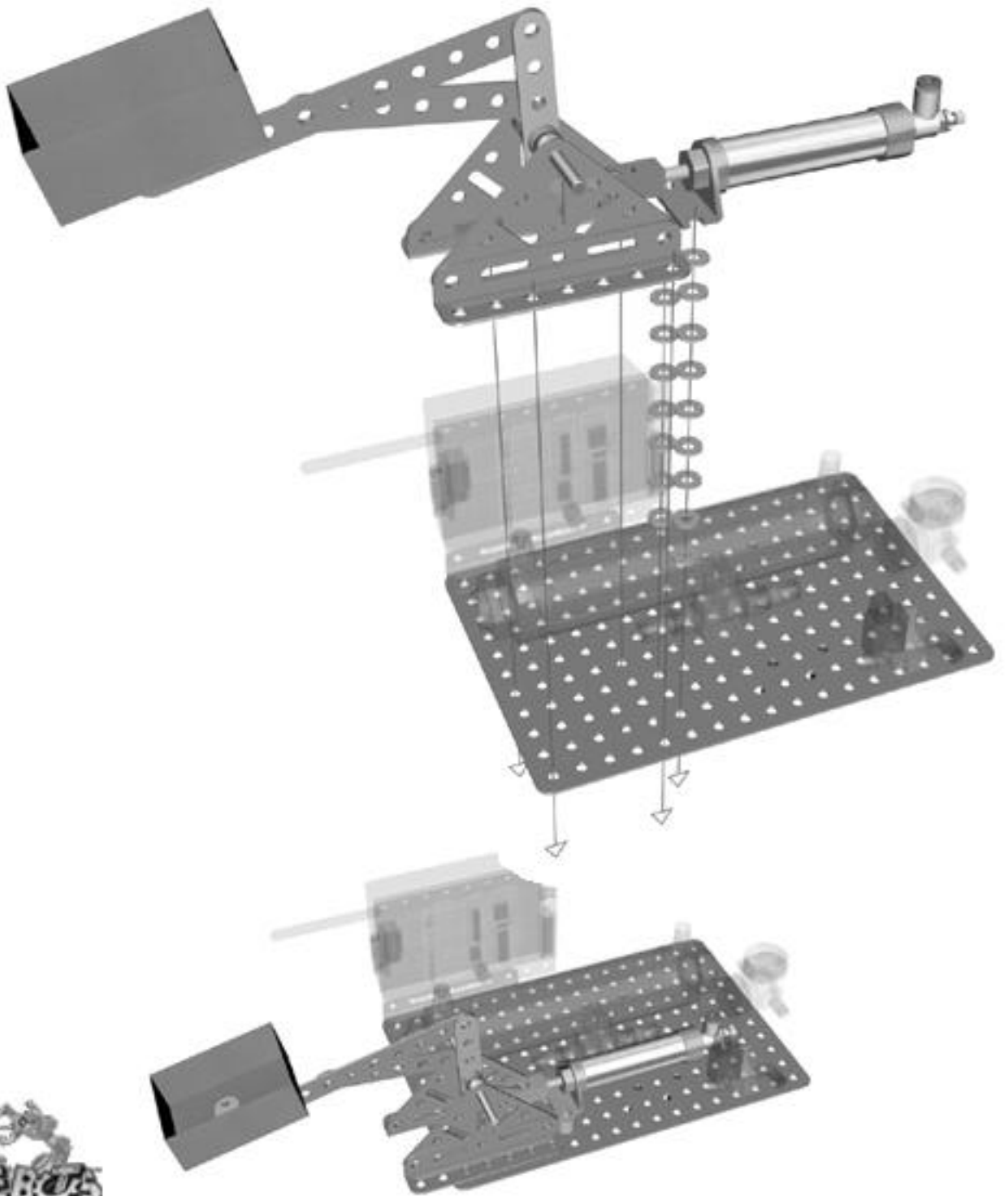
Educational Engineering System

Solenoid Valve **Assembly**



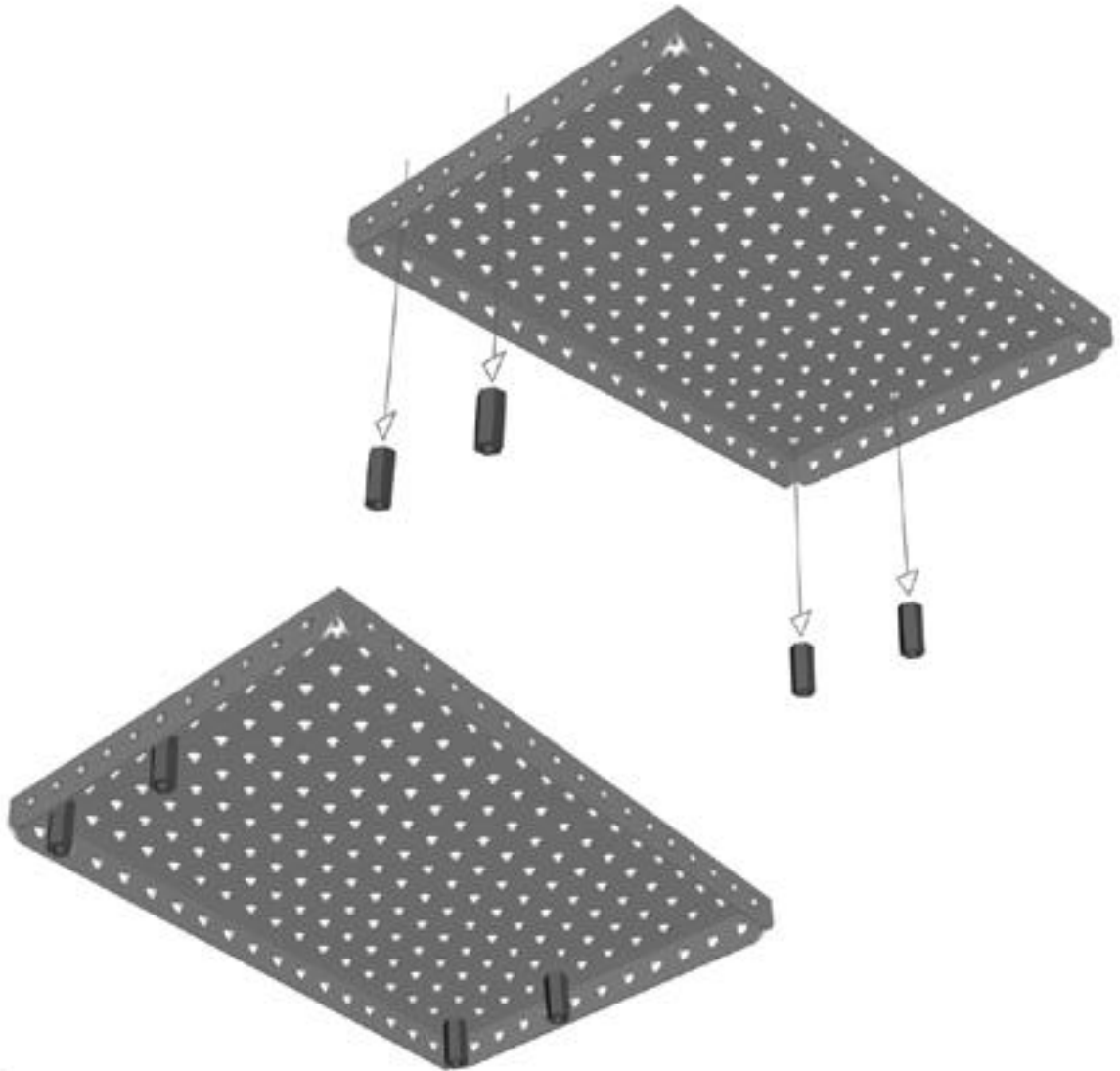
Educational Engineering System

Catapult Assembly



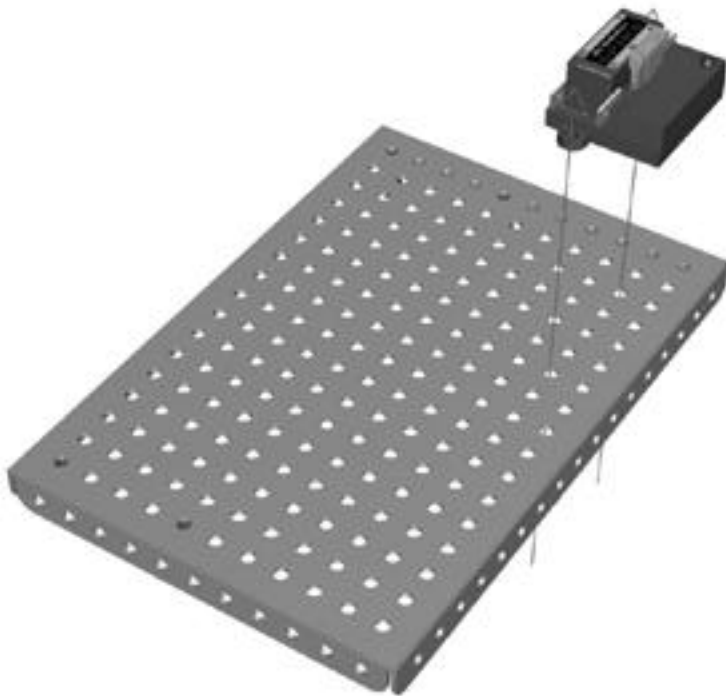
Educational Engineering System

Bottom Plate **Standoff Assembly**



Educational Engineering System

IFI Spike Assembly



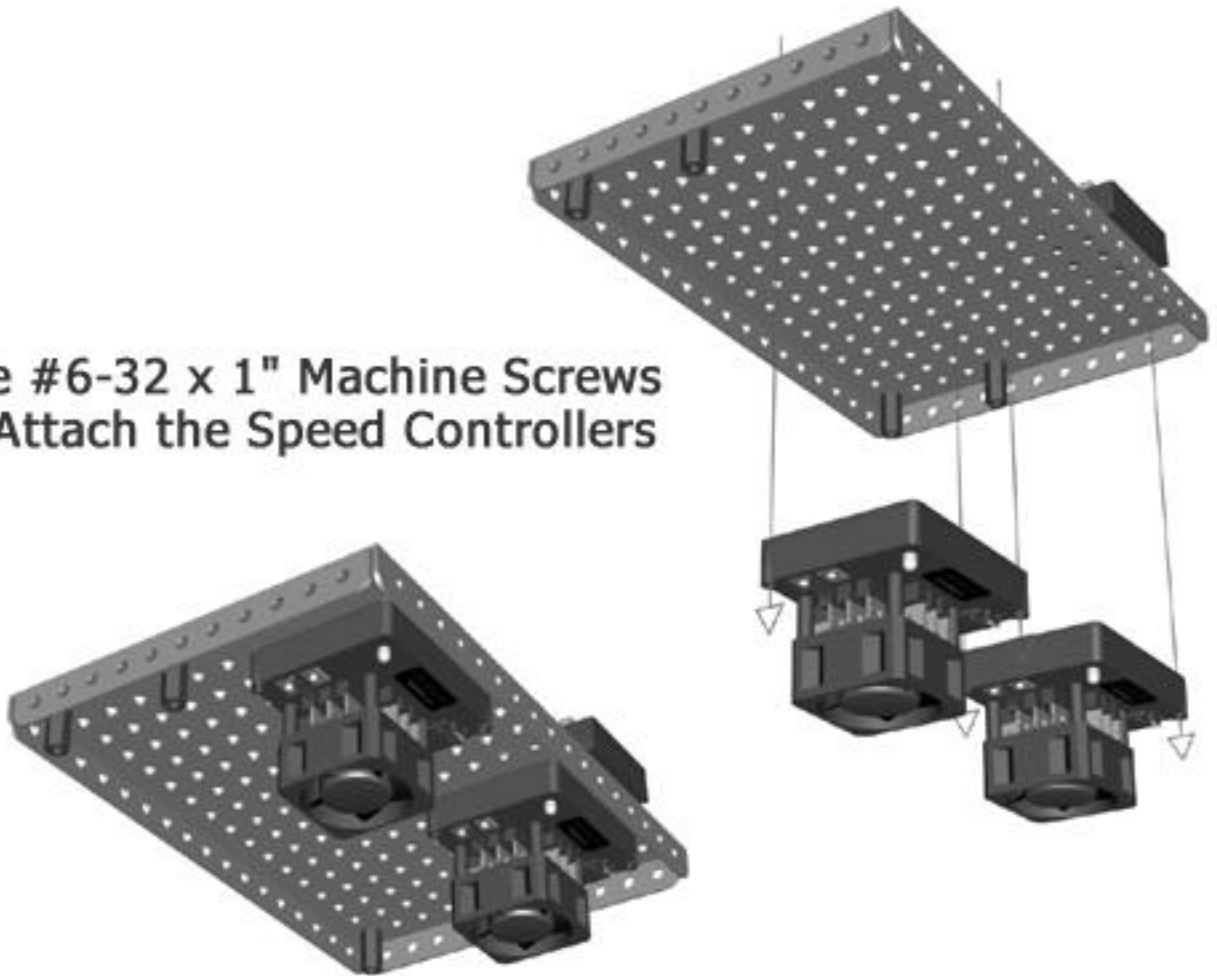
Use #10-24 x 3/8"
Machine Screws to
Assemble the IFI Spike



Educational Engineering System

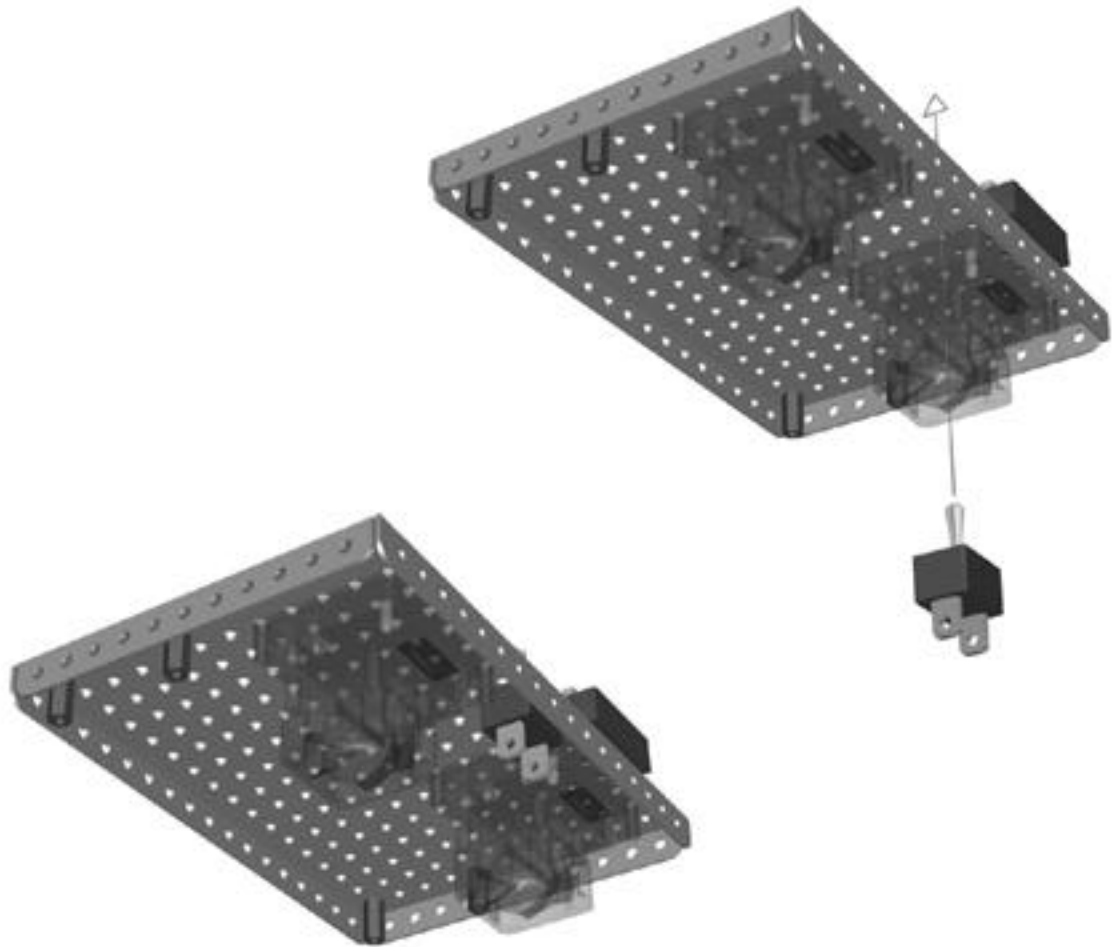
IFI Speed Controller Assembly

Use #6-32 x 1" Machine Screws
to Attach the Speed Controllers



Educational Engineering System

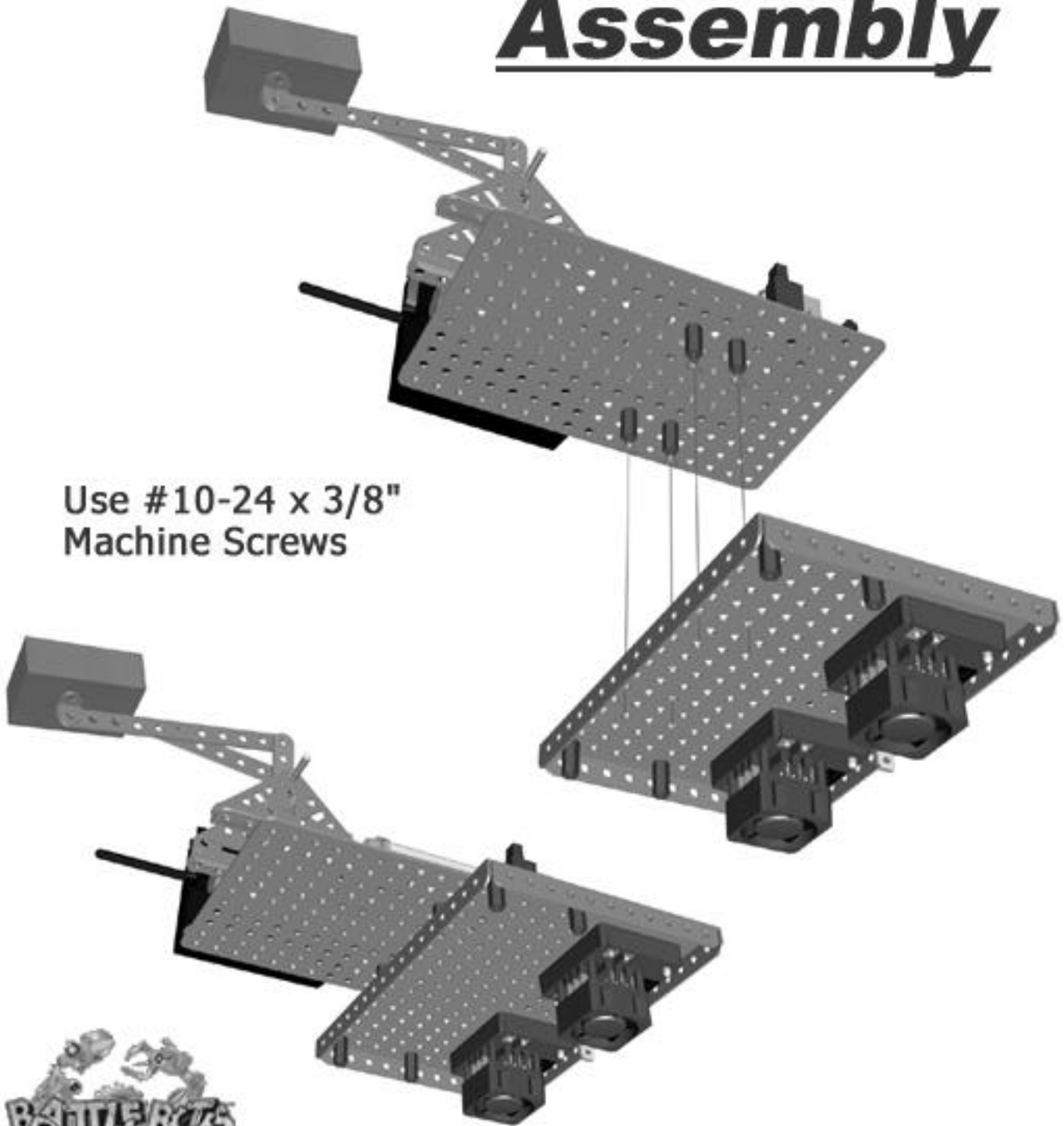
Switch Assembly



Educational Engineering System

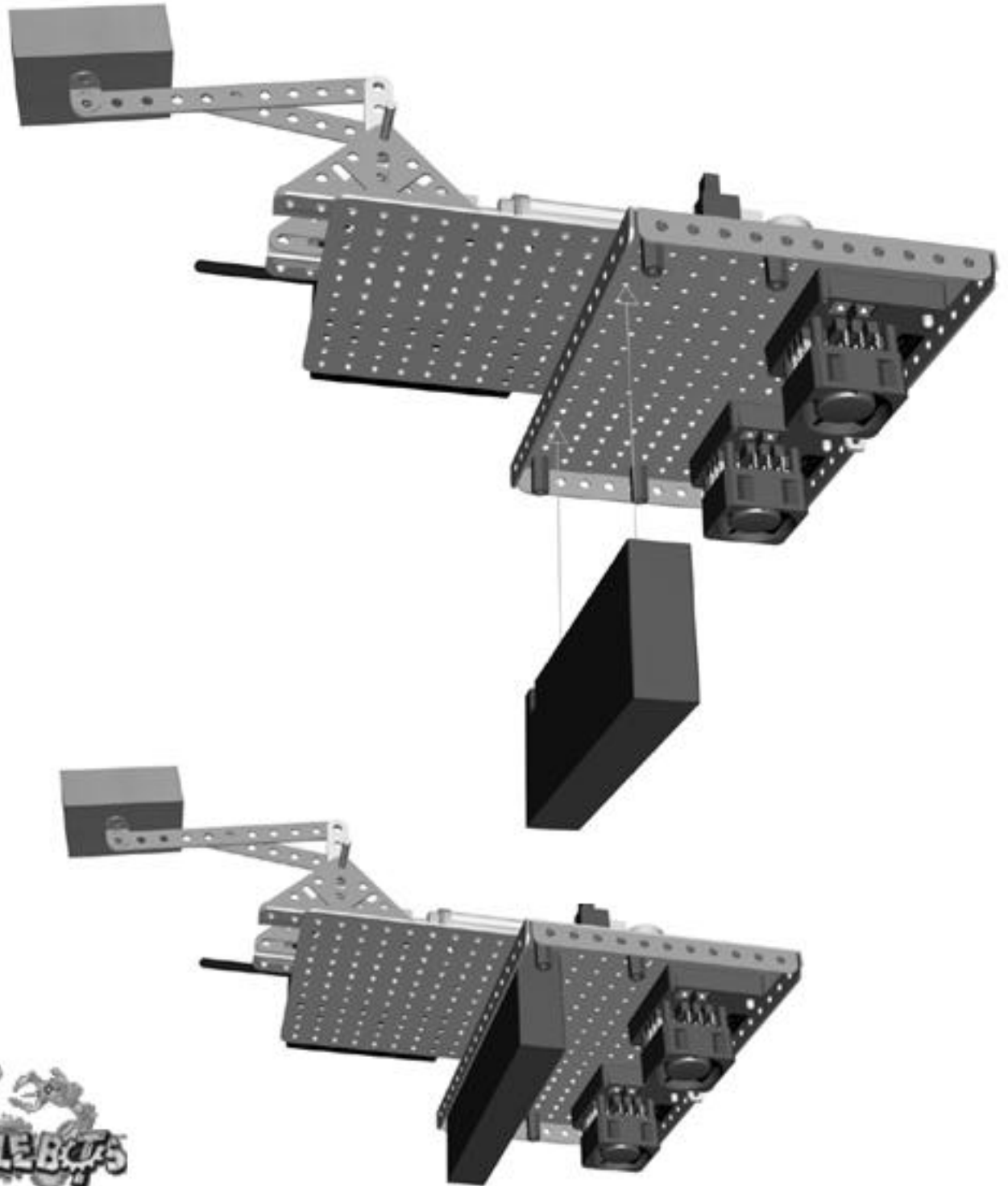
Chassis Tier Assembly

Use #10-24 x 3/8"
Machine Screws



Educational Engineering System

Battery Assembly



Educational Engineering System

Drive System **Integration**

Note: Add #25 Pitch
Chains After
assembling Drive Systems



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