

# GEAR BOX BUILD

## PARTS REQUIRED

- Two Hole Plates
- Five 12in (300mm) Dowels
- One 10, 20, 40 and 50 Tooth Gear
- Two Stop Clips
- One #10 Washer

## TOOLS REQUIRED

Cutters: Multicutters, pruning shears or a saw

Safety Glasses



Phillips Screwdriver

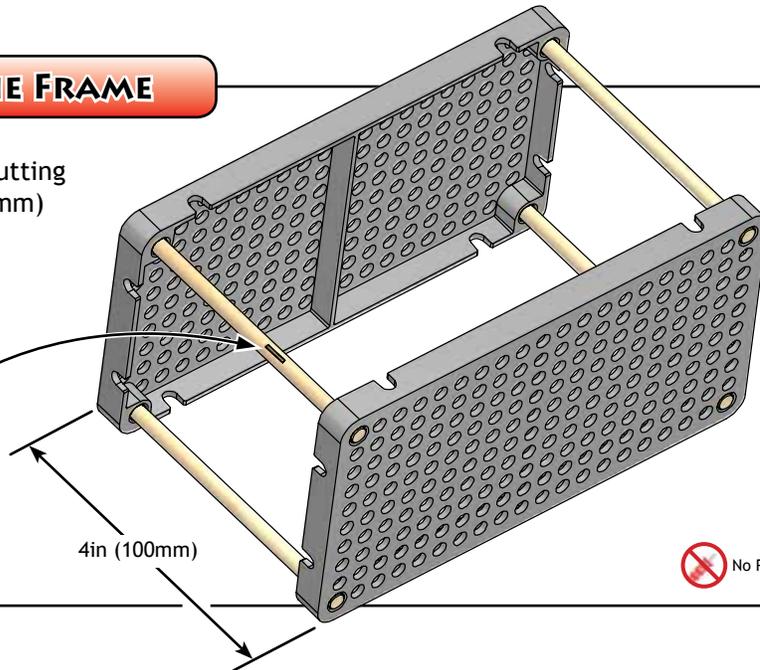


Pliers or a wrench to grip #10 square Nuts

## 1. CREATE THE FRAME

Create the frame by cutting and inserting 4in (100mm) dowels into hole plate corners.

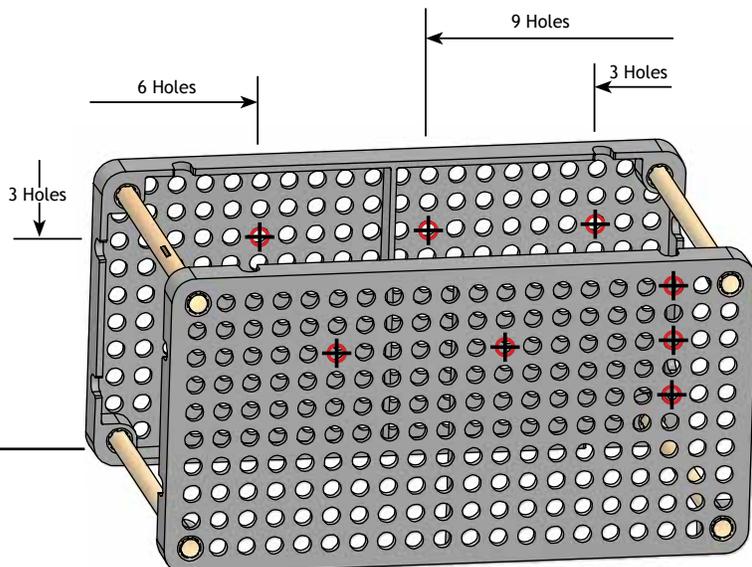
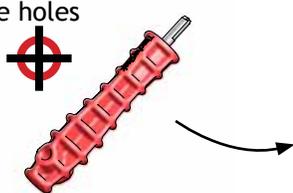
Tip: Make a mark on this dowel. It will be used as a reference.

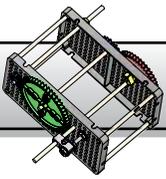


## 2. REAM THE FRAME

Ream the holes in the frame in which dowels will need to spin freely.

Only Ream the holes shown with a





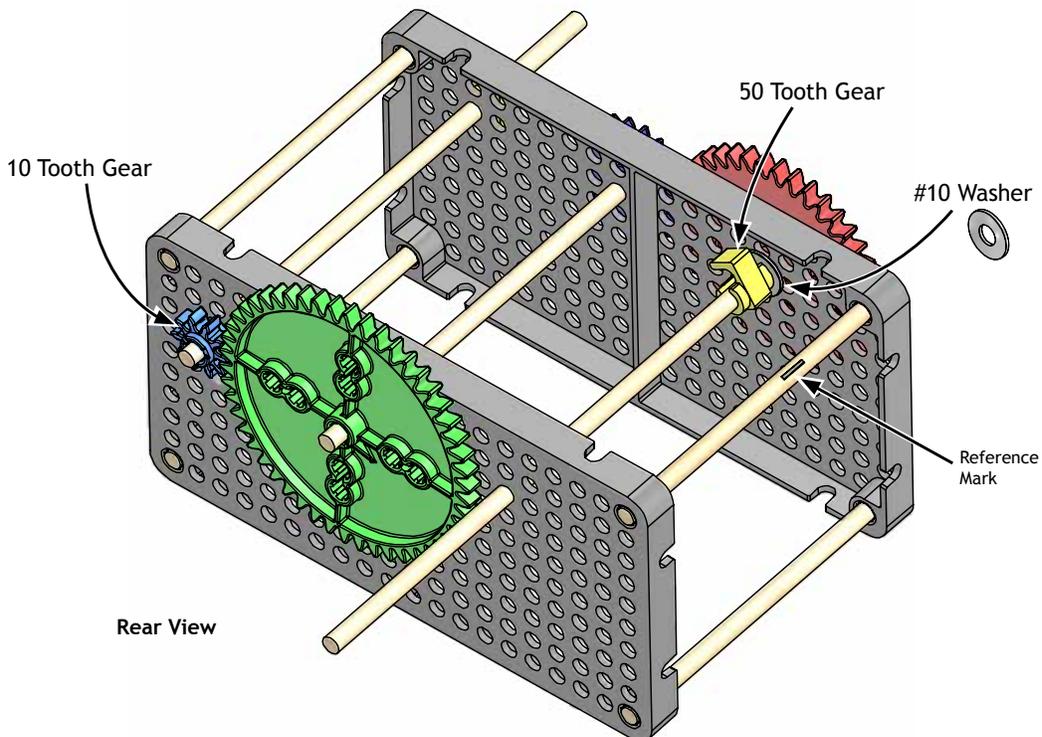
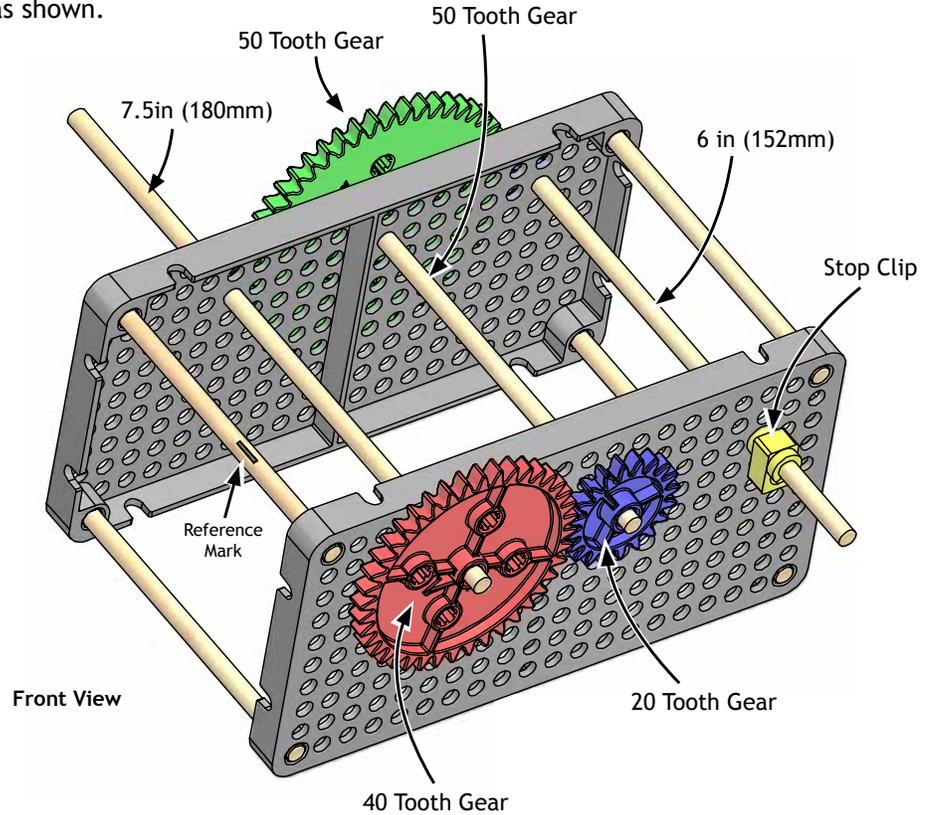
## 3. GEAR IT

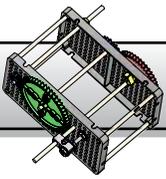
Create a gear transmission as shown.



Caution:  
Do not ream  
the Gear Holes

Tip: Allow gears to spin freely by keeping them 1/16in (4mm) away from the hole plate.





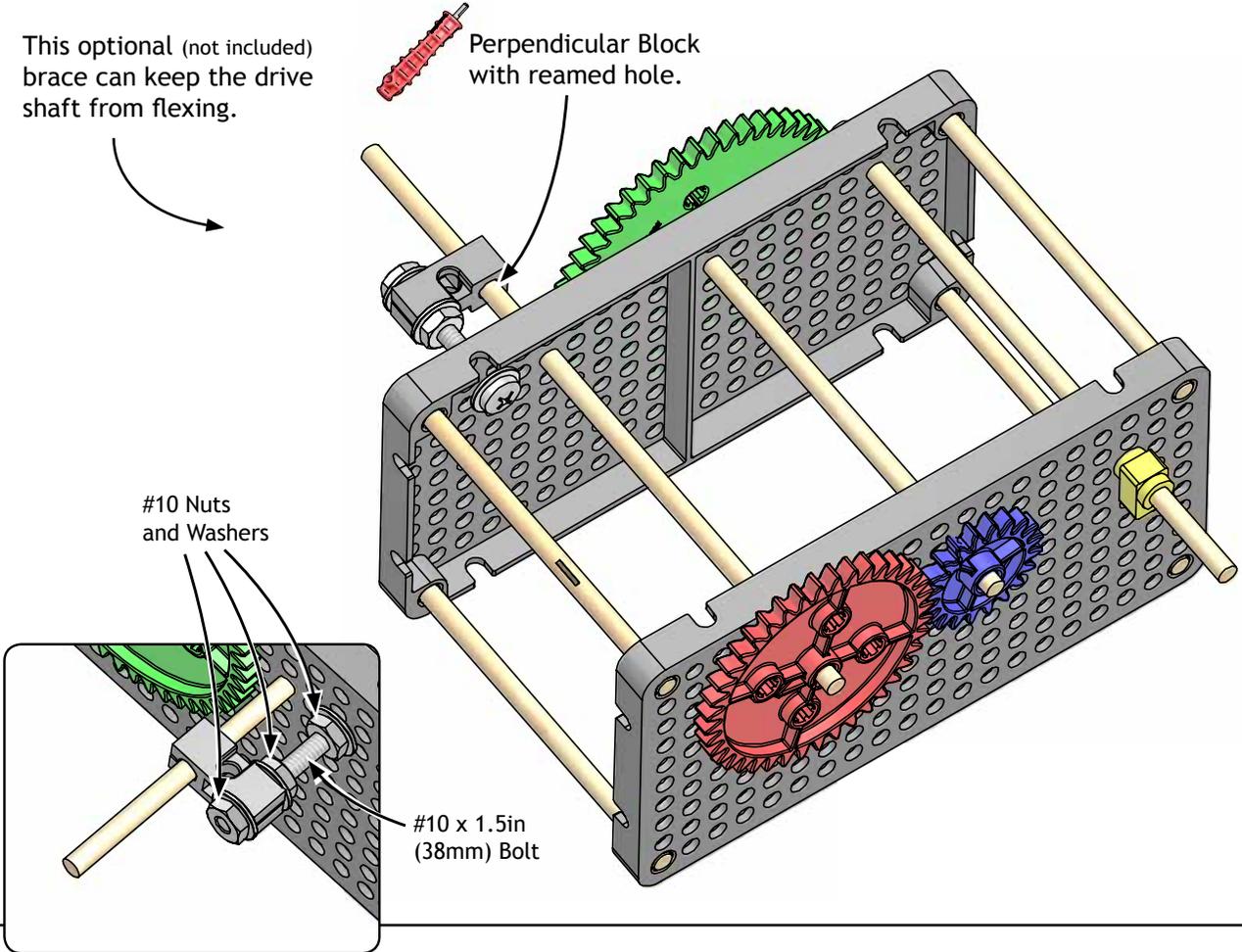
## 4. OPTIONAL DRIVE SHAFT BRACE

This optional (not included) brace can keep the drive shaft from flexing.

Perpendicular Block with reamed hole.

#10 Nuts and Washers

#10 x 1.5in (38mm) Bolt



The Gear Box is done!

## 5. EXPERIMENT. IMPROVE IT.

Experiment! Create your own design to best fit your turbine and increase efficiency.

