

Top Lab

Theme: Just for Fun

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Purpose

This lab was designed to investigate what keeps a top standing. This lab will test three types of tops to see which will stay standing the best.

Constructing the Tops

Parts:

- 3: Length 10 Axle
- 1: Large Wheel
- 1: 40 Tooth Gear
- 1: Length 16 Brick
- 2: Technic $\frac{3}{4}$ Pins
- 1: Technic Belt Wheel

Instructions for the Wheel based Top:





Slide a large wheel on to a length 10 axle.

Instructions for the Gear based Top:



Slide a 40 tooth gear on to a length 10 axle.

Instructions for the Beam based Top:

<p>1</p> 	<p>2</p> 
<p>Slide a technic belt wheel onto a length 10 axle. Attach two technic $\frac{3}{4}$ pins to the belt wheel.</p>	<p>Attach a length 16 beam as shown.</p>

Questions

1. How does the wheel based top compare to the gear based top? How well do they spin?
2. How would it work if you used a smaller wheel?
3. How did the beam based top spin?