



# #SkillsAtHome Challenge Series

## Challenge #12: Simple Machines

This challenge brought to you by:



*This program is funded by the Government of Ontario.*



Program Sponsors



Challenge Sponsors

**Challenge**—Your challenge is to create a device out of household materials that will make your life easier using two or more of the six ‘simple machines’; Inclined Plane, Wheel & Axle, Screw, Pulley, Lever and Wedge.

For example, you could create a device using levers and pulleys to turn off a light switch from the other end of the room! Or maybe use an inclined plane with a pulley system to lift an object.

<https://www.youtube.com/watch?v=LSfNYpCprw4>

## Challenge Materials

Any available household materials!

## Challenge Rules

1. First create a blueprint design of your device. Your blueprints should include a legend, be drawn with a straight-edge rule, and should have the two or more ‘simple machines’ labeled.
2. Your simple machine must be something that makes your “day-to-day” life easier, include what its purpose is on your blueprint designs.
3. Your submission must also include a video of your device completed the task it was built for
4. Once you are done, upload a photo to Twitter. Follow & Tag @SkillsOntario and use the hashtags #SkillsAtHome and #SkillsSimpleMachinesChallenge.

**Skills:** Creativity, Problem-Solving, Planning, Design

**Skilled Trades/Technologies:** Industrial Mechanic Millwright  
[Click here for a full list of all recognized Ontario skilled trades](#)

## Judging/Scoring

Submissions will be marked in the following:

<b>Simple Machine and Creativity</b>	<b>Points</b>
Challenger Submission included only one simple machine	5 points
Challenger submission included two simple machines but no task	10 points
Challenger submission included two simple machines completing a task	15 points
Challenger submission included all requirements and exceeded standards	20 points
<b>Total Marks (Total out of 20)</b>	

<b>Design Plans</b>	<b>Points</b>
No Plan was provided	5 points
Challenger had plans with measurements.	10 points
Plans were to scale with measurements outlined. Detailed. Straight edge was used.	15 points
Plans were to scale with measurements outlined. Detailed. Straight edge was used. Legend provided.	20 points
<b>Total Marks (Total out of 20)</b>	

**Challenger Total Marks:      / 40 points**