

Based on what you discovered last week, answer the following questions.

When a generator is rotating slowly, does it produce more or less energy? _____

When a generator is rotating quickly, does it produce more or less energy? _____

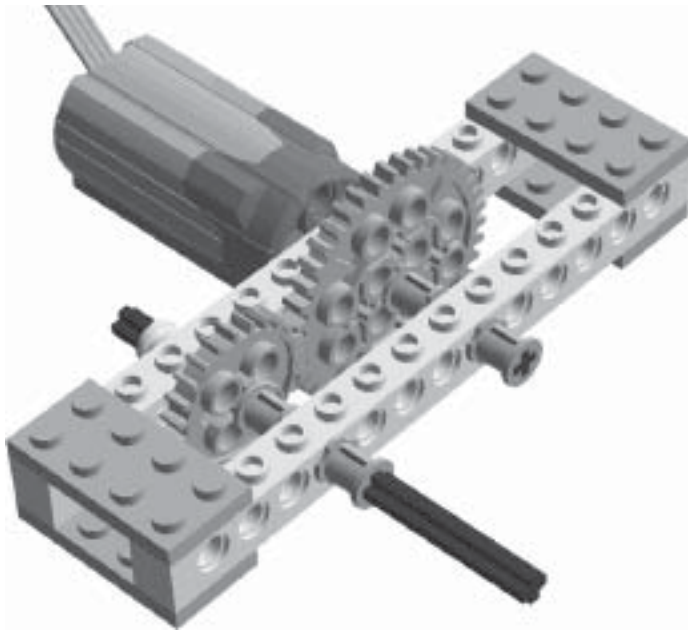
Using gears with a generator

Gears help machines do work. When used together with a generator, gears can make the generator go faster or slower.

The gears to the right are known as Spur gears. They are like a wheel with teeth. When connected teeth to teeth, they will turn in opposite directions.

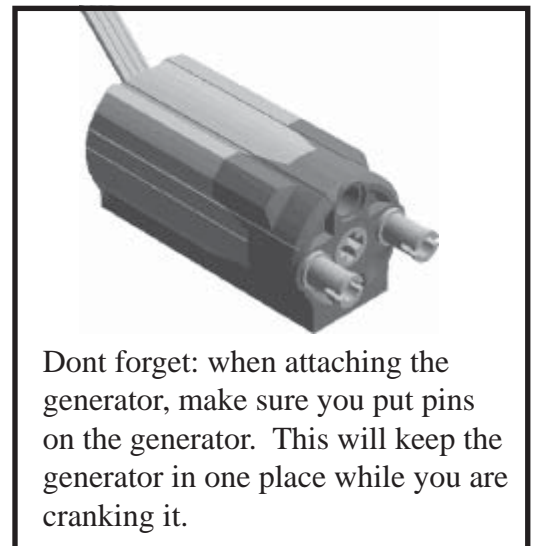


Challenge! - Engineer a Hand Cranking Generator with Gears



Engineer a hand cranking generator that uses gears. See which gear combination works the best to produce the most energy. You will notice that some gear combinations make it very difficult to turn the generator.

Here is one example of a simple generator using gears. See if you can build the example or come up with your own design. Remember, you can experiment with different gear combinations and designs.



What happens when the gear on the generator is the larger of the two gears?

Don't forget: when attaching the generator, make sure you put pins on the generator. This will keep the generator in one place while you are cranking it.