

Name: _____ Date: _____ Class Period: _____

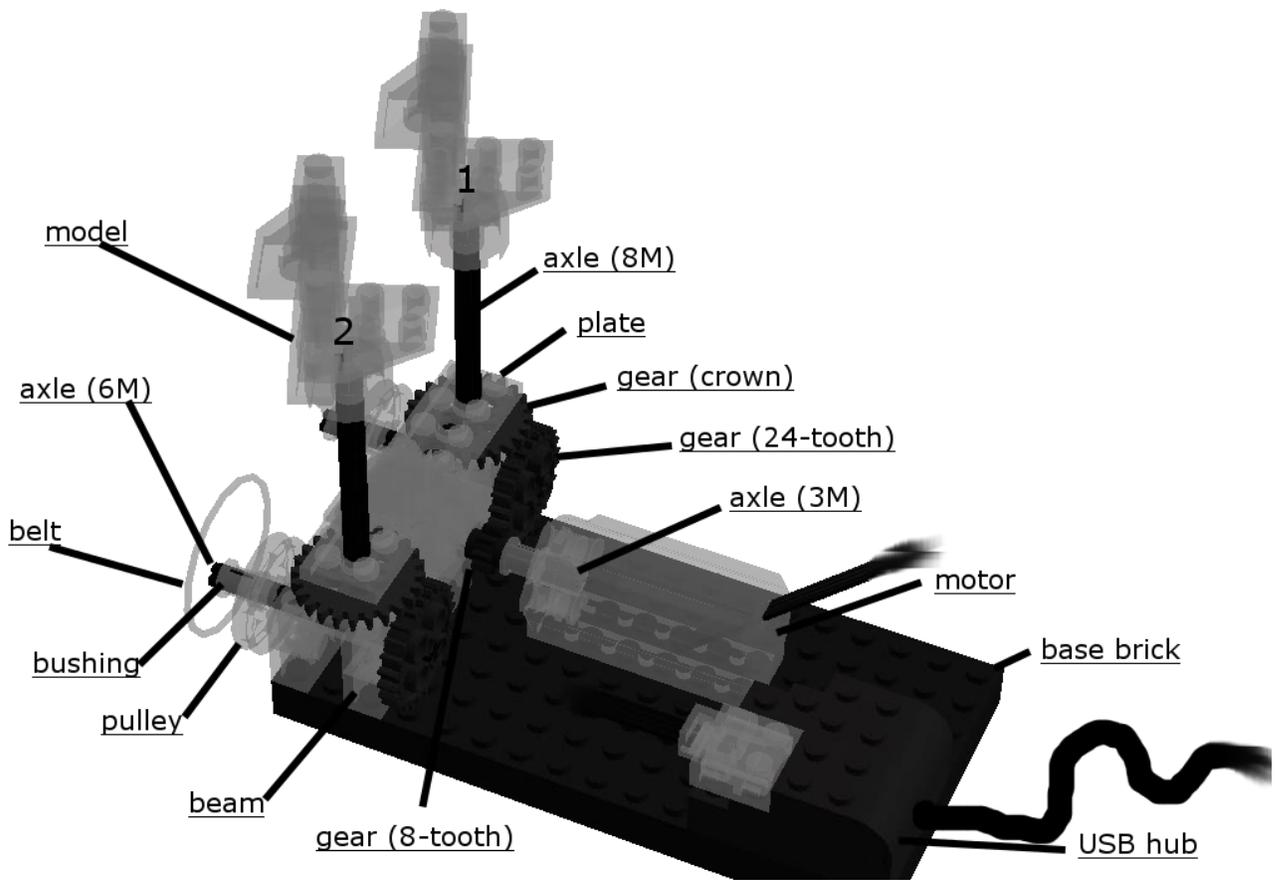
Word Bank:

axle (3-module)
 axle(s) (6-module)
 axle(s) (8-module)
 base brick (8x16)
 beam(s) (1x8)
 belt
 bushing(s)
 gear (8-tooth)
 gear(s) (24-tooth)

gear(s) (crown)
 pulley(s) (or wheel hub)
 plate(s) (2x8)
 program [not shown]
 model(s) [multiple parts]
 motor
 software [not shown]
 USB cable
 USB hub

Part 1:

Label the parts in the schematic diagram.



Part 2:

Explain, piece-by-piece, how the project is put together. (fill in the blanks)

1. The **computer** runs a WeDo program within the WeDo software .
2. The **program** sends signals to the USB hub through the USB cable .
3. When given the signal by the program, the **USB hub** sends power to the motor .
4. A(n) 3-M axle is inserted into the **motor**, so that it spins when the motor spins.
5. The **3-M axle** from the motor is inserted through a(n) bushing and then through a(n) 8-tooth gear .
6. The **8-tooth gear** is meshed to the first of the two 24-tooth gears .
7. Each **24-tooth gear** is meshed with a(n) crown gear at a 90-degree angle.
8. Each **crown gear** is connected to a(n) 8-M axle , pointing up, atop which sits one of the models of a bird.
9. Each **24-tooth gear** also has a(n) 6-M axle through its center, at the other end of which is connected a(n) pulley (or wheel hub) .
10. The two **pulleys** are connected to each other by a(n) belt .

Now explain, step-by-step, how the mechanism works:

When the motor is signaled to spin, it spins the 3-M axle , which spins the 8-tooth gear , which spins the first 24-tooth gear , which then causes several other things to spin: the first crown gear and its connected 8-M axle (and model), and the first 6-M axle and its connected pulley . Then, the first pulley pulls on the belt which causes the second pulley and its connected 6-M axle to spin. This causes the second 24-tooth gear to spin, which meshes with and causes the second crown gear to spin, which finally causes the second 8-M axle and second model to spin.

Now explain this program, block-by-block (write underneath each block):



start program	set motor speed random	turn on motor clockwise	play sound #18 (whistle)	wait random time	turn motor counter-clockwise	play sound #19 (tweet)	wait random time	play sound #7 (grind)	repeat program
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