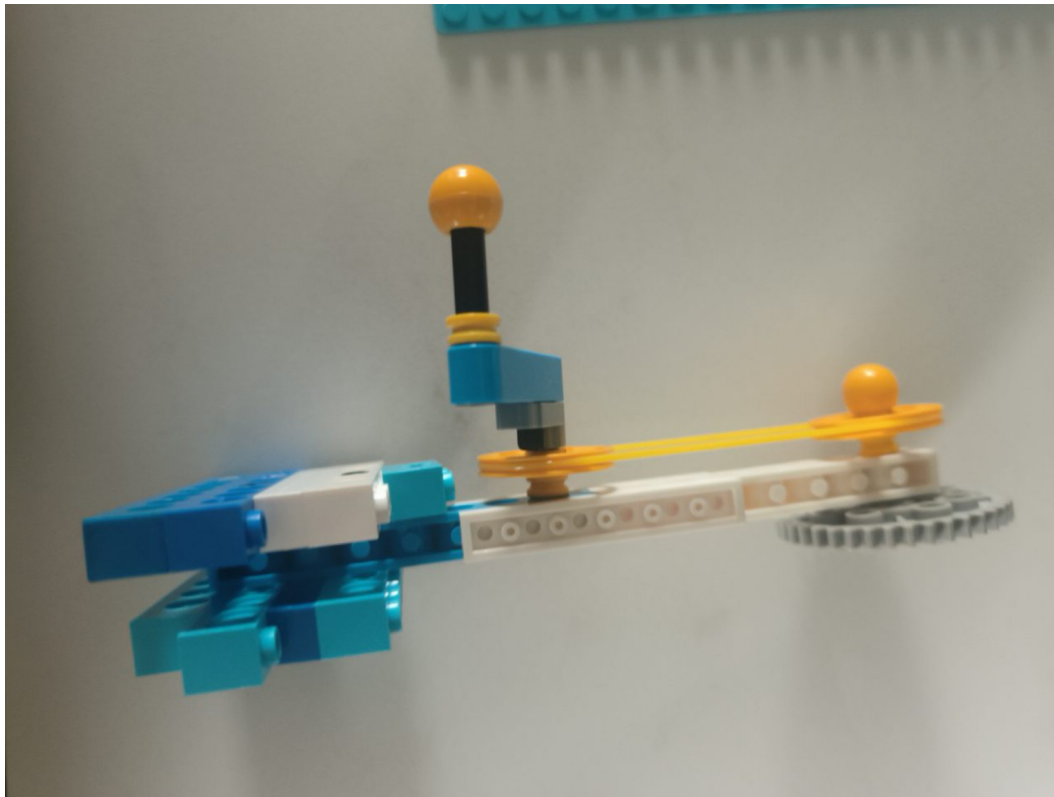


Hand-Crank Belt & Gear Mechanism

LEGO-style photo reconstructed building instructions



MECHANISM

- Hand crank input
- Orange pulley drive
- Yellow elastic belt
- Upper orange pulley
- Large grey output gear
- Rigid blue/white frame

Blue/Cyan beams

base & supports

White beams

upright tower

Orange pulleys

2

Yellow elastic belt

1

Large grey gear

1

Grey/black axles

several

Orange ball ends

handle/stops

Pins/connectors

as shown

Exact element IDs are not visible in the photographs, so this booklet follows the visible hole spacing, geometry and mechanism rather than claiming uncertain part numbers.

1

Build the lower blue base

SIDE CHECK



Make a rigid rectangular lower block. Keep the pin holes aligned as shown in the front view.

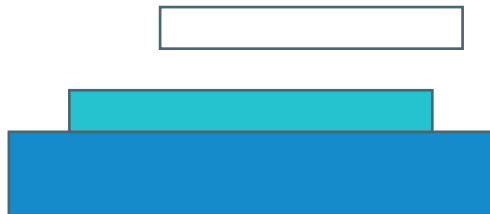
ADD

2 x blue/cyan beam
many x black pins

2

Add the upper white base block

SIDE CHECK



Center the white block above the blue base. This supports the vertical mechanism.

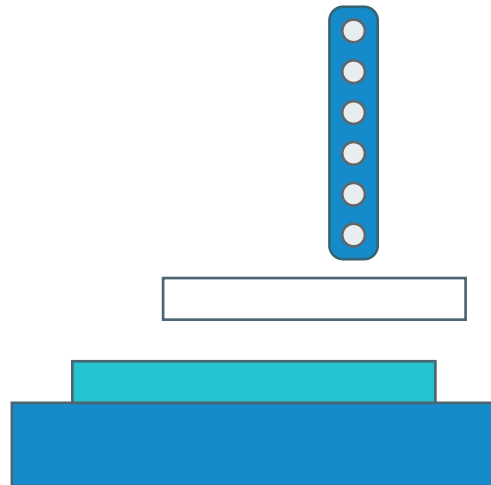
ADD

1 x white beam/block

3

Install the central blue upright

SIDE CHECK



Fix the blue upright vertically in the center of the base.

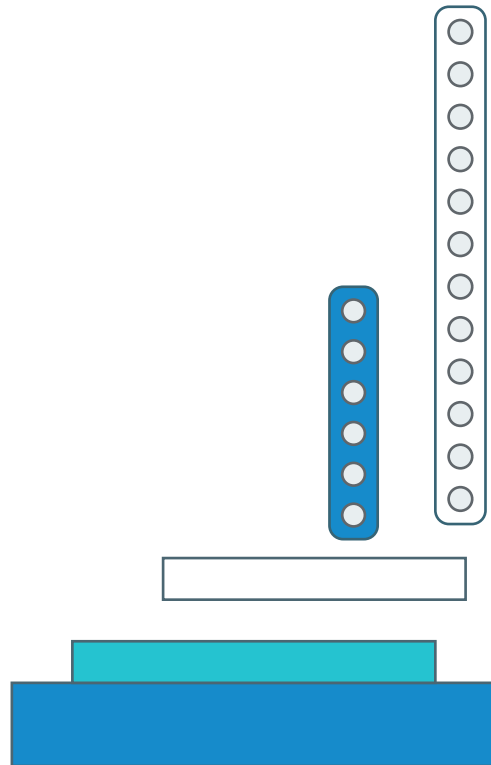
ADD

1 x blue upright beam

4

Add the long white tower

SIDE CHECK



Attach the white beam vertically behind/alongside the blue upright. Keep it straight.

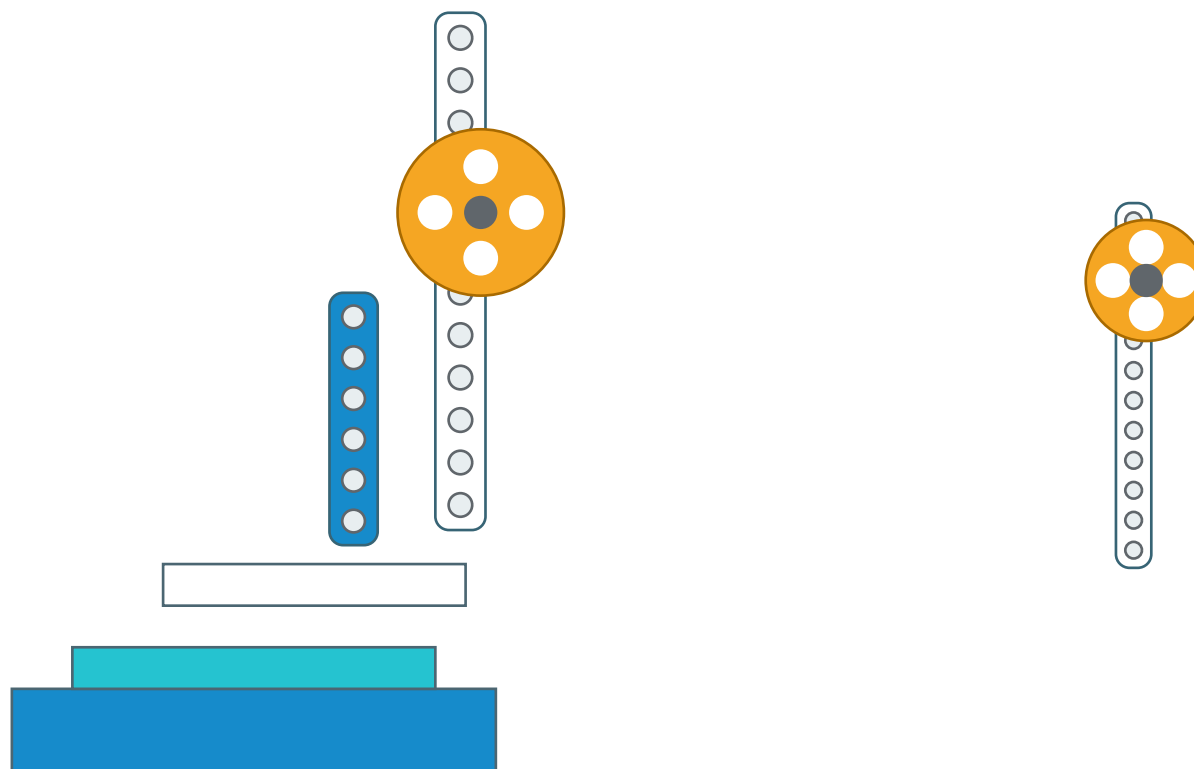
ADD

1 x long white beam

5

Add the lower orange pulley axle

SIDE CHECK



Place the first orange pulley around the lower-middle section of the tower.

ADD

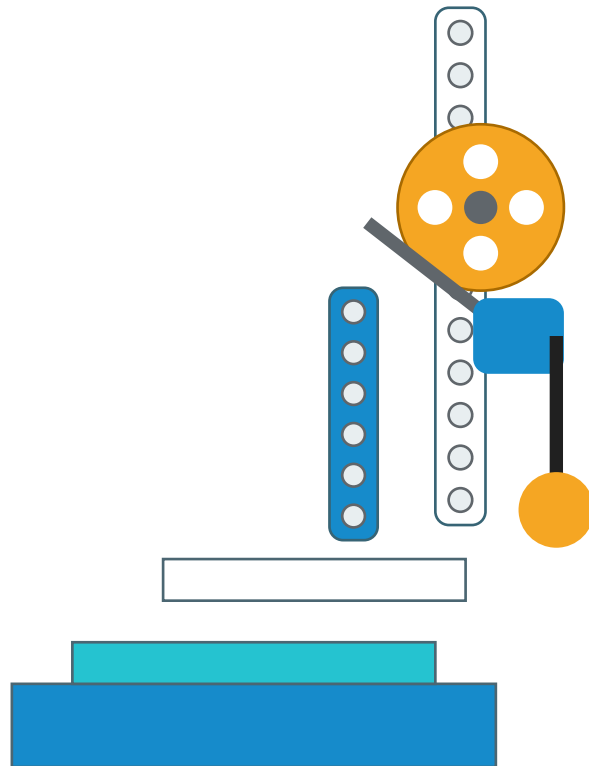
1 x orange pulley

1 x axle

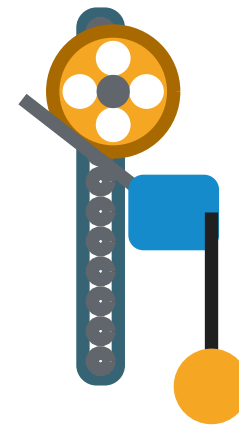
6

Build the crank arm

SIDE CHECK



Build the hand crank with the orange ball grip at the end.



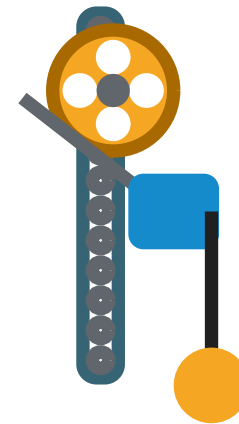
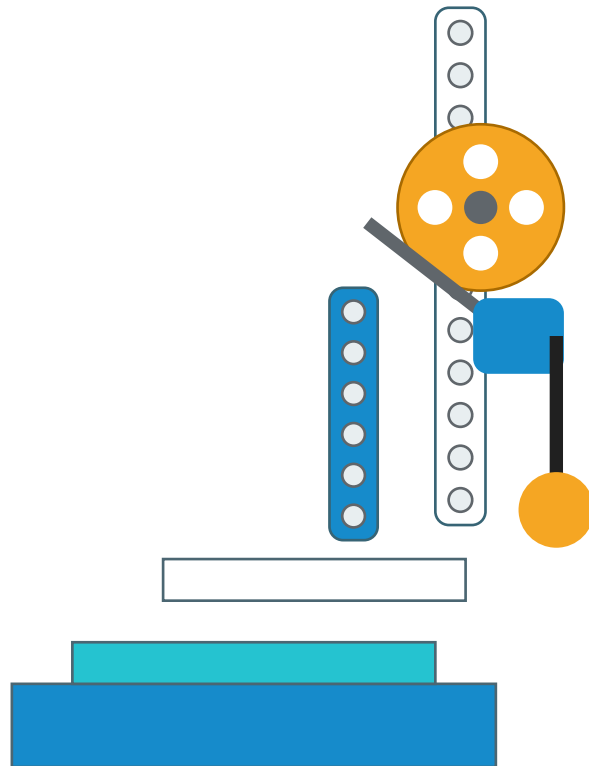
ADD

- 1 x blue crank beam
- 1 x black axle
- 1 x orange ball

7

Connect crank to lower pulley

SIDE CHECK



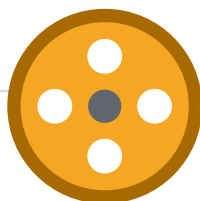
Connect the crank axle to the lower orange pulley so turning the handle rotates the pulley.

ADD

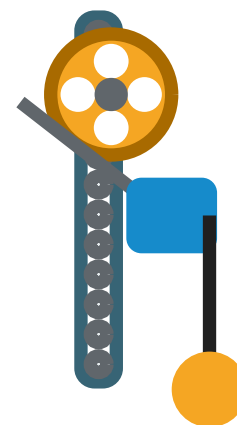
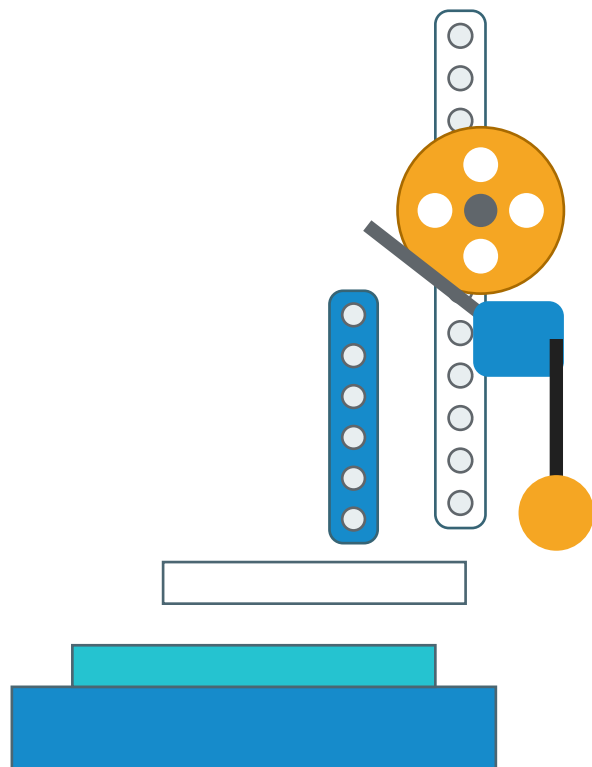
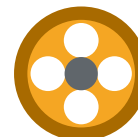
1 x axle connector

8

Install upper pulley



SIDE CHECK



Mount the second orange pulley at the top of the white tower.

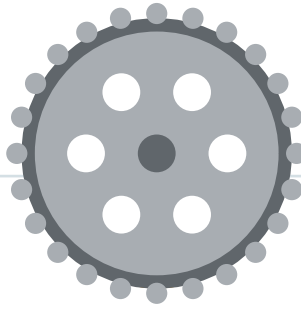
ADD

1 x orange pulley

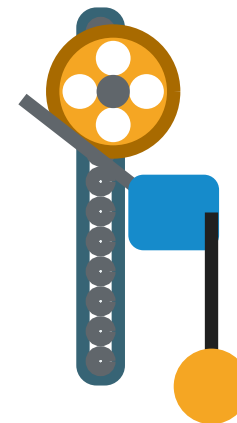
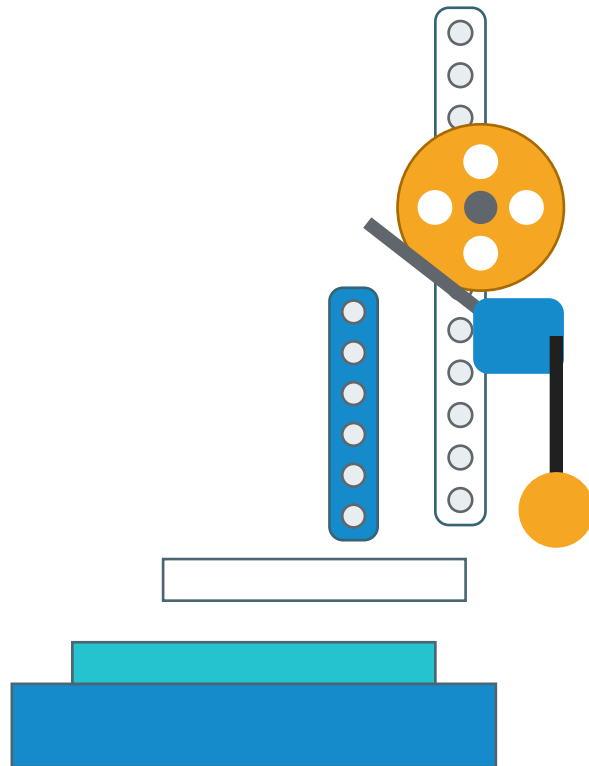
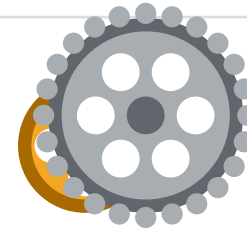
1 x axle

9

Add large grey gear



SIDE CHECK



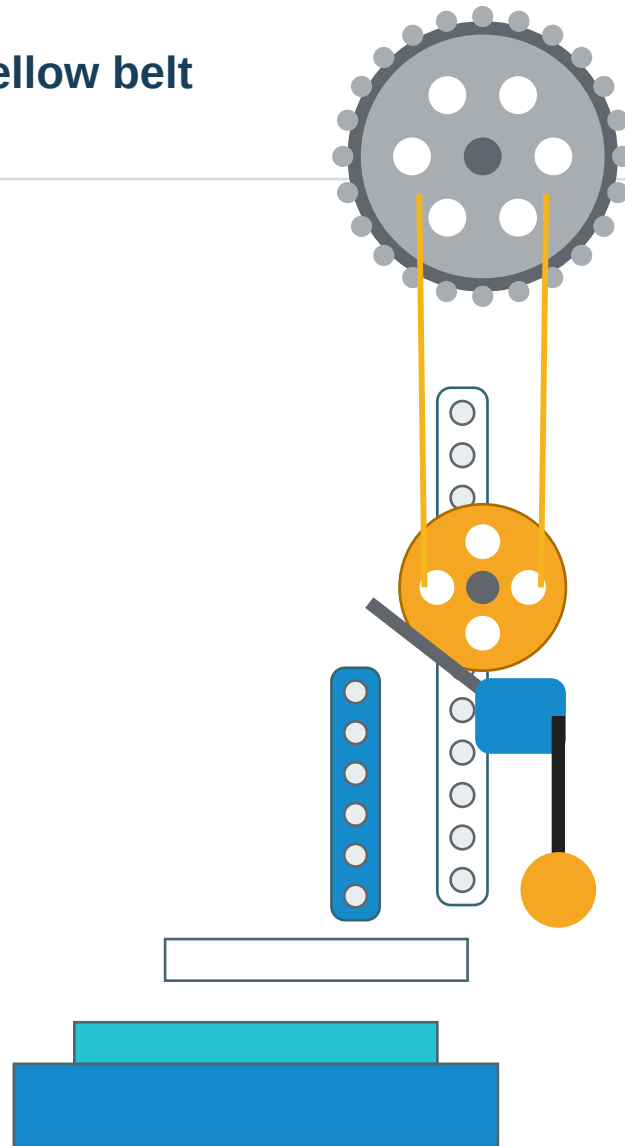
Fit the grey gear coaxially at the top, behind the upper pulley as seen in the side views.

ADD

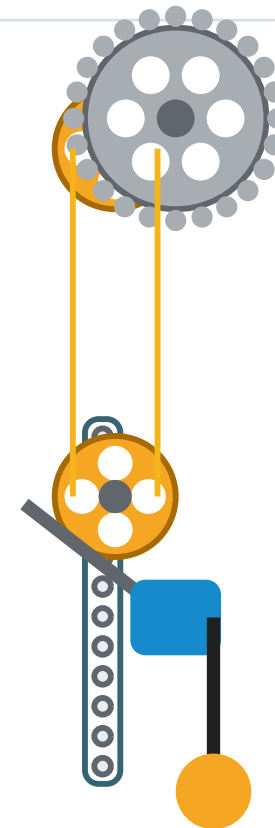
1 x large grey gear

10

Fit yellow belt



SIDE CHECK



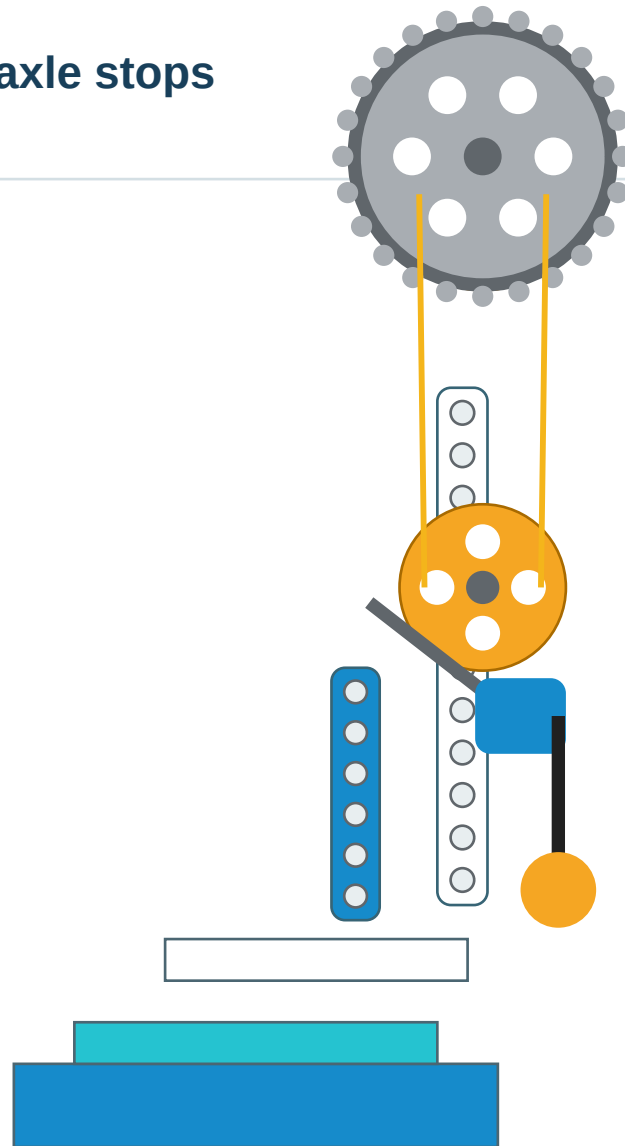
Loop the belt around both orange pulleys. It should be taut but not overstretched.

ADD

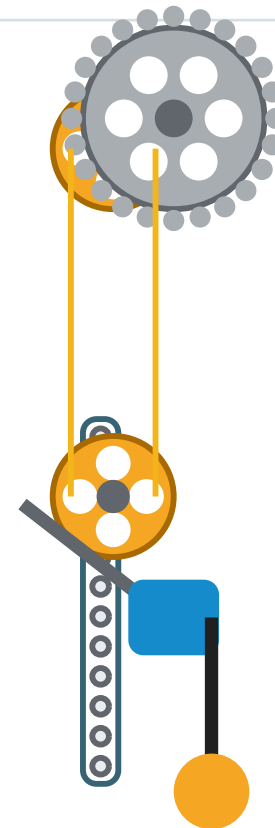
1 x yellow elastic belt

11

Add axle stops



SIDE CHECK



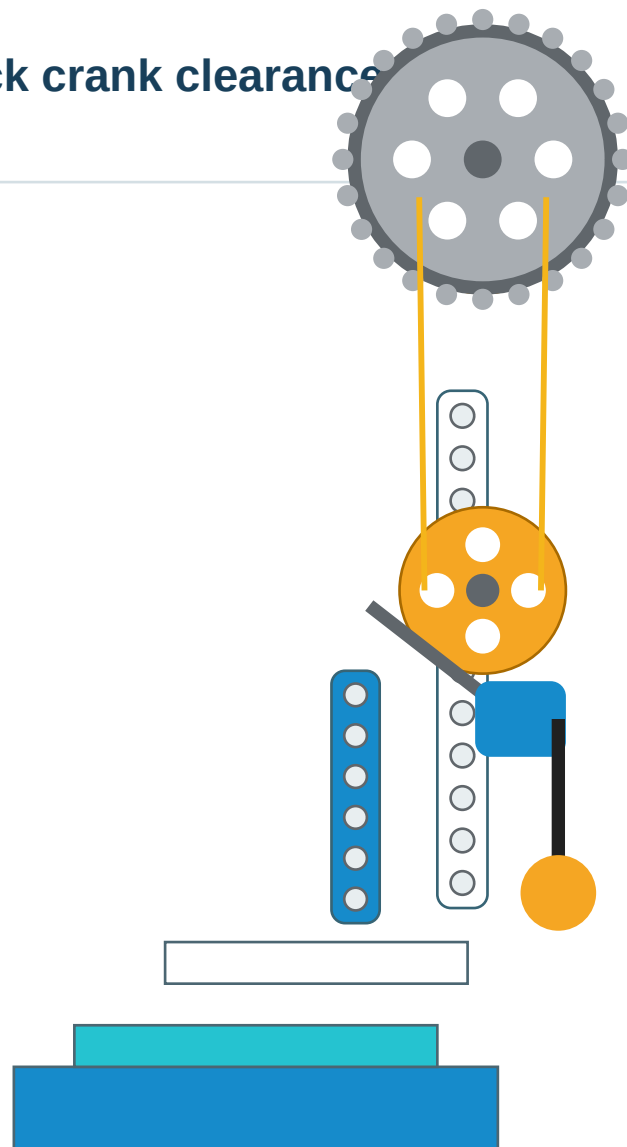
ADD

2+ x bush/ball stop

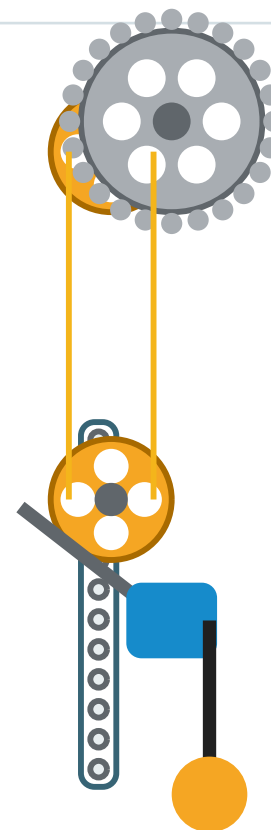
Secure the pulley and crank axles so they cannot slide sideways.

12

Check crank clearance



SIDE CHECK



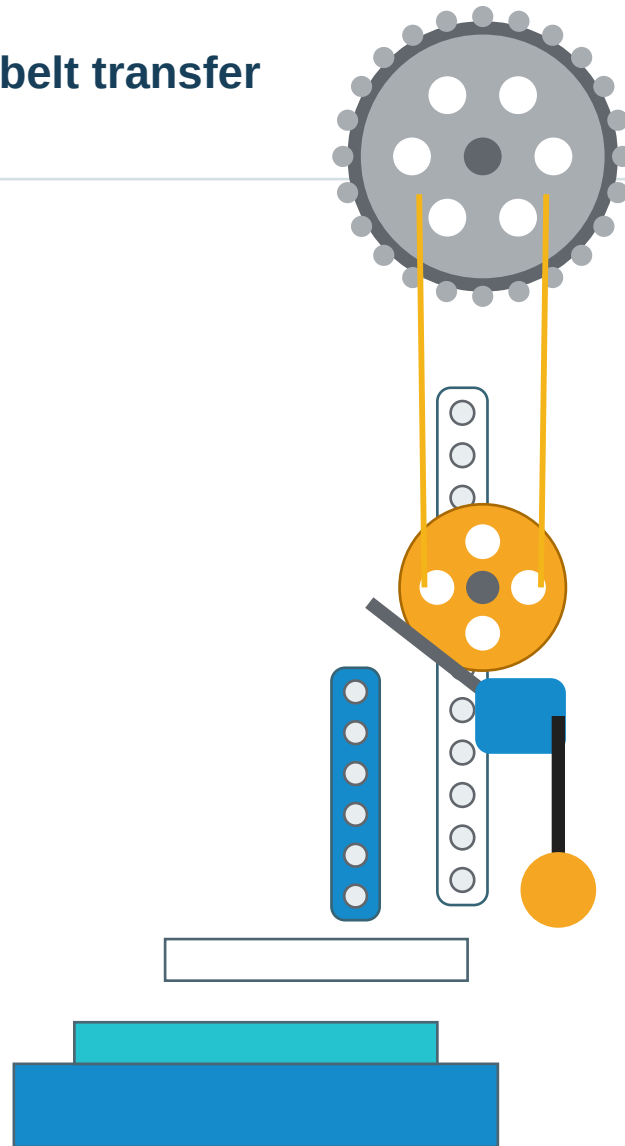
Rotate the orange handle through a full circle. It must not strike the base or tower.

ADD

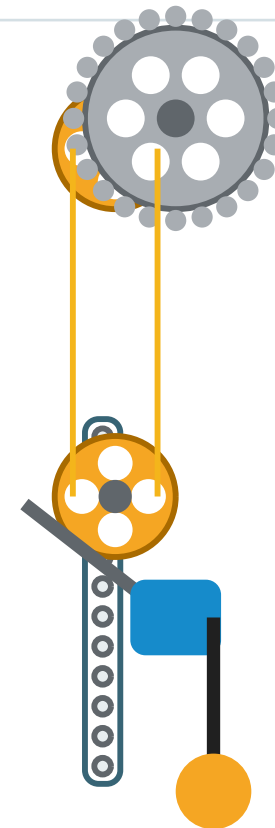
0 x new parts

13

Test belt transfer



SIDE CHECK



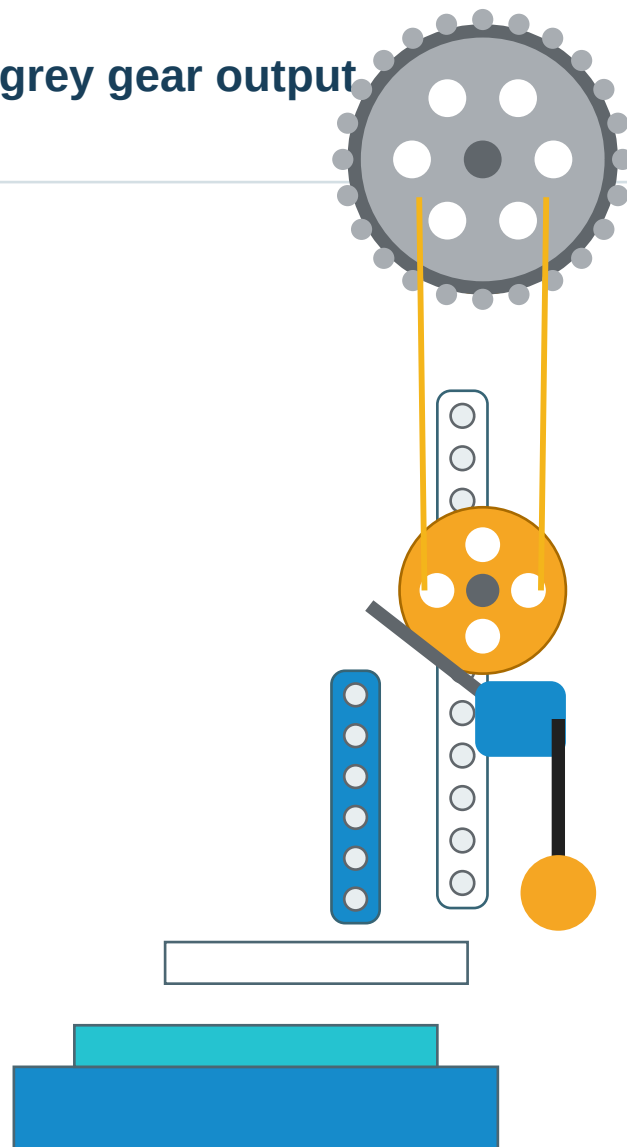
Turn the crank slowly. The lower pulley should drive the upper pulley without the belt slipping.

ADD

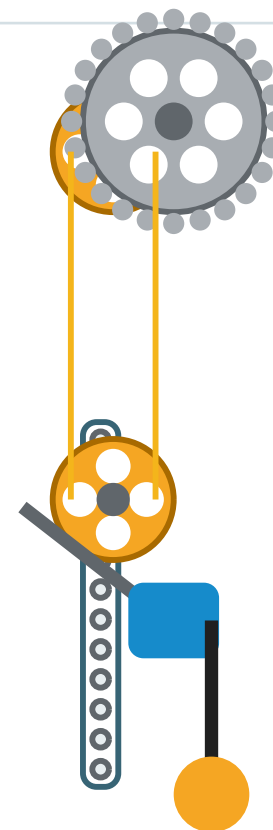
0 x new parts

14

Test grey gear output



SIDE CHECK



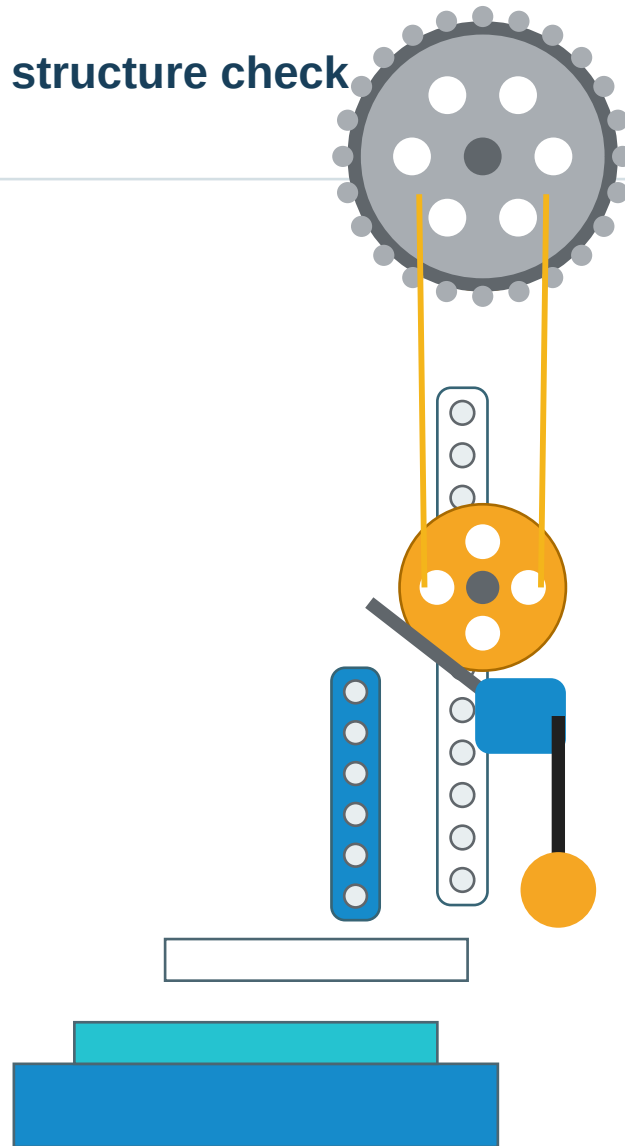
Confirm the large grey gear rotates with the upper shaft. Re-align the axle if it wobbles.

ADD

0 x new parts

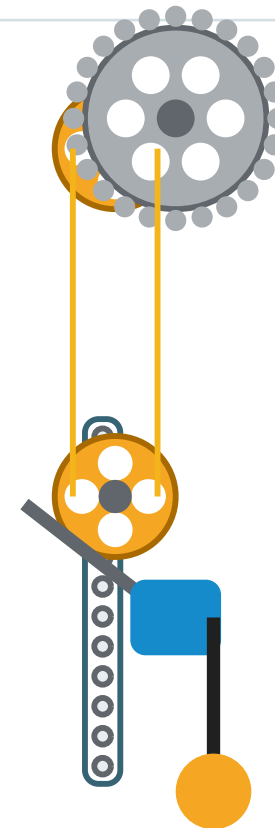
15

Final structure check



Tighten loose pins, square the white tower and verify that all rotating parts remain free.

SIDE CHECK



ADD

0 x new parts

R

Photo reference views

