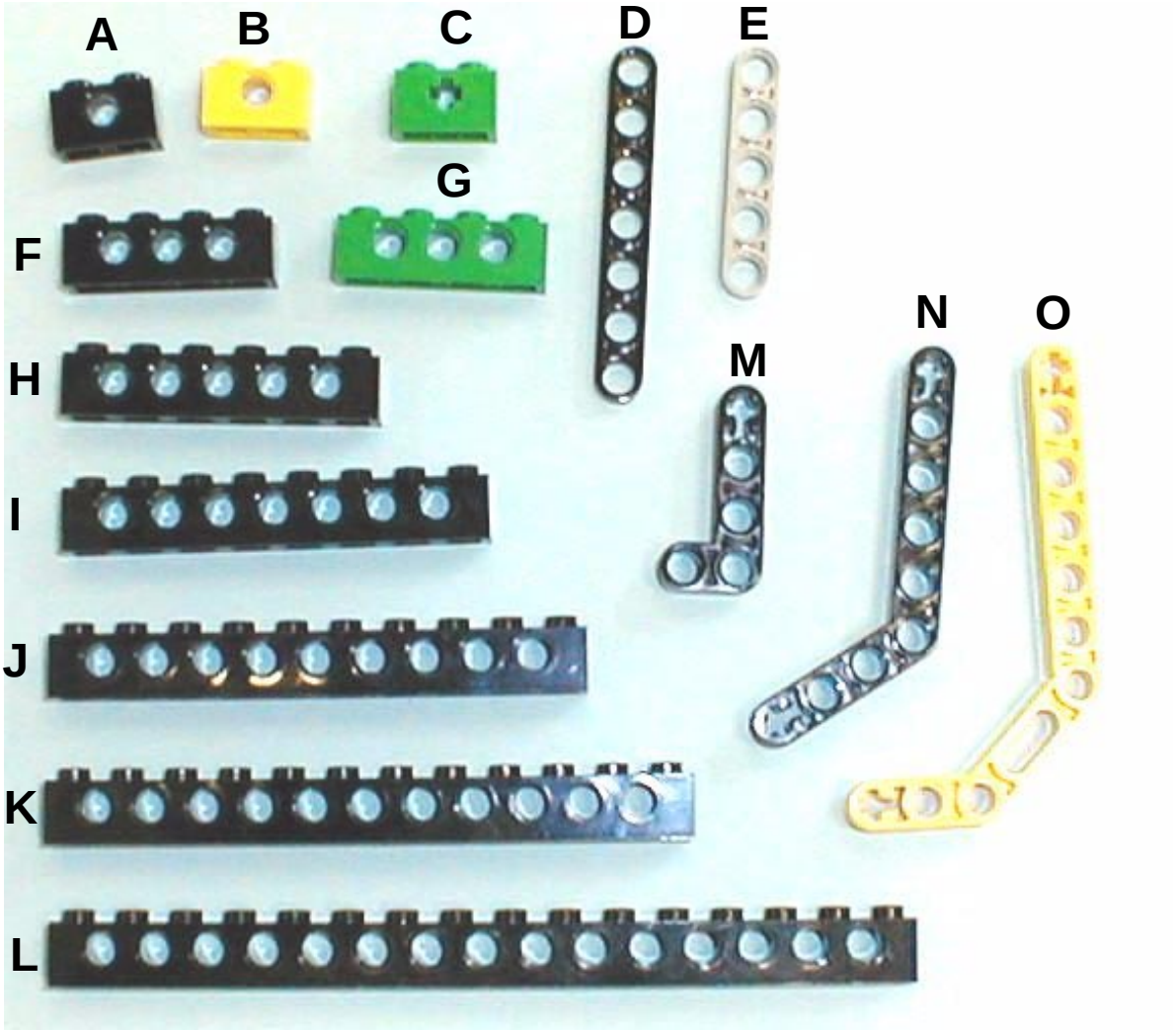
LEGO PARTS REFERENCE

BEAMS

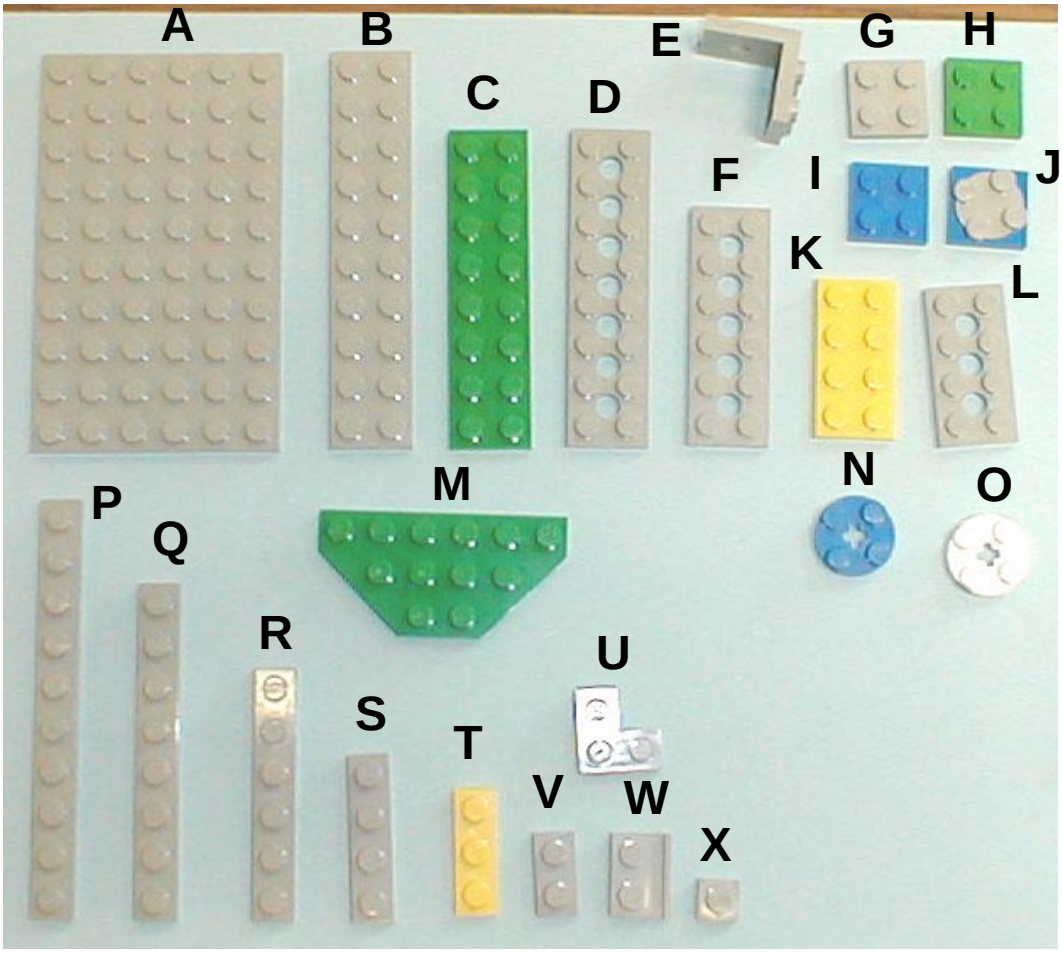
Beams are named by their length in Lego bumps.



A) 1x2 black beam
B) 1x2 yellow beam
C) 1x2 green X-hole beam
D) 7 hole black flat beam
E) 5 hole gray flat beam
F) 1x4 black beam
G) 1x4 green beam
H) 1x6 black beam
I) 1x8 black beam
J) 1x10 black beam
K) 1x12 black beam
L) 1x16 black beam
M) black “L” beam
N) black angle beam
O) yellow angle beam

PLATES

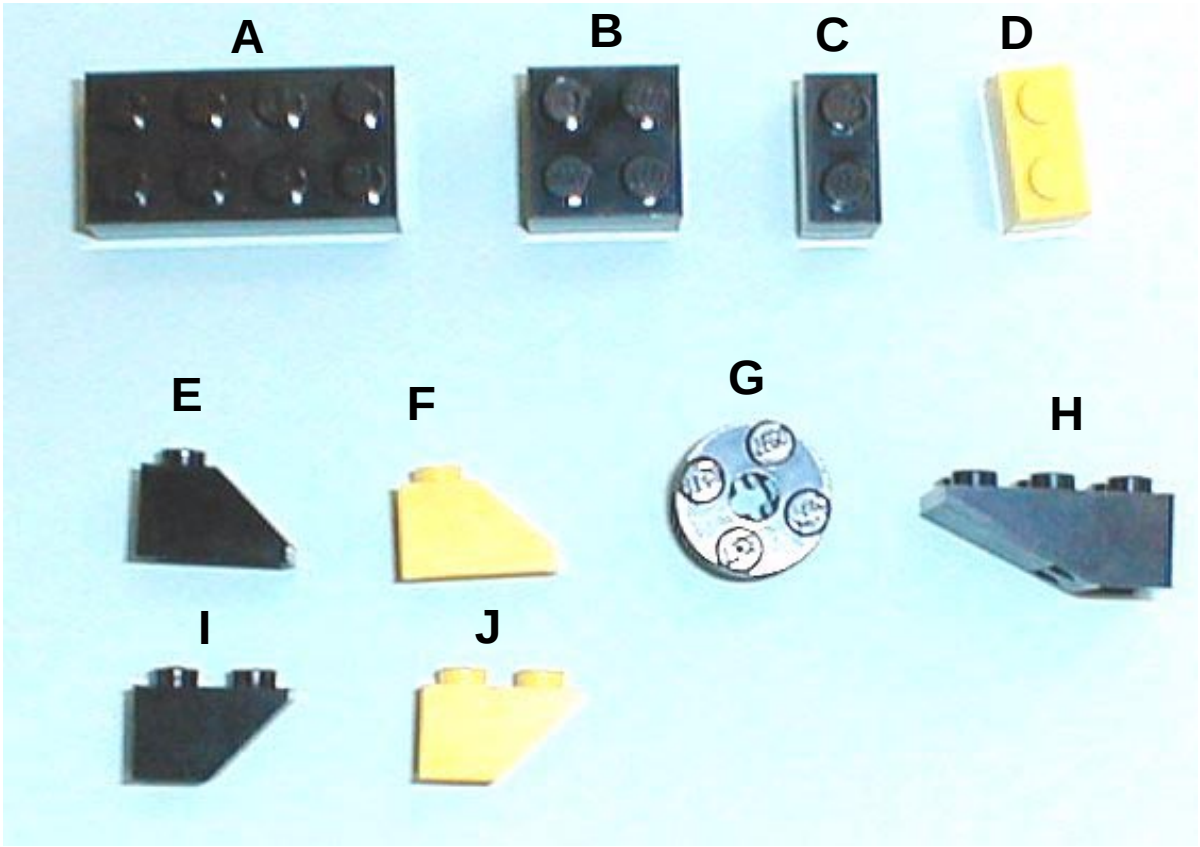
Plates are named by the number of Lego bumps on each dimension.



A) 6x10 gray plate
B) 2x10 gray plate (w/o holes)
C) 2x8 green plate (w/o holes)
D) 2x8 gray plate (with holes)
E) 2x2 gray angle bracket
F) 2x6 gray plate (with holes)
G) 2x2 gray plate
H) 2x2 green plate
I) 2x2 blue plate
J) 2x2 rotating plate
K) 2x4 yellow plate (w/o holes)
L) 2x4 gray plate (with holes)
M) 3x6 green triangular plate
N) 2x2 blue round plate
O) 2x2 white round plate
P) 1x10 gray plate
Q) 1x8 gray plate
R) 1x6 gray plate
S) 1x4 gray plate
T) 1x3 yellow plate
U) gray corner plate
V) 1x2 gray plate
W) 1x2 motor mount
X) 1x1 gray plate

BRICKS

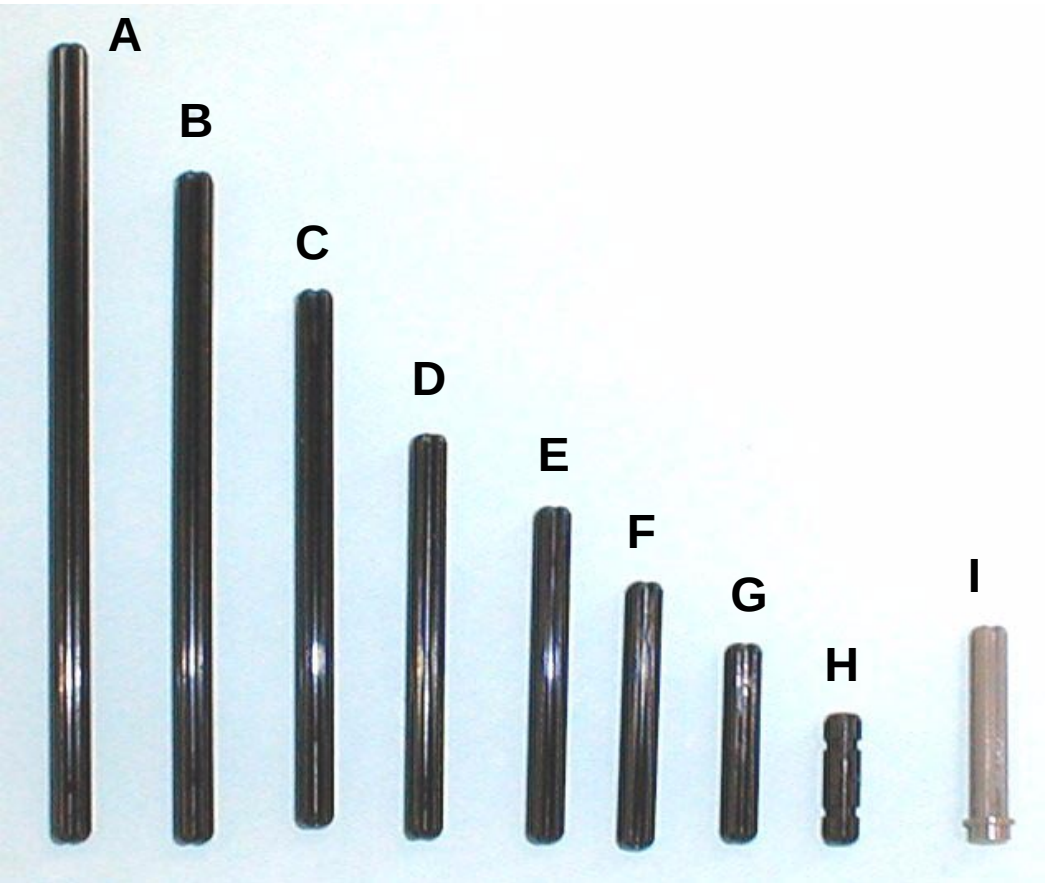
Bricks are thicker than plates. Bricks are named by the number of Lego bumps on each dimension.



A) 2x4 black brick
B) 2x2 black brick
C) 1x2 black brick
D) 1x2 yellow brick
E) 1x2 black wedge
F) 1x2 yellow wedge
G) 2x2 black round brick
H) 2x3 black reverse wedge
I) 1x2 black reverse wedge
J) 1x2 yellow reverse wedge

AXLES

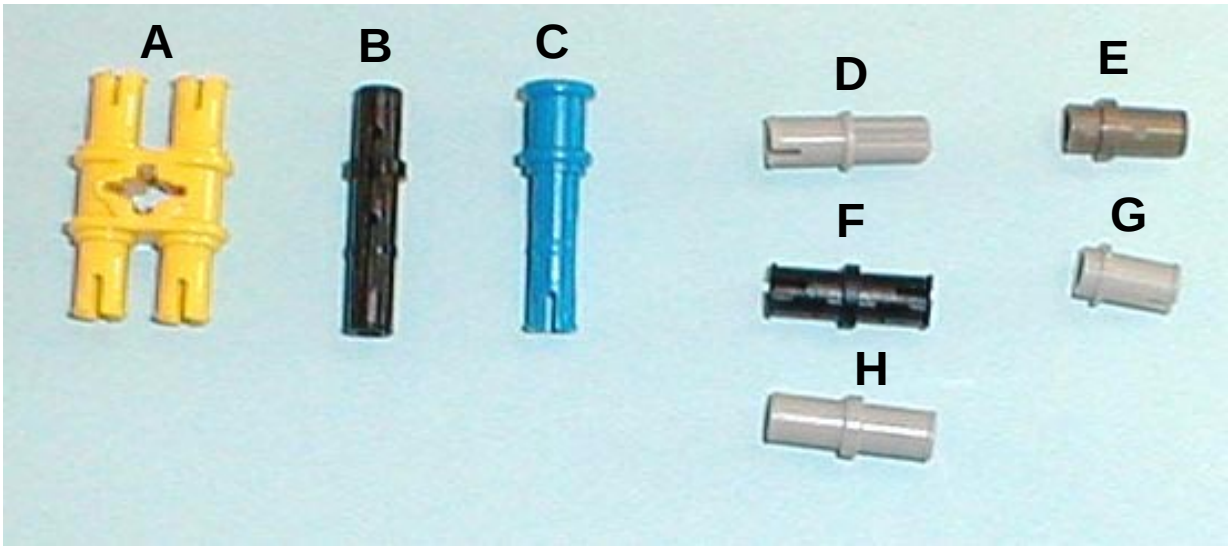
Axles are named by their length in Lego bumps.



A) #12 axle
B) #10 axle
C) #8 axle
D) #6 axle
E) #5 axle
F) #4 axle
G) #3 axle
H) #2 axle
I) Cap-end axle

PEGS

Pegs connect axles or beams together.

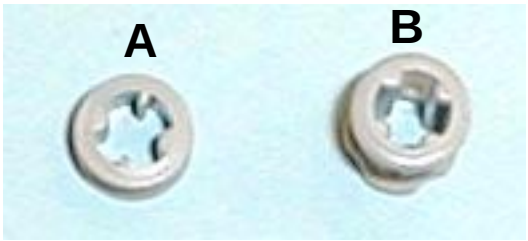


A) Yellow double peg
B) Black long peg
C) Blue double-head long peg
D) Gray axle-end peg
E) Short peg
F) Black peg
G) Button-end peg
H) Gray peg

May not be present in your kit.

BUSHINGS

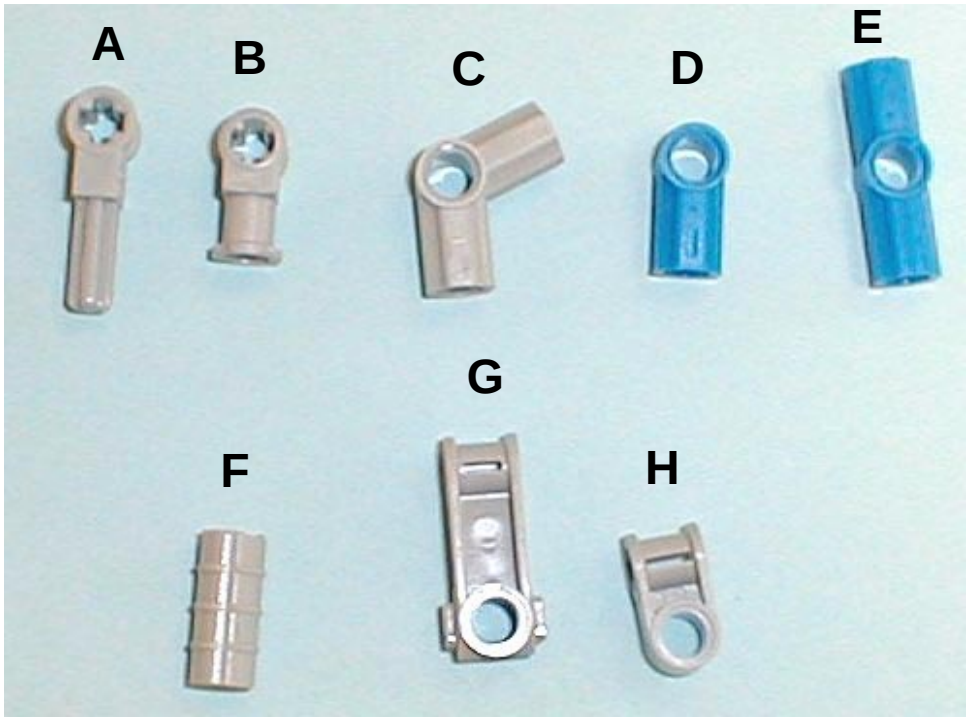
Bushings are put on the end of axles to hold them in place.

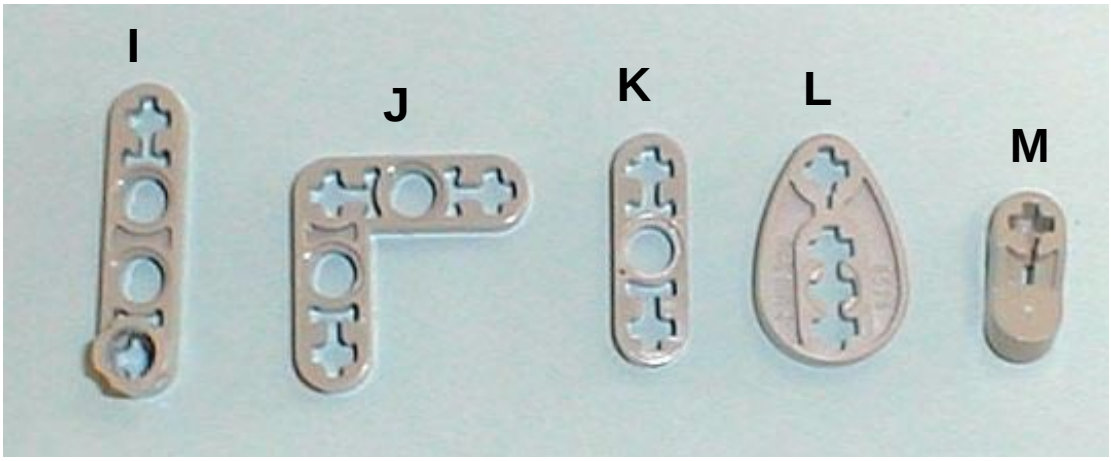


A) Half bushing
B) Full bushing

CONNECTORS

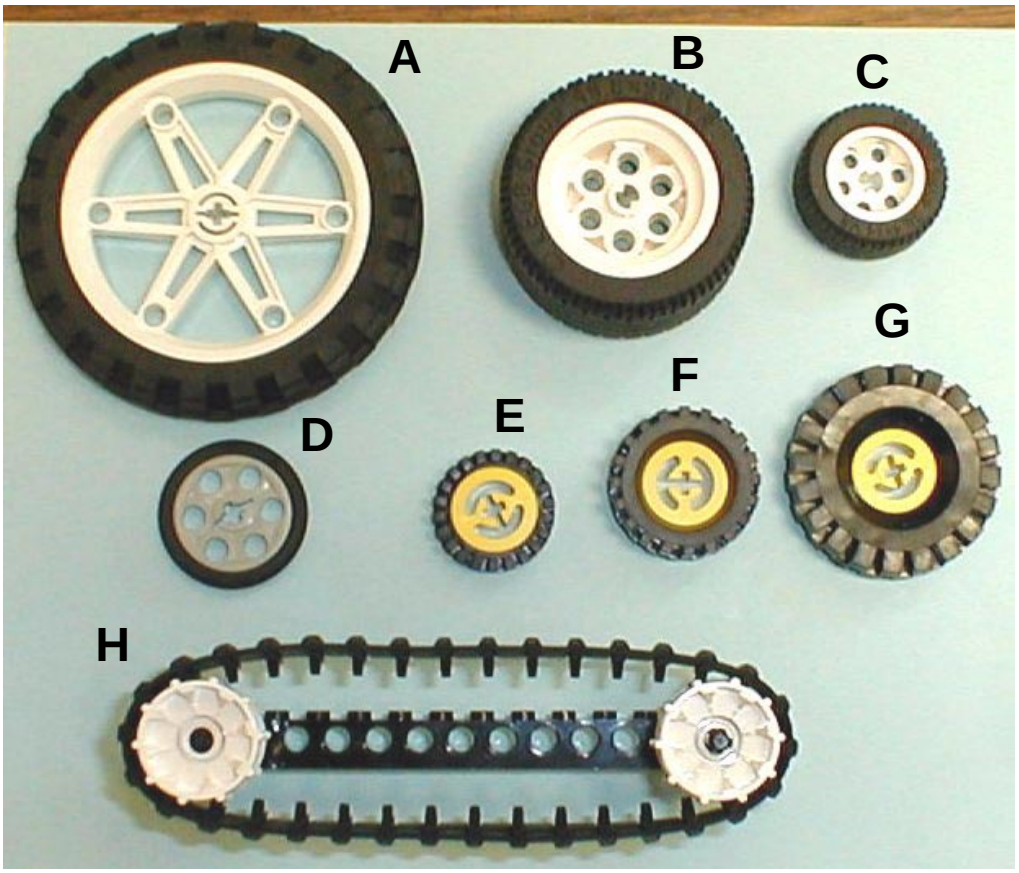
Connectors are special plates that use pegs.





A) Gray axle tip tee
B) Gray end axle tee
C) Gray elbow connector
D) Blue peg-end tee
E) Blue straight connector
F) Axle coupler
G) Long mid-axle tee
H) Short mid-axle tee
I) Gray 4 hole flat connector
J) Gray “L” connector
K) Gray 3 hole flat connector
L) Gray cam
M) Compound half gear piece

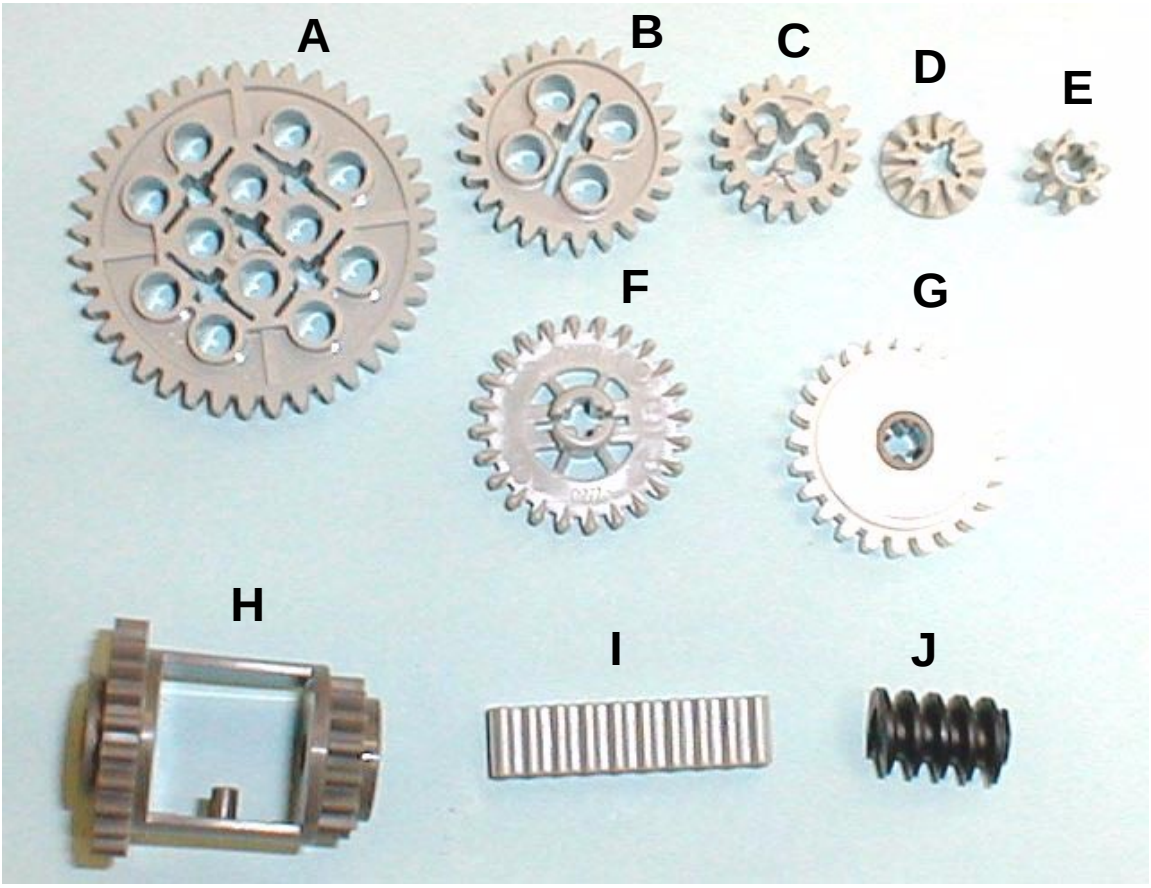
WHEELS



A) Large white hub and tire
B) Medium white hub and tire
C) Small white hub and tire
D) Pulley wheel
E) Small yellow hub and tire
F) Medium yellow hub and tire
G) Large yellow hub and tire
H) Treads and hubs

GEARS

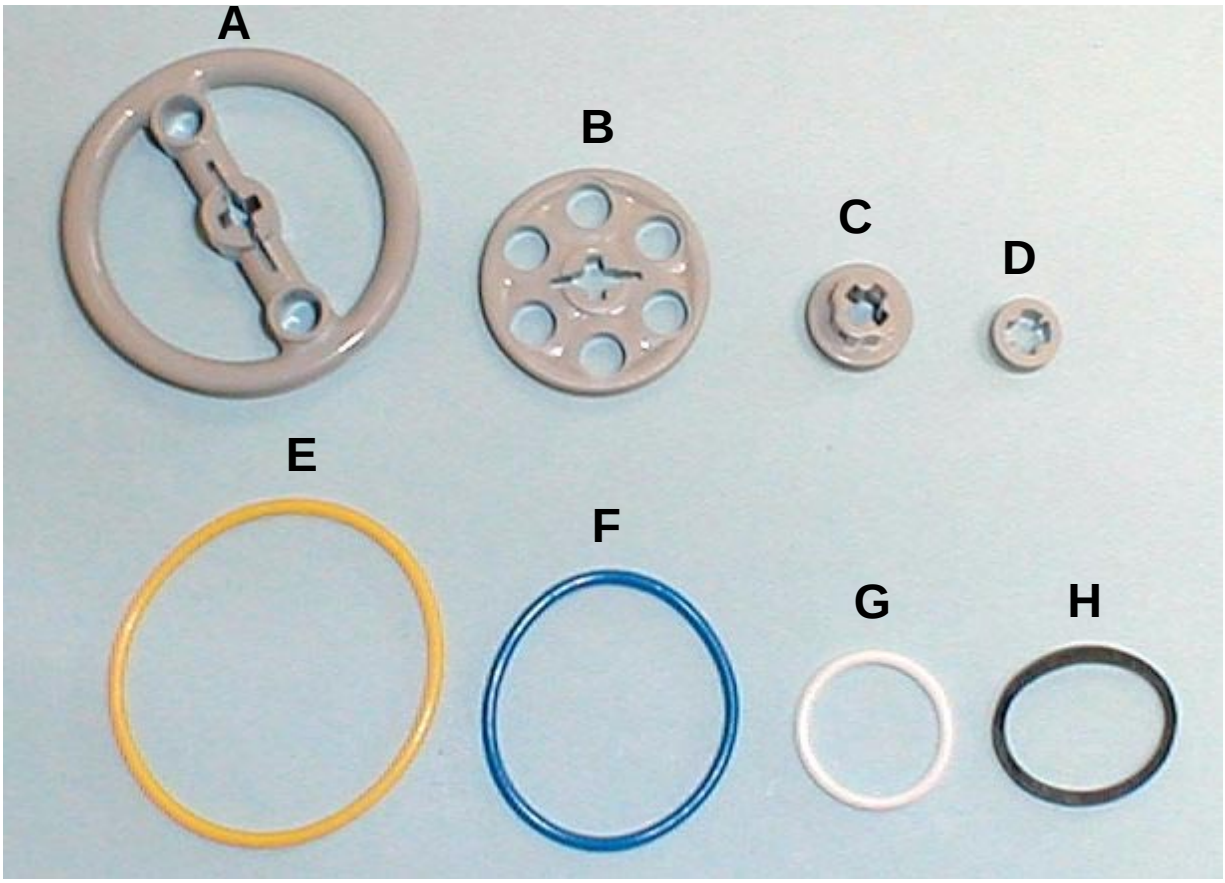
Gears are used to slow down your robot and give it more strength.



A) 40 tooth spur gear
B) 24 tooth spur gear
C) 16 tooth spur gear
D) 12 tooth bevel gear
E) 8 tooth spur gear
F) 24 tooth bevel gear
G) 24 tooth slip clutch
H) Differential
I) Rack
J) Worm gear

BELTS AND PULLEYS

Belts and pulleys are similar to gears, but the belts can slip if they get stuck.



A) Large pulley
B) 6 hole pulley
C) Small pulley
D) Half bushing pulley
E) Yellow belt
F) Blue belt
G) White belt
H) Black belt