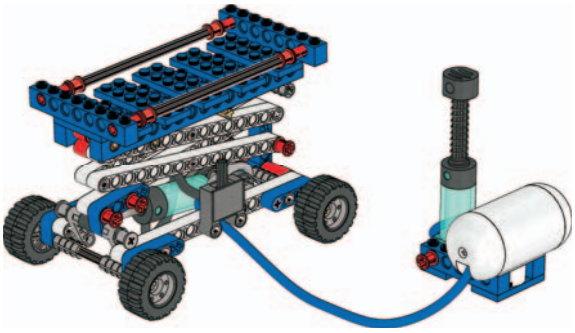
Scissor Lift

Name(s):

Build the Scissor Lift and investigate how its function is influenced by weight and height. Let's find out!

Build the Scissor Lift.

(All of book 1A and book 1B to page 11, step 15)



- Pump air into the system and make sure the Scissor Lift raises smoothly
- Press down on the platform of the raised Scissor Lift
- When you let go, the platform should bounce back up again. If not, check for air leaks
- Then lower the Scissor Lift and empty the air tank

Going Up?

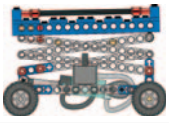
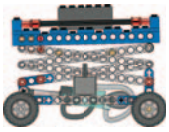
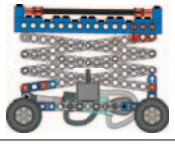
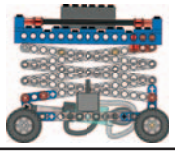
Find out what influence weight and height have on the number of pumps needed to raise the Scissor Lift to its maximum height.

First, predict how many pumps are needed to raise Scissor Lift A to its maximum height.

Then, test how many pumps are needed.

Next, follow the same procedure for Scissor Lifts B, C and D.

Test several times to make sure your results are consistent.

	My prediction	My findings
A 		
B 		
C 		
D 		

Explain your findings:

How much pressure is needed?

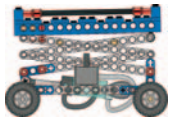
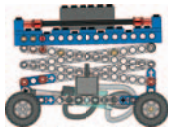
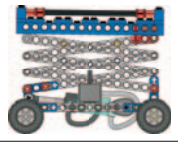
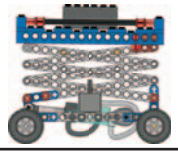
You know how many pumps are needed to raise the Scissor Lift to its maximum height. Now add the manometer and find out how much pressure is needed.

First, predict how much pressure is needed to raise Scissor Lift A to its maximum height.

Then, test how much pressure is needed.

Next, follow the same procedure for Scissor Lifts B, C and D.

Test several times to make sure your results are consistent.

	My prediction	My findings
A 		
B 		
C 		
D 		

Optional: My Amazing Pneumatic !

Invent a new and useful machine that uses the same mechanism as the Scissor Lift but does a different job. Sketch it and explain the three most important features.

Optional: Further Research

Describe some of the industries and jobs the Scissor Lift is used for and what some of its limitations might be.