FIRST LEGO LEAGUE CHALLENGE

Building Skills Quick Guide





Lesson 1: One Way Curtain



Discuss

- How does this work?
- How can it be useful?
- Where could we apply this technique?
- Watch: https://youtu.be/2P1EREM1Yzc?t=47

- Now build a full mechanism that uses this concept
- Modify the concept to fit your needs



Lesson 2: Carabiner



Discuss

- How does this work?
- How can it be useful?
- Where could we apply this technique?
- Watch: https://youtu.be/Mjp9holZ0dY?t=35

- Now build a full mechanism that uses this concept
- Modify the concept to fit your needs



Lesson 3: Gearbox



Discuss

- How does this work?
- How can it be useful?
- Where could we apply this technique?
- Watch: https://youtu.be/2P1EREM1Yzc?t=23

- Now build a full mechanism that uses this concept
- Modify the concept to fit your needs



Lesson 4: Rack Gear



Discuss

- How does this work?
- How can it be useful?
- Where could we apply this technique?
- Watch: https://youtu.be/GI5L2B2jTEI?t=19



- Now build a full mechanism that uses this concept
- Modify the concept to fit your needs



Lesson 5: Gravity



Discuss

- How does this work?
- How can it be useful?
- Where could we apply this technique?
- Watch: https://youtu.be/dJSeMeAGmXE?t=113

- Apply
- Now build a full mechanism that uses this concept
- Modify the concept to fit your needs



Lesson 6: Aligners



needs

- Where could we apply this technique?
- Watch: https://youtu.be/Mjp9holZ0dY?t=75



Discuss

- How does this work?
- How can it be useful?
- Where could we apply this technique?
- Watch: https://youtu.be/dJSeMeAGmXE?t=113

- Now build a full mechanism that uses this concept
- Modify the concept to fit your needs



Lesson 8: Auto-Retracting Lever



Discuss

- How does this work? Can it work without the rubber band?
- How can it be useful?
- Where could we apply this technique?
- Watch:
- https://youtu.be/Mjp9holZ0dY?t=73



- Now build a full mechanism that uses this concept
- Modify the concept to fit your needs

Lesson 9: Parallel 4 Bar Linkage





Discuss

- How does this work?
- How can it be useful?
- Where could we apply this technique?
- Watch:
- https://youtu.be/GI5L2B2jTEI?t=115

- Now build a full mechanism that uses this concept
- Modify the concept to fit your needs



Lesson 10: Gearing Down



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