



FIRST LEGO LEAGUE CHALLENGE

Learn the Missions



TEAM NAME:

TEAM NUMBER:

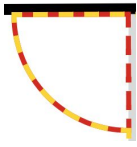


You can print and hold these “tents” to learn the missions. You can also print the 2-page scoring guide provided by FIRST LEGO League at the end of the Robot Game Rulebook and post them on a nearby wall.



Learn the Missions

Instructions: Print out. Cut along solid line. Create a tent fold along the dashed line. Place near matching mission model.



Equipment Inspection

If your robot and all your equipment fit completely in one launch area and are under a height **20** limit of 12 in. (305 mm) during the pre-match inspection:: **20**



M01 Innovation Project Model

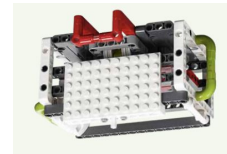
If your Innovation Project model is at least partly in the hydrogen plant target area:: **20**

Made of at least two white LEGO® pieces, Measures at least as long as 4 LEGO “studs” in some direction,



M02 Oil Platform

- If a fuel unit is in the fuel truck: **5 EACH**
- Bonus: If at least one fuel unit is in the fuel truck and the fuel truck is at least partly over the fueling station target: **10 ADDED**



M03 Energy Storage

- If an energy unit is completely in the energy storage bin (max of three): **10 EACH**
 - If the energy unit is completely removed from the energy storage tray: **5**
- All energy units stored in the energy storage bin may not be touching team equipment at the end of the match.*



M04 Solar Farm

- If an energy unit has been completely removed from its starting circle: **5 EACH**
- Bonus: If all three energy units have been completely removed from their starting circles: **5 ADDED**



M05 Smart Grid

- If your field's orange connector is completely raised: **20**
- Bonus: If both teams' orange connectors are completely raised: **10 ADDED**

The smart grid model may not be touching team equipment at the end of the match.



Learn the Missions

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M06 Hybrid Car

- If the hybrid car is no longer touching the ramp: **10**
- If the hybrid unit is in the hybrid car: **10**



M07 Wind Turbine

- If an energy unit is no longer touching the wind turbine: **10 EACH**



M08 Watch Television

- If the television is completely raised: **10**
- If an energy unit is completely in the green television slot: **10**

The watch television model and the energy unit in the green television slot may not be touching team equipment at the end of the match.



M09 Dinosaur Toy

- If the dinosaur toy is completely in the left home area: **10**
- If the dinosaur toy lid is completely closed:
 - And there is an energy unit inside: **10**
 - Or there is a rechargeable battery inside: **20**



M10 Power Plant

- If an energy unit is no longer touching the power plant: **5 EACH**
- Bonus: If all three energy units are no longer touching the power plant: **10 ADDED**



M11 Hydroelectric Dam

- If the energy unit is no longer touching the hydroelectric dam: **20**



Learn the Missions

Instructions: Print out. Cut along solid line. Create a tent fold along the dashed line. Place near matching mission model.



M12 Water Reservoir

- If a looped water unit is completely in the water reservoir, touching the mat: **5 EACH**
- If a looped water unit is placed on a single red hook: **10 EACH HOOK**

The loop on the looped water unit may extend out of the water reservoir. Looped water units in the water reservoir or on red hooks may not be touching team equipment at the end of the match.



M13 Power-to-X

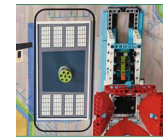
- If an energy unit is completely in the hydrogen plant target area (max of three): **5 EACH**



M14 Toy Factory

- If an energy unit is at least partly in the slot in the back of the toy factory (or in the red hopper) (max of three): **5 EACH**
- If the mini dinosaur toy has been released: **10**

Energy units stored in the toy factory may not be touching team equipment at the end of the match.



M15 Rechargeable Battery

- If an energy unit is completely in the rechargeable battery target area (max of three): **5 EACH**

The rechargeable battery is not an energy unit.

Energy units stored in the rechargeable battery target area may not be touching team equipment at the end of the match.



Precision Tokens

You begin the match with six precision tokens worth 50 free points. The referee holds onto them. If you interrupt the robot outside of home, the referee removes one token. You keep points for the number of remaining tokens at the end of the match. If the number remaining is:

1:10, 2:15, 3:25, 4:35, 5:50, 6:50

EQUIPMENT INSPECTION

If your robot and all your equipment fit completely in one launch area and are under a height limit of 12 in. (305 mm) during the pre-match inspection: **20**

MISSION 01 INNOVATION PROJECT MODEL

If your Innovation Project model is at least partly in the hydrogen plant target area: **10**

Design and bring a single Innovation Project model of your own to the match. To score, it must:

- *Be made of at least two white LEGO® pieces.*
- *Measure at least as long as four LEGO studs in some direction.*

MISSION 02 OIL PLATFORM

If a fuel unit is in the fuel truck: **5 EACH**

Bonus: If at least one fuel unit is in the fuel truck and the fuel truck is at least partly over the fueling station target: **10 ADDED**

MISSION 03 ENERGY STORAGE

If an energy unit is completely in the energy storage bin (max of three): **10 EACH**

If the energy unit is completely removed from the energy storage tray: **5**

All energy units stored in the energy storage bin may not be touching team equipment at the end of the match.

MISSION 04 SOLAR FARM

If an energy unit has been completely removed from its starting circle: **5 EACH**

Bonus: If all three energy units have been completely removed from their starting circles: **5 ADDED**

MISSION 05 SMART GRID

If your field's orange connector is completely raised: **20**

Bonus: If both teams' orange connectors are completely raised: **10 ADDED**

The smart grid model may not be touching team equipment at the end of the match.

MISSION 06 HYBRID CAR

If the hybrid car is no longer touching the ramp: **10**

If the hybrid unit is in the hybrid car: **10**

MISSION 07 WIND TURBINE

If an energy unit is no longer touching the wind turbine: **10 EACH**

MISSION 08 WATCH TELEVISION

If the television is completely raised: **10**

If an energy unit is completely in the green television slot: **10**

The watch television model and the energy unit in the green television slot may not be touching team equipment at the end of the match.

MISSION 09 DINOSAUR TOY

If the dinosaur toy is completely in the left home area: **10**

If the dinosaur toy lid is completely closed:

- And there is an energy unit inside: **10**
- Or there is a rechargeable battery inside: **20**

MISSION 10 POWER PLANT

If an energy unit is no longer touching the power plant: **5 EACH**

Bonus: If all three energy units are no longer touching the power plant: **10 ADDED**

MISSION 11 HYDROELECTRIC DAM

If the energy unit is no longer touching the hydroelectric dam: **20**

MISSION 12 WATER RESERVOIR

If a looped water unit is completely in the water reservoir, touching the mat: **5 EACH**

If a looped water unit is placed on a single red hook: **10 EACH HOOK**

The loop on the looped water unit may extend out of the water reservoir.

Looped water units in the water reservoir or on red hooks may not be touching team equipment at the end of the match.

MISSION 13 POWER-TO-X

If an energy unit is completely in the hydrogen plant target area (max of three): **5 EACH**

MISSION 14 TOY FACTORY

If an energy unit is at least partly in the slot in the back of the toy factory (or in the red hopper) (max of three): **5 EACH**

If the mini dinosaur toy has been released: **10**

Energy units stored in the toy factory may not be touching team equipment at the end of the match.

MISSION 15 RECHARGEABLE BATTERY

If an energy unit is completely in the rechargeable battery target area (max of three): **5 EACH**

The rechargeable battery is not an energy unit.

Energy units stored in the rechargeable battery target area may not be touching team equipment at the end of the match.

PRECISION TOKENS

You begin the match with six precision tokens worth 50 free points. The referee holds onto them. If you interrupt the robot outside of home, the referee removes one token. You keep points for the number of remaining tokens at the end of the match. If the number remaining is:

1: 10, 2: 15, 3: 25, 4: 35, 5: 50, 6: 50