

## LEGO CREATIVITY

### GENERAL DESCRIPTION

The LEGO Creativity category consists of the creation of a prototype that performs actions and/or functions previously described by the qualifying jury, during the day of the competition.

The jury will share the challenge information with all the participating teams on the day of the competition.

### COMPETITION RULES

The participating robots should only be built from parts from the STANDARD OR EDUCATION LEGO EV3 BASE KIT and the EV3 EXPANSION SET. This includes:

1. The Controller (Smart Brick)
2. big motor
3. medium motor
4. Proximity, color, touch sensors
5. LEGO MINDSTORMS EV3 pieces available in the appendix section

The use of spinning sensors is not allowed.

All robots must be autonomous at the time of performance. Any control mechanism can be used, as long as all the components are contained within the robot and that it does not interact with any external control system, otherwise it will lose the competition.

The robot must meet all the specifications stated by the qualifying jury.

### CHARACTERISTICS OF THE WORK AREA

The competition area includes the open space granted by the organizers for the development of the contest.

### COMPETITION DEVELOPMENT

During the development of the competition, the participating teams must take into account the following aspects that will be required without exception, otherwise they will be eliminated:

1. The LEGO Creativity category consists of creating a prototype on the day of the competition, which performs actions and/or functions previously described by the qualifying jury.
2. The challenge will be given by the qualifying jury on the day of the competition and shared with all the participating teams.
3. The competition will take place in a single day and the participants must present themselves 15 minutes beforehand to review the work kit. In the event that the organizers or the qualifying jury find materials or equipment other than the BASIC LEGO EV3 STANDARD OR EDUCATION KIT AND THE EV3 EXPANSION KIT, they will have instruct the participants not to bring them into the competition area.

4. The robot will be built solely and exclusively in the designated work area and during the time given by the qualifying jury: the structure and control of the robot will be made with materials and parts from the BASIC LEGO EV3 STANDARD OR EDUCATION KIT AND THE EV3 EXPANSION KIT. The teams must bring at least one laptop to the competition, as well as the necessary tools and materials.
5. The prototype must not perform obscene actions or functions that might be considered immoral.
6. The programming of the prototype can only be done with the LEGO MINDSTORMS EV3 program. The use of other programming languages such as Java, Python, etc. is prohibited.
7. There should always be at least two participants in the work area. It is recommended to take turns in case any participant wants to leave and, if that is the case, they must return in a maximum time of five minutes. If the qualifying jury observes that this is not fulfilled, the team will receive a warning and the respective score will be reduced.
8. Only the participants will be able to enter the competition designated area. If any person outside the team is seen talking to the participants without prior authorization from the qualifying jury, the team involved will be reprimanded and the respective score will be reduced.

## EVALUATION

Once the time established for the competition has ended, the participating team will have to present their prototype to the qualifying jury for their respective review. The jury will verify that all the groups are present and if there are missing groups, a new call will be made. If after five minutes any of the teams does not appear, it will be eliminated.

1. During the revision phase the participants will not be able to touch their prototypes or invade the designated area. If this occurs, the team will receive a warning.
2. The performance of the prototypes will be evaluated by the qualifying jury in the presence of all the teams.
3. Scoring will be done individually by each judge and will then be averaged. The aspects considered for the qualification of this category are shown in table 1:

ASPECTS	SCORE
1. Skill and functioning of robot prototype	35
2. Creativity, originality and aesthetics	30
3. Team performance in the designated area	10
4. Presentation in front of jury	15
5. Report	10
6. Warnings	-5

TABLE 1

4. Regarding the performance of the team within the work area, the participants must be ready to answer two questions that will be asked by the judges during the competition.

5. From the averages obtained, the three highest will be taken into account for the designation of the winners. The winning project, as well as the second and third places, will be announced at the closing ceremony of the event.
6. In case there is a tie between teams, it will be considered which of them obtained the highest score according to the order presented in Table 1.
7. It will be considered as a penalization and, disqualification, the qualifying jury will proceed to disqualify the team and penalize the general score in the following cases:
  - a. Disrespect towards any member of the jury, the organization or a member of any team.
  - b. Trying to cheat the regulations by using equipment, tools or electronic cards that are not part of the LEGO kit.

## JUDGES

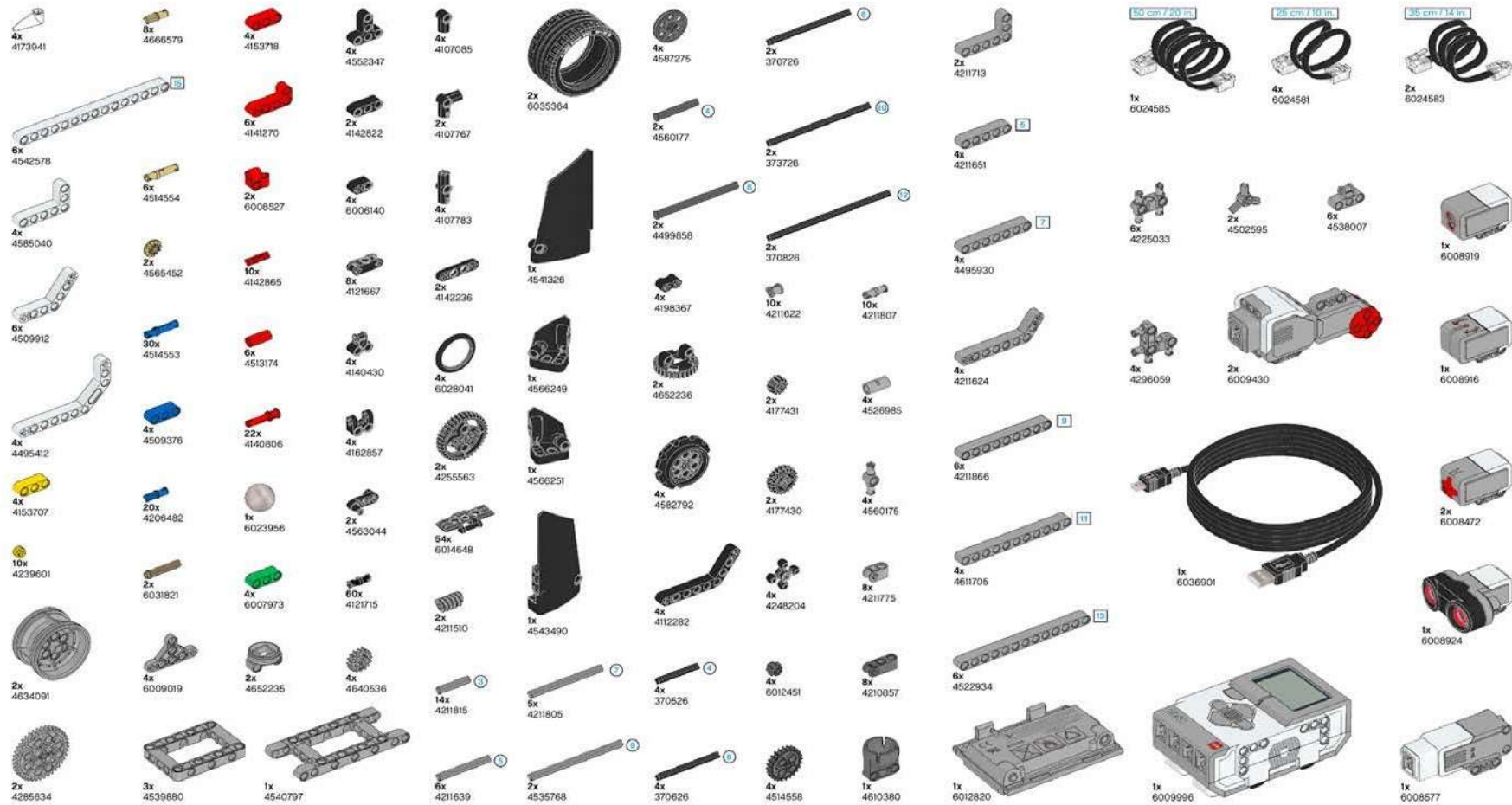
- i. The role of the judge is important in the competition; he will be in charge of complying with the rules and regulations established by the organizing committee.
- ii. The judges for this competition will be appointed by the organizing committee.
- iii. Contestants may present their objections to the judge in charge of the category before the end of the competition.
- iv. In case of doubt in the application of the norms, the judge will make the final decision.
- v. In the event of a controversy about the decision of the judge or judges, a written disagreement can be sent to the Council of Judges. Once the competition is over, the arguments presented will be evaluated and a decision will be made in this regard. This decision is final.

## APPENDIX

Attached to these rules is the list of pieces allowed to be used, corresponding to the LEGO kit mentioned in these regulations.



## 45544



## 45560

