

# Firefighter

Deadline: 25.4.2021

Points: 20

Material requirements: Your mobile robot, a gripper, an item of your choice, a platform with a minimum of 40cm height, 5 small balls (f.e. Pompoms)



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## Topic description

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Firefighters and firewomen are tirelessly on duty. Not infrequently, they risk their own lives in the process. You should try to relieve these brave people and build a robot that rescues an object, a person or an animal from a burning house.

We wish you a lot of fun with this and the following tasks!

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## Task description

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- **Find a suitable item**

Find an item that represents what you want to save. You are free to choose the item, its size and weight. Save what is important to you. Upload us a photo of your object including size and weight.

- **Rescue mission**

Place your firefighting robot at the fire station (any place, at least 1 m away from the house) and place your object on the house (platform). Now it's time to get serious. Your robot has to drive to the house, rescue the object and bring it back to the fire station. Safety is the order of the day. Make sure your object doesn't get squashed too much or fall down during the rescue operation. Upload us a video of a successful rescue code as well as your code.

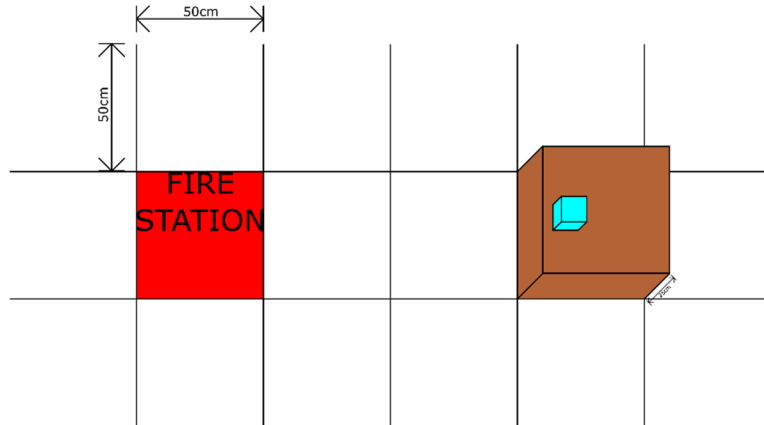


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- **Rescue mission with extinguishing operation**

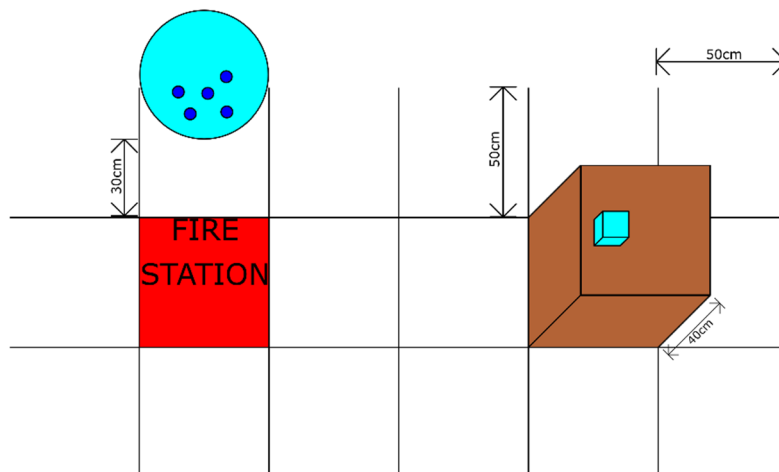
The setup is the same as in the first rescue mission, but with the following changes:

O Start at the fire station as before.

O Your item to be rescued must weigh at least 100g and the longest dimension (width, height or length) must be at least 10cm.

O Before you can rescue your item you have to get water for firefighting. The pond is located 30cm from the fire station (see picture). As water you need 5 balls (min. 3 cm big) - the more water you bring on the house the better.

O Afterwards grab your object again and bring it safely back to the fire station.



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## *Evaluation criteria*

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- Photo of the item including dimensions and weight
- Successful rescue of your item and safe delivery to the fire station.
- Successful transport of water to the house as well as safe rescue of the item.
- Jury evaluation: The jury evaluates the quality and creativity of the submission.