



Tips!

- You will need to start by familiarising yourself with the capabilities of Spot. Use the resources listed, including the YouTube videos from Boston Dynamics.
- What is Spot currently used for in different industries? How does it provide a solution to the problems faced by big companies?
- Try to extend the capabilities of Spot through your payload design, made especially to solve a problem at your school. If you don't want to use your school as an end user, you could use a hypothetical school that may have different problems.
- While your payload should be designed to work with a Spot robot, you do not need to do any of the theoretical coding required for the interface between the robot and payload. You also do not need to design an attachment for the guide rails. We will assume your design fits and works with Spot, you just need to explain the capabilities.
- Remember to make use of your Design Mentors and STEM Mentors, they will be able to guide you in terms of the scientific viability of your ideas. **ASK LOTS OF QUESTIONS!**

Challenge Brief

Your school has recently acquired a Spot robot to assist students with tasks at school and general wellbeing.

Specifically, your school is looking to use artificial intelligence to make the lives of students easier while they are at school.

The school executive has approached your group to come up with a use for Spot to benefit students, and to design a payload that can be mounted on Spot to assist with this purpose.

Your Task

Identify a **problem in your school** and relate to the **students** who experience it.

Research and understand the **capabilities of a Spot robot**, including **payload design**.

Design a **creative and unique solution** to the problem identified, incorporating the capabilities of a Spot robot and how your designed payload contributes to this solution.

Resources

A link to each of these resources is also emailed to your teacher.



Spot - Boston Dynamics



Spot Specifications



Guidelines for Robust Payload Design



Spot - YouTube playlist

