Teacher Guide
Lego Mindstorms - Rescue Challenge

Levels : Second & Third
Maximum Number of Pupils: 20

Duration: 60 mins

What to Expect

Pupils will use sophisticated Lego robots and Robolab software to make them move, and respond to light and touch sensors.

Pupils will work in groups and in the initial training session are asked to follow specific instructions to practise basic programming tasks. The pupils will be challenged to programme their robots to move from an identified starting point on a model terrain to an identified end point, avoiding obstacles along the way. This requires discussion and decision making followed by trialing and refining of the programme until the challenge is met.

What is Covered

- Using robots, pupils will problem solve to navigate to various points
- Pupils will plan and then execute a route to a destination
- Pupils will use a range of skills and have the opportunity for capacity development
- Pupils will experience using control technology and develop specific knowledge and understanding of computer programming

Curriculum for Excellence links

We have identified the Curriculum for Excellence experiences and outcomes to which this workshop can most significantly contribute (please see the next page):

Second Level
TCH 2-13a

I understand the operation of a process and its outcome. I can structure related items of information

Second Level
TCH 2-14a

I can explain core programming language concepts in appropriate technical language.

Second Level
TCH 2-15a

I can create, develop and evaluate computing solutions in response to a design challenge

Second Level
LIT 2-02a

When I engage with others, I can respond in ways appropriate to my role, show that I value others' contributions and use these to build on thinking.

Second Level
MNU 2-10b

I can carry out practical tasks and investigations involving timed events and can explain which unit of time would be most appropriate to use.

Third Level
TCH 3-01a

I can explore and use the features of a range of digital technologies, integrated software and online resources to determine the most appropriate to solve problems.

Third Level
TCH 3-14a

I can describe the structure and operation of computing systems which have multiple software and hardware levels that interact with each other.

Third Level
TCH 3-15a

I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements

Third Level
MNU 3-03a

I can use a variety of methods to solve number problems in familiar contexts, clearly communicating my processes and solutions.

Third Level
LIT 3-02a

When I engage with others, I can make a relevant contribution, encourage others to contribute and acknowledge that they have the right to hold a different opinion. I can respond in ways appropriate to my role and use contributions to reflect on, clarify or adapt thinking