Rugged Robot Activity Ideas

Our award-winning outdoor friendly Rugged Robot can be used across all age groups to develop computing skills across the curriculum.
There are plenty of fun interactive ways to use Rugged Robot. Here are some ideas to get you started on your Rugged Robot Adventures!

There are endless opportunities with Rugged Robot. A must have for all settings!

Rugged Robot in ICT

Take ICT outside with Rugged Robot. You can programme Rugged Robot with the controls on the robot, use our Teaching Tablet or download our free app onto your own tablet or use the Tactile Reader.

Skills and Learning

- *Use simple programming to operate the robot.*
- *Use logical reasoning.*
- *Explore algorithms.*

- Explore, test and write programs with Rugged Robot. The Rugged Robot has a drag and drop coding interface making it easy for children to write programs and set up challenges. Use the Rugged Robot Challenge Cards (available on our website) and create more challenges of your own.
- Write and explore algorithms.
- Debug programs and solve problems, for example “How can you get Rugged Robot to ...?” Expand children’s programming skills. Build in progress using programming on-screen and then a Coding App and assess children’s skills.

Rugged Robot in Maths

Rugged Robot is great for outdoor Maths Activities.

Skills and Learning

- Describe position and movement including half and quarter turns.
- Identify and use right-angles.
- Measure lines and simple perimeter and shapes.

- Learn and explore directional language. You could make a Rugged Robot obstacle course and time how long it takes to complete using a stopwatch or timer.
- Get Rugged Robot to follow a line/set of commands. You could use Rugged Roboto to draw different shapes and why not try to draw them in sand.
- Create a map with co-ordinates and ask the children to program Rugged Robot to find different features on the map and record the co-ordinates.
- Use Rugged Robot to explore angles. Rugged Robot can make 45° turns. Talk about obtuse and acute angles.
- Use Rugged Robot to find and travel the area or perimeter of the playground, quiet area, field, etc.
- With a giant 100 square explore numbers and multiplication facts with Rugged Robot.

Rugged Robot with English

Be creative with Rugged Robot and use the robot to enrich literacy skills.

Skills and Learning

- *Listen and respond appropriately and explore story.*
- *Retrieve and record information.*
- *Give and follow instructions using directional language.*

- Develop speaking and listening skills with paired and group activities. Children could practice their directional language by giving verbal and written instructions for a partner to program Rugged Robot, e.g. Move forward under the bridge. Turn 45° right, etc.
- By programming Rugged Robot and working together, children can develop their ability to follow instructions, sequence events and predict what will happen next. Why not introduce the use of imperative verbs?
- Why not record instructions and directional language used with our Recordable Sound Buttons!
- Navigate through a story map. Create your own Robot Adventure stories taking Rugged Robot on a journey and writing about it. You could record the stories using a camera or microphone.
- Use with Outdoor Phonics Mats to learn sounds and collect items with Rugged Robot for words containing that sound.

Explore Languages with Rugged Robot

Develop language and communication with Rugged Robot. Learn and explore directional language.

Skills and Learning

- Listen and respond appropriately.
- Use basic vocabulary and directional language.

- Learn English or another language by identifying and naming objects along Rugged Robot's journey. You could lay out a selection of items and then program Rugged Robot to find a named object.
- Use construction resources, such as blocks, tunnels or tubes to build a street based on a country you are studying, such as with name labels for the different shops. Use Rugged Robot to navigate the street using directional language and phrases in the language you are learning.
- Use Recordable Devices, such as microphones and Talking Points to record names of the items discovered on Rugged Robot's journey.

Use Rugged Robot in Design and Technology

Rugged Robot is great to develop problem-solving skills and explore designing.

Skills and Learning

- *Generate, model and communicate ideas.*
- *Use logical reasoning.*
- *Explore, test, design and write simple programs.*

- Explore the different Rugged Robot Mats and program Rugged Robot to travel and explore around them. Which ones do children like the best and why?
- You could ask children to design their own Rugged Robot mats.
- Turn your Rugged Robot into different vehicles and then watch how Rugged Robot moves. For instance, Rugged Robot could become a farmer's plough or a combine harvester as part of your farming topic. K'nex is great here for adding parts to Rugged Robot.

Rugged Robot - PE and Music

Rugged Robots have an impressive memory of up to 256 steps. Perfect to keep dancing!

Skills and Learning

- *Program robot to perform dances and use simple movement.*
- *Compare performances of robot and see if each time personal bests can be improved.*

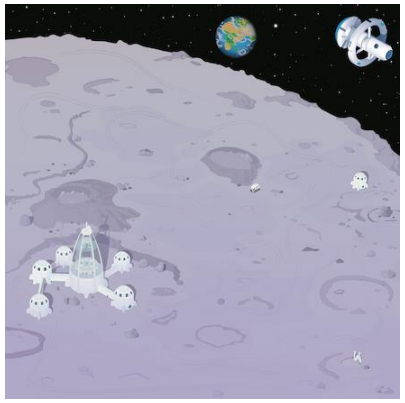
- Use coding to create dance routines for Rugged Robot. You could add an extra challenge by setting specific requirements to your dance or timing it to music!
- Why not have a dance competition setting up your own Strictly Come Dancing Rugged Robot Show!
- Listen to different types of music and create specific dance routines to match the genre of music.
- Create group dances using more than one Rugged Robot to demonstrate a synchronised dance routine.

Rugged Robot with History

Journey through different terrains and explore the past with Rugged Robot.

Skills and Learning

- *Use simple programming to operate the robot and learn about the past.*



- Take Rugged Robot on a journey along a giant timeline to gather information about the past. You could travel through different eras or focus on one era that you are learning about. Encourage children to share facts as they travel along with Rugged Robot.
- Design an outfit and turn Rugged Robot into a Roman Chariot or a Viking Longship and set off on a historic journey.
- Be archaeologists and fit Rugged Robot with a camera to find evidence about the past. Dig up finds along the way and bring back to research in the classroom. You could use artefact collections hidden in the sand, for Rugged Robot to find.

Forest School with Rugged Robot

Explore your local environment. Rugged Robot is designed for outdoor use and is ideal for all forest school adventures.

Skills and Learning

- *Use simple fieldwork and observational skills to study the world outside and learn about nature.*

- Plan a route for Rugged Robot around your outdoor space to explore nature and identify and name trees, flowers and the like along the way. Keep a note of what you have seen and then bring this back to the classroom to learn more about them.
- Use Rugged Robots built-in storage area to collect items.
- Use Rugged Robots built-in sensors to detect and avoid obstacles as you explore your outdoor space together.
- Fit a camera to Rugged Robot to record your outdoor adventures and observations.

Discovering Geography with Rugged Robot

With its oversized wheels, Rugged Robot can handle most terrains. Pupils can set up obstacles and use the built-in sensors to detect, reverse, rotate and continue the journey.

Skills and Learning

- *Use basic geographical vocabulary and directional language.*
- *Use simple fieldwork and observational skills to study the immediate environment and explore different terrains.*

- Use Rugged Robot on maps with co-ordinates or create maps of your own, such as a map of the local area, school or a treasure map. Follow instructions and use compass points to explore the map and find landmarks.
- Create your own Robot Adventures taking Rugged Robot on a journey. Fit Rugged with a camera and record your outdoor fieldwork.
- Use with an Outdoor Giant World or UK Map to find different locations and places, such as where our food comes or oceans and continents.
- Explore farming around the world and create your own examples of different farmlands getting Rugged Robot to journey through different terrains.

Explore in Science with Rugged Robot

Rugged Robot is built for outdoor Science activities, and you can get a Rugged Robot Data Logging Backpack which is ideal for collecting data.

Skills and Learning

- *Use a range of equipment like data loggers.*
- *Explore forces and compare how things move on different surfaces.*

- Explore friction by testing, designing and writing programs for Rugged Robot to move over different terrains. Can Rugged Robot jump gaping canyons, cross rapid rivers or climb muddy mountains?
- Which terrains does Rugged Robot find the most challenging? Plot your findings on a graph or barchart. Time how long Rugged Robot takes using stopwatches or timers.
- Explore materials and take Rugged Robot on a journey to name and identify what things are made of.
- Add a Rugged Robot Data Logging Backpack to log light, sound, temperature. The backpack fits into the recess of Rugged robot.