

## RUGGED ROBOT CHALLENGES

Deliver fun cross-curricular challenges in a fun, hands-on, playful way. Ideal for children to use independently or as a group, in lesson time or at a computing club.

Just print and laminate these cards and allow children to explore and learn with Rugged Robot, both indoors and out *(not suitable to be left outdoors)*.



### A few top tips:

- Make sure Rugged Robot has enough charge. The charge level is indicated by the LED ring on the top of the robot.
- If using the Rugged Robot App ensure your tablets are charged and ready to go.
- When starting a new algorithm remember to press the cancel button to clear the memory otherwise any new instructions will be added to the previously stored routine.



# OBSTACLE CHALLENGES

## Can you set up an obstacle course for your Rugged Robot?



- You could include tunnels, bridges and other obstacles to overcome.
- Maybe you can create characters for Rugged Robot to meet along the way!
- Why not include and test Rugged on different terrains and surfaces? Use the Mode Selector depending on the terrain. The higher the mode, the more rugged the terrain.
- Use a stopwatch or timer to time how long your Rugged Robot takes to complete your course.
- Keep a logbook of the challenges Rugged Robot completes.



# STRICTLY COME ROBOTS



**Create a synchronised dance routine for your Rugged Robot or a group dance with more Rugged Robot friends.**

- Can you get Rugged Robot to move in time with the music?
- Make your own costume for Rugged Robot to wear.
- Why not record your dances for others to see?
- Don't forget: Your robot can store 256 steps, can turn 45 degree turns and can travel 20cm for each step. You can also use the 'repeat' function for your commands.

**Have fun and ... Keep dancing!**



# MISSION IMPOSSIBLE



## Set up your own Mission Impossible Challenge with obstacles for Rugged Robot to avoid.

- You can use the built-in sensors so that Rugged Robot can detect objects, rotate and continue its journey.
- Make some rewards for Rugged Robot to collect on its journey and bring back in the built-in storage area.
- Will your Rugged Robot complete its mission?
- Use a stopwatch or timer to time how long your Robot takes to complete. Is there a way to change the route to speed up Rugged's journey time!

**Record your commands for Rugged Robot using the voice command button. Play the Mission Impossible music as your robot completes its task.**



## GET INTO SHAPE!



### Can you programme Rugged Robot to draw different shapes in the sand?

- Write programs to create different shapes and debug codes that are not accurate.
- Rugged Robot uses 45° turns, able to draw quite complex shapes.
- Work in multiples of 20cm as every directional press is 20cm.

**Have fun outside and  
get your Rugged Robot  
into Shape!**



# RUGGED ROBOT ADVENTURES



## Take Rugged Robot on different adventures!

Use a Rugged Robot Mat or why not create one of your own.

Examples:

- **Working on the Construction Site-** Can you get Rugged Robot to help transport items around the construction site?
- **One small step for man, One giant leap for mankind Moon Mat-** Take Rugged Robot on a Lunar adventure. What could it find or collect while exploring?
- **Ahoy there! Pirate Adventure-** Where is the treasure hidden? Get Rugged Robot to explore the island and hopefully bring back the hidden treasure!
- **Fishy Business Under-the-sea journey-** Explore sealife and get Rugged Robot to collect items along the way to research further.
- **Once upon a time Story Map-** Navigate Rugged Robot through a story map. What characters could it meet?

**Rugged Robot has a built-in storage area to hold and transport small items, ideal for any Robot Adventure!**  
**Write a Rugged Robot Adventure story. Photograph the adventure for your illustrations or record adventures to make a short film.**

