

# Mini-Golf - NXT

## *Suggested Time*

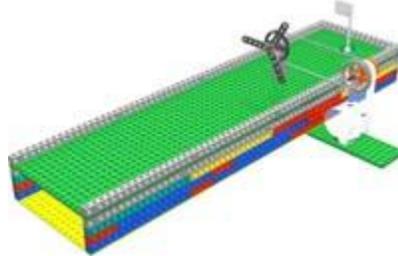
60 minutes

## *Age*

8 - 18

## *Challenge*

In this activity, design and construct a working RCX or NXT mini-golf obstacle/course. Each obstacle must utilize the use of at least one sensor.



## *Topics*

Building & Programming

## *Subjects*

Engineering & Technology

## *Programming Themes*

Wait For, Events

## *Related Math & Science Concepts*

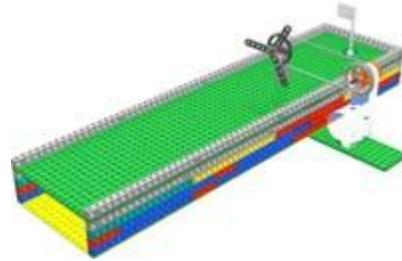
- RCX or NXT
- Assortment of LEGO Pieces
- Golf Ball & Putter

## *Materials*

- NXT Car
- Assortment of LEGO Pieces
- Tape or LEGO Walls for Maze

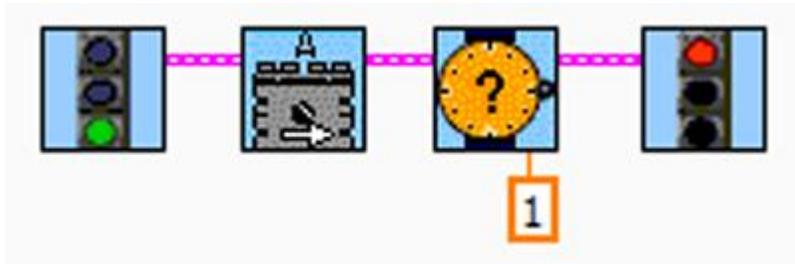
## *Building Instructions*

1. Build a mini-golf obstacle similar to those that you would see at a mini-golf course. Add ramps, windmills, and other hazards to increase the difficulty of your hole.



***Programming Instructions***

1. Choose whether to use ROBOLAB or the LEGO NXT Software to program.
2. Here is an example ROBOLAB INVENTOR 4 program.



3. Here is an example LEGO NXT Software program. This section controls a door that drops as the ball passes a light sensor.



4. This section swings a pendulum over the hole.



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***In Action***

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***Classroom  
Management***

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Play the whole course to see if the obstacles built can be beat.

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1. Students can fill out a journal to document their work.
2. Introduce the activity to students with a discussion about what mini-golf obstacles look like and how they move.
3. Students should build an obstacle using at least one sensor and one motor.
4. Set up a mini-golf green. You can use a commercially-fabricated green or a homemade one. The green should have a starting point (the tee) and a goal (the hole).
5. Students should test their obstacles and modifier their designs as necessary.
6. Have a mini-golf tournament when everyone is finished building and programming.