

Model 10 – Airplane Rescue



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Model 10 – Airplane Rescue LEGO Education WeDo



Connect - Preparation and discussion

The children could discuss these questions during circle time.

- Look at a map or a globe. Can you find where we live? Choose another location far away. Pretend you are on an airplane and that you are flying to that location. During your trip, what might you see as you look out the window of the plane? Are there mountains? Rivers? Oceans? Farms? Cities? Name what you would see.
- Why do we have airplanes to go from one place to another?
- Can you move like an airplane?
- To fly properly, the pilot needs to know the position of the airplane in the air. Is it tilted (going) up or down? What are the other positions that he could use?

Engaging question

Can you build an airplane that changes speed when it goes up and comes down?

* Show the children the poster of the airplane to get them thinking about building this model.

Construct

Model 10 – Airplane Rescue

Contemplate and discuss

Tips that are given to the students on the site.



Tip to launch the programme
Use the green arrow pictogram.



Tip to stop a programme
Click on the red square.



Tip for the sound
Put together the music notes and the "123" pictograms. Place your cursor on 123. When the letter "T" appears, you can type a number. You can choose among 20 sounds: numbers 1 to 20.



Tip for the repeat block
To make your program work without stopping, use the repeat block to group a sequence and repeat it.



Tip for the power of the motor
Put together the motor power and the "123" pictograms. Place your cursor on 123. When the letter "T" appears, you can type a number. The power goes from 1 to 10: 1 is the weakest, 10 the strongest.



Tip to launch the programme using the pictogram with the letter "A"

Place the pictogram with the letter "A" at the beginning of the program and hit the letter A. The program will start. To change the start-up letter, place the cursor over the pictogram and type any letter.



Tip for the tilt sensor

The tilt sensor has an arrow on its side. The sensor detects its own position. By clicking on the sensor pictogram, you can program 6 different tilts: left, right, up, down, straight (horizontal) or any tilt.

Various positions are available.



Straight



Left



Right



Up



Down



Any



Tip to program the tilt sensor

Use the "wait for" block (hourglass) pictogram and the tilt sensor pictogram. Don't forget to click on the tilt sensor pictogram to choose its position. The program will proceed to its next step when the sensor senses it is in the selected position.

Pictograms to use in the challenges



Here are a few challenges the children can do in class.

Challenge 1

Find the sound the engine of an airplane makes.

Challenge 2

Make the propeller turn slowly.

Challenge 3

Make the propeller turn fast.

Challenge 4

a- Copy the programs.



b- Hold the airplane in your hand. Play at making it fly up and down. What do you notice?

Note to teacher: *The same key must be used to launch the two sequences of the program simultaneously. The repeat block must be used to group the pictograms in order for the sequence to repeat.*

Challenge 5

Add sounds to the programs in challenge 4. What sound would the airplane make if it touched the ground?

Continuer

Each team creates its own challenge using the pictograms in the exercises above. Plan a time during which each team can explain and show their challenge to the class. This robot is particularly suited for creating a story, like that of a rescue attempt, for example.

If the children are used to playing games involving the throw of a dice, they can intuitively understand the idea of getting a different (random) number every time the die is thrown. You can program the motor strength to be picked randomly by inserting the pictogram of the die instead of the number pictogram.

Model 10 - Airplane Rescue Correction Key

Contemplate and discuss

Challenge 1

Find the sound the engine of an airplane makes.



Challenge 2

Make the propeller turn slowly.



(or a number from 1 to 5)



Challenge 3

Make the propeller turn fast.



(or a number from 5 to 10)



Challenge 4

a- Copy the programs.



b- Hold the airplane in your hand. Play at making it fly up and down. What do you notice?
The engine turns slowly when it goes down and fast when it goes up.

Challenge 5

Add sound to the programs in challenge 4. For example:



Continuer

Each team creates its own challenge using the pictograms in the exercises above. Plan a time during which each team can explain and show their challenge to the class.

The answers are personal for each team



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