

HANDLING LEGO WEDO ROBOTS — PART 1

We use the LEGO WEDO robots, instruction to build them are on the following webpage :

<https://education.lego.com/en-us/product-resources/retired-products/wedo/getting-started/>

This week, we'll work on the Dancing Birds : <https://assets.education.lego.com/v3/assets/blt293eea581807678a/blte1f48277efac5182/5f8804d769efd81ab4debf5a/9580-dancing-birds.pdf?locale=en-us>

Please construct the Dancing Birds, and answer the following questions :

1. What makes the birds rotate?
2. Can you make the birds rotate in the same direction? (both clockwise, or both anti-clockwise)
Can you make the birds rotate in two opposite directions? (one clockwise, the other anti-clockwise)
Explain what you need to do for each of the two previous situations (draw the differences on your paper)
3. Can you make one of the birds rotate faster than the other? Explain what you need to do (draw the differences on your paper). When you make this modification, how much faster does the fast bird rotate, with respect to the other? (how many turns does the fast bird do while the other makes one turn)
4. Make a scratch program that :
 - make the birds dance in one direction for 10 seconds
 - make them dance in the other direction for 7 seconds
 - generate two random numbers (one to know in which direction to dance, and the second number to know how many seconds to dance), then make the birds dance in the chosen direction for the chosen time