



Departmental Project

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Subject X

- Subject X took 45 seconds to gate to the first configuration. It took the subject 10 movements to be able to gate to the first configuration. The subject pulled upward, rotated counterclockwise the top, and repeated these steps 8 times and then pushed upward the tube from the bottom and then finally rotated counterclockwise to unscrew the tube. For the second configuration, it took the subject 4 seconds. It took the subject 1 movement to be able to gate to the second configuration. The subject pulled the tube upwards, to be able to rotate it and align it to the grooves. For the third configuration, the subject took 3 seconds to gate to the third configuration. It took one movement to be able to gate to the third configuration. The subject pulled upward in order to uncover the hinge.

Subject X Cont.

○ For the fourth configuration, it took the subject 1 minute and 22 seconds to gate to the fourth configuration. It took the subject 10 moves. The subject placed the revolute joint to 70 degrees and then raised it back up to its original position. Then she repeated this sequence 15 times, then she pulled downwards to cover again the mechanism, pulled upwards, subject tried rotating the tube counterclockwise, clockwise and then subject was able to get the revolute joint to 90 degrees to unlock the cap. It took 5 seconds for the subject to gate to the fifth configuration and 1 move to be able to gate to the first configuration. The subject pulled the tube towards her to be able to reveal the ball and socket joint. It took the subject 4 seconds to gate to the final configuration (6th) and 1 movement. The subject placed the tube upward and pulled upwards to be able to discover the ball and socket joint movement. Data to keep in mind is that the subject is in between 18-20 years old. The subject is a female. The subject did not use gloves and she was able to discover all the joints in the mechanism. Her total time of exploration was 2 minutes and 38 seconds.

Results

- Total interaction time(minutes): 2.63333 Visualisation test score: Did the subject discovered all the joints? yes
- Were you using gloves?(yes=1; no = 0) 1
- Was the subject female(1) or male(0) 1
- Age 18-25 (yes =1 otherwise leave blank) 1
- Age 25-30 (yes =1 otherwise leave blank)
- Time to uncrew the tube (minutes): 0.75

How many different movements you took: 10

Enumerate the movements (each one in its cell) The subject pulled upward rotated counterclockwise the top, repeated these steps 8 times and then pushed upward the tube from the bottom then finally rotated counterclockwise to unscrew the tube.

Results Cont.

- Time to rotate & then align the grooves (minutes): 0.66666667
- How many different movements you took: 1
- Enumerate the movements (each one in its cell): The subject pulled the tube upwards to be able to rotate it and align it to the grooves
- Time to move up & uncover the hinge (minutes): 0.05
- How many different movements you took: 1
- Enumerate the movements (each one in its cell): The subject pulled upward in order to uncover the hinge.

Results Cont.

- Time to place the hinge to 90* (minutes): 1.366667
- How many different movements you took: 10
- Enumerate the movements (each one in its cell): The subject placed the revolute joint to 70 degrees and then raised it back up to its original position. Then the subject repeated this sequence 15 times, , then she pulled downwards to cover again the mechanism pulled upwards subject tried rotating the tube counterclockwise clockwise and then subject was able to get the revolute joint to 90 degrees to unlock the cap

Results Cont.

- Time to reveal the ball & socket joint (minutes): 0.083333333
- How many different movements you took: 1
- Enumerate the movements (each one in its cell): The subject pulled the tube towards her to be able to reveal the ball and socket joint.
- Time used to explore the ball & socket joint (minutes): 0.06666667
- How many different movements you took: 1
- Enumerate the movements (each one in its cell): The subject placed the tube upward and pulled upwards to be able to discover the ball and socket joint movement