

Rope Handcuffs

Activity Length:
15 mins.

Introduction

Get your students' minds all tied up with this rope puzzle. They'll have to use lateral thinking and topology to untangle themselves from their partners.

Objectives:

Explain the importance of observation when doing science.

Key Questions:

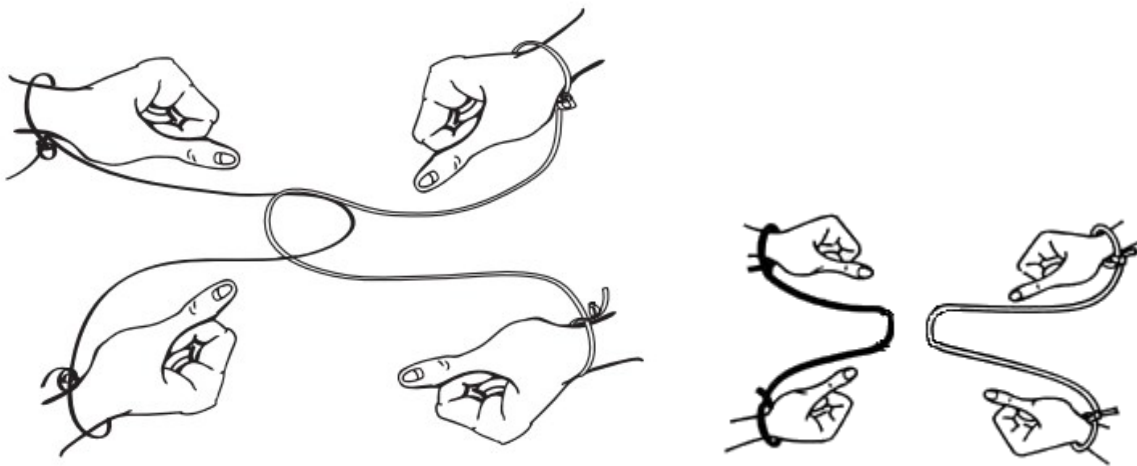
Why does this solution work?

Materials:

String or rope, pre-cut into meter lengths

What To Do:

1. Each student receives one rope and ties loops on either end large enough to insert their hands like a pair of handcuffs. Tip: the loops should be loose enough that students can easily take their hands out for safety purposes. It will also make the trick easier to accomplish.
2. Pair students and have them each put on their handcuffs so that they are linked Together.



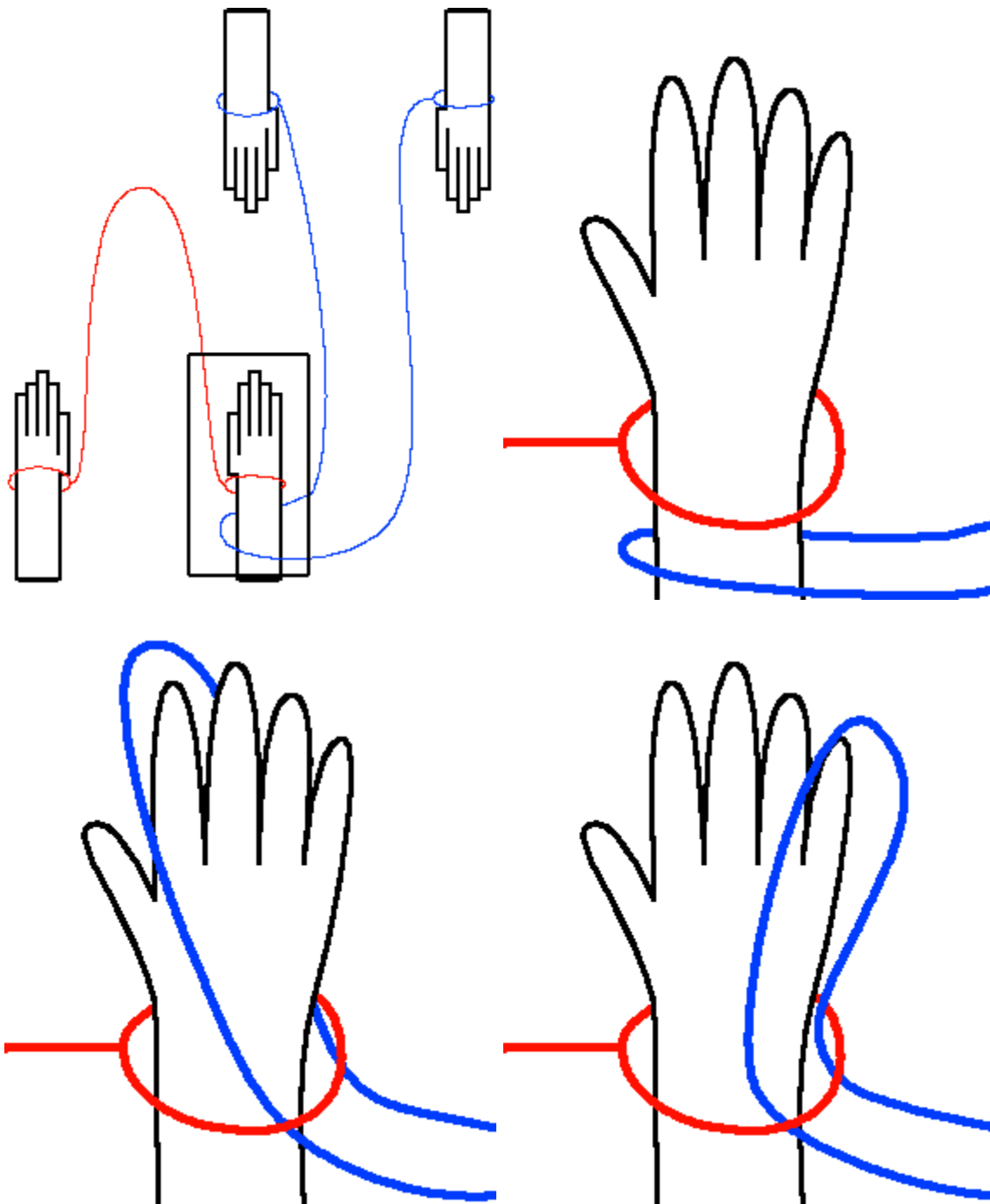
3. Students now need to figure out how to separate themselves from their partner without removing the handcuffs or breaking or damaging the ropes in any way. They must be able to show you how they accomplished it.

The Solution:

1. Lay your partners rope on your arm. You should be able to see that you could pull the rope through the loop on that arm, if only your arm weren't in the way!

2. To get around your arm, reach through the loop of your cuff and pull your partner's rope through the loop towards your hand, and bring it over your hand to the other side of your arm.

3. You should now be able to slide your partner's rope through the loop of your handcuff! See an example of how to do this.



Extensions:

Using what you learned from this puzzle, can you invent another puzzle using ropes?