

STEMify Low Ropes

Electric Orange

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NGS Standards:

PS3 Energy
PS4 Waves and Their Applications in Technology

Time:

Plan/design: 0-1 minute
Activity/testing: 3-5 minutes
Group Processing: 1-2 minutes

Materials:

Large coin with distinctive “head” and “tail”

STEM Themes:

Pulse
Conductor vs. Insulator

Team Building Themes:

Nonverbal Communications
Patience
Leading vs. Following

Permission:

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Activity Objective

The group will divide into two equal teams. Each team will join hands and stand in a line facing the other team. The person at the head of each line will watch the facilitator, while everyone else looks the other direction. The facilitator will flip a large coin slowly and continuously (partially as a bluffing exercise) and whenever a tail is flipped the head person will squeeze the hand of the person behind them. Then person two squeezes the hand of person three and so forth until the end. Upon being squeezed, the last person in line quickly detaches and runs around the outside to the front to tap the facilitator’s hand. They then move to the head of the line. Play several rounds so multiple people get a chance to play different roles. Note: this game is played in complete silence other than the brief running which often generates cheering in larger groups.

Opening Inquiry

There is no opening inquiry for this activity, as the lessons learned are generated by the event’s action rather than planning and strategizing.

Set Up

Other than sharing the directions, there is no set-up for this activity. It is best to just jump right in.



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Safety in Focus

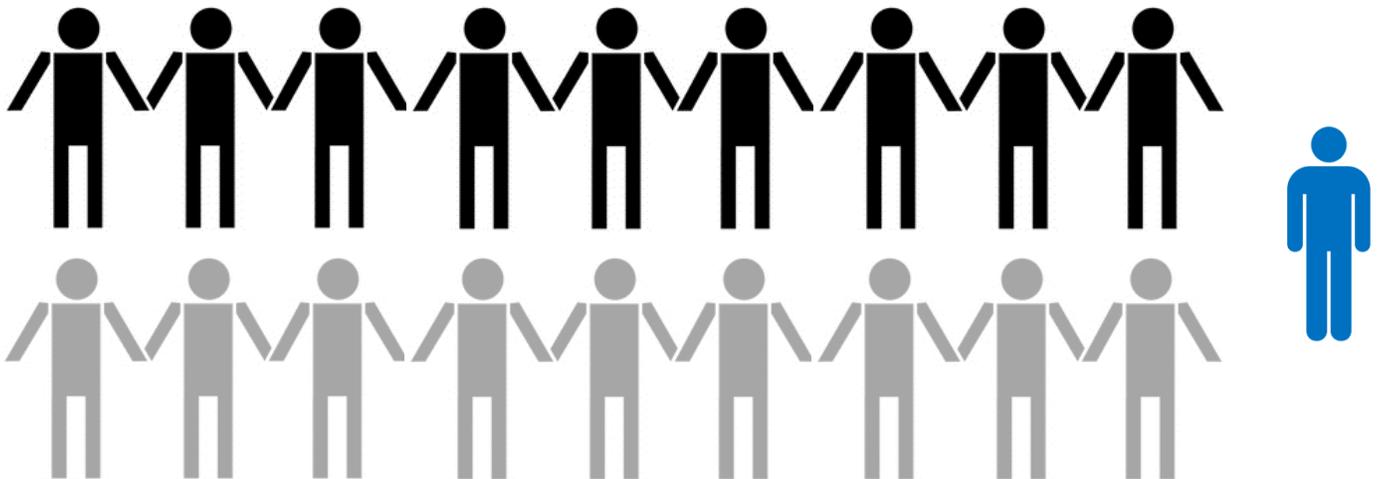
The primary safety concern of this activity is **running**. Facilitators should ensure that each participant has good footwear and that the outside running surface is clear of obstructions (usually teammates).

This is one of the safest low ropes activities around.

Procedure Perfect

The perfect group will listen attentively, have their hands as relaxed as possible, and close their eyes unless they are in the first or last position. They will also be encouraging to their teammates while running and not cast blame if that person is slow/causes the defeat. Most importantly, they will remain in a straight line to prevent being an obstruction to their running teammate.

The diagram below is a representation of a typical Electric Orange game during the stationary phase. If you will not have at least six members per team, it would be wise to avoid this activity.



—continued—



Facilitator Tips

Consider the following as the activity unfolds:

- ◆ Are there any runner safety concerns you need to immediately address?
- ◆ After the initial excitement wears off, how engaged does the team remain?
- ◆ What STEM words do you hear the group verbalize informally between the rounds?
- ◆ Does the level of challenge seem about right? Should an *Increasing the Challenge* be added?

Increasing the Challenge

1. When a group accidentally pulses incorrectly, give them some form of minor penalty for the next round. Example: make them stretch their arm lengths out so they have farther to run
2. You can do a sit-down version, but it is challenging for younger or uncooperative groups. Again, form two equal teams. This time have them face each other backwards and sit down with their legs straight in front of them. Encourage them to sit closely (side-by-side) with their teammates. Then place a kickball at the head of each team. On your starting mark, they must pass the ball to the end of their team without using hands. The ball must touch each person on the way down. Everyone must remain seated the entire time. If a ball jumps the tracks, you replace it to the last person it touched sequentially. Again remember to alternate positions between rounds, or this game loses its luster rather quickly.

Variation

When mobility or terrain is a concern, you can place a soft object (like a stuffed animal) on a table approximately five feet beyond the end of the line. The final person will then simply go and grab it rather than running around the outside. This eliminates the need for the running component, but you should remember to alternate positions anyway.

Processing the Activity

Spend 2-3 minutes discussing the following questions before moving on to the next activity:

- ◆ In what ways did your team work well together? What might you have done differently?
- ◆ What science and math skills did you use to complete this activity?

As appropriate, review the unmentioned/remaining *Themes* from page 1 to ensure group learning.

Citation

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