



## Open Access Curriculum

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TITLE: Plant Migration Movement Exercise

AGES: 12 & up

ASSUMPTIONS: Students have a good understanding of natural selection.

GROUP SIZE: 8-30

RESOURCE LIST:

- Robinson Meyer, [American Trees Are Moving West, and No One Knows Why](#) MSN.com, May 18, 2017.

LEARNING OBJECTIVES:

- Define the “range” of a species
- Understand plant migration over generations through a participatory movement activity
- Develop awareness of climate change and its effects on plants

SCRIPT:

*First, as a group, determine where the cardinal directions are (North, South, East, West).*

**Facilitator:** Today we're going to pretend to be trees, speeding up their life cycles so that we can experience several generations in just a few minutes. This will allow us to see how trees move as a species in response to changing environmental conditions.

**Facilitator:** Could I have someone volunteer to be the first tree in this population?

*Ask the volunteer to stand in an open space with their arms outstretched.*

**Faciliator:** Would someone like to be this tree's offspring?

*Direct the second volunteer to stand with arms outstretched and fingers touching those of the first tree.*

**Faciliator:** And how about the next generation? Feel free to stand in any configuration you like, it does not have to be a straight line.

*A third volunteer takes their place.*

**Faciliator:** We're going to continue like this for dozens of generations. When we run out of people, the first tree will perish, and that person will become the youngest tree. When a tree dies, mark your place.

*This can be done with chalk or a contrasting small object placed on the ground. Make sure to distinguish the first tree's mark so you can find it at the end of the exercise. Continue in this manner for at least 15 generations.*



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**Faciliator:** So now it hasn't rained much lately, but we sense some humidity coming from the west.

*Trees start moving west.*

**Faciliator:** Now it's warming up and getting a little uncomfortable.

*Trees start moving north.*

**Facilitator:** Because it's so warm, a pest from the south has come up here.

*Trees start moving even further north.*

**Facilitator:** Now the exercise is complete. Everyone please mark your place and step back.

*Make sure to distinguish the last tree's mark, to compare with the first tree's mark.*

**Faciliator:** What do you see?

*Begin discussion.*

### DISCUSSION QUESTIONS:

- According to recent studies, certain trees in Northeast US are moving north and west. Why might this be happening?
- What other sorts of environmental factors might cause a population to shift locations?
- Would this type of movement be easy for us to notice? How can we detect this?
- In real plant species, are the individual plants deciding where to grow?
- How might migration of plants affect animals?
- How might migration of plants affect humans?

FEEDBACK: Please email us with notes, comments and suggestions, or just to say hi at [nextepochseedlibrary@gmail.com](mailto:nextepochseedlibrary@gmail.com) We'd love to hear from you!