

AVALANCHE

Big Ideas: Systems, Equilibrium

Healthy natural and human systems engage self-regulating behavior. The individual parts respond to the forces and information sent out by all of the other parts of the system in order to maintain a dynamic equilibrium. When one part acts “with blinders on” without responding to the feedback it receives, the whole system tips out of balance.

Essential Questions:

- How are the parts of a system interdependent?
- How does individual behavior impact the whole system?

You will need:

1 long rod or stick (a meterstick or a broomhandle will do)

Participants:

This activity works well in groups of 6-8. To lessen the challenge, make groups of 4 to begin, then add complexity by increasing the amount of people in a group.

Activity:

1. Organize the participants into small groups of no more than 8 people. The members of each group need to arrange themselves into two lines, standing shoulder to shoulder. The two lines face each other. Each person holds out one finger of each hand at waist height—as if pointing to the person opposite them.
2. Instruct: “I am going to lay a stick across all of your fingers. Make sure your fingers stay in contact with the wood at all times, but don’t hold the wood with your fingers.”
3. The group’s goal is to lower the stick to the ground. Remember, each person must stay in continual contact with the stick.

Typically, as soon as the activity begins, the stick will begin moving upwards. This often feels like an incomprehensible mystery to the players, and sometimes players will feel disempowered or defeated. Allowing groups to repeat the activity multiple times ultimately leads to success as individuals begin to look beyond their own actions and focus more on, and respond to the behavior of the whole group.

Variations:

- Adjust group size. Avalanche is more challenging with larger groups, and it is easier to achieve success with smaller groups.
- Use a hula hoop. Something about a round system changes this game slightly.
- Make a “no talking” rule. This helps to avoid blaming while the activity is in process. Give groups 1 minute of planning time in-between rounds to voice their thoughts and ideas.
- Each time a player loses contact with the stick, start over.
- Add a metal washer to the end of each rod (you need to use a rounded rod or pole for this variation). Each time a washer falls off, start over again. This version gives more immediate feedback, speeding up the group learning.

Debrief:

- What caused the stick to rise?
- How did you change your behavior in response to the movement of the stick?
- How did your team’s behavior change over the course of many rounds?
- What stopped the stick from rising?
- What helped your group to succeed?
- Who was leading the group?
- Where else in nature and society do we see these kinds of dynamics?

Adapted from:

Meadows, Dennis and Linda Booth Sweeney (2010). *The systems thinking playbook*. White River Junction, VT: Chelsea Green Publishing.