

Flocking Activity

Materials needed:

- Notecards or small sheets of paper, enough for 1 per flock member
- 3 different types of stickers, enough for 2 stickers of each type per flock member (so, if you have red, blue, and green stickers, you want enough for each flock member to get 2 red stickers, 2 blue stickers, and 2 green stickers)
- A special outfit or costume for each of the 2 predators

Cast of characters:

- Flock members (this is all of the members of your audience who wish to participate – so far this activity has been tried with up to 30 flock members in a large, open space)
- 3 trees (3 different staff or volunteers who will pass out the stickers representing food)
- 2 predators (2 different staff or volunteers who will chase their prey, the flock members)

Round 1:

- Everyone follows these rules: always keep moving, never get more than an arm's length away from at least one other flock member, no holding hands (although contact is allowed), and no communication.
 - Always keep moving: Flocks and herds don't just stop for no reason. If everyone else is moving around you, you will keep moving too.
 - Never get more than an arm's length away: If you do, you are a much easier target for a predator and are automatically dead for that round.
 - No holding hands: This would make it easier to stay together and is not a behavior observed in nature.
 - No communication: Animals do not communicate with each other to plan how to move as a group – they just stick to their rules, and group movement occurs as an emergent property.
- Following these rules, the group moves around for a bit, getting a feel for how a flock moves together without planning to do so.
- Call out the flock members who do not follow the rules so they learn for the next rounds.

Round 2:

- The rules remain the same, but...it's time to introduce the predators!
- If you are tagged by a predator, you are dead for the rest of the round.
- See how the presence of predators impacts the movement of the group.
- Play until the predators have eaten the majority of the flock members – the survivors are the winners.

Round 3:

- The rules remain the same, and the predators are still in play, but now winning doesn't mean just avoiding predation but also surviving by feeding yourself.

- The 3 trees will pick locations spread out through the area and stay there. Each tree has a different type of sticker to hand out to represent food. Winners must collect a sticker from each tree.
- After giving out 5 stickers, a tree must not give out any more stickers for 10 seconds so that it can grow new fruit/seeds/nuts. This mirrors the limited resources that every animal competes for within an ecosystem.
- Every time a predator eats a flock member, it must stand in place for 10 seconds while it digests its prey item. This mirrors the type of impact a predator can have on its ecosystem.
- Once a flock member successfully collects all 3 stickers without being preyed upon, it has to make it to a designated safe spot and then wait for the round to be over before being declared a winner.
- If participants wish to play again, they can flip their card or paper over and use the blank side to collect another round's worth of stickers.

Follow-up discussion:

- Get the teens thinking about how this is similar and different to real-life flocking and predation situations. Some things that were discussed were whether the predators favored brightly-colored prey and whether we allow flock members to mob the predators to deter predation.