



STEM Activity Idea:

Locating Partners at Night

Suggested Program Level: Juniors – Cadettes

Girls will use flashlight codes to find their partners, just like fireflies do!

Materials:

- Flashlights for each girl
- Batteries
- Code cards – may want to hole punch and put on yard to wear around neck

Background knowledge to share with girls:

- Fireflies belong in the beetle family, but they are the only type of beetle that has bioluminescence
- Bioluminescence is the chemical reaction inside the fireflies' body that causes it to glow
- Each type of firefly species has its own code to flash so it can identify other members of its species in the dark
- Glowworms are not actually worms, but a firefly that doesn't have wings

Activity:

1. Share background knowledge (above).
2. Explain that each girl will have a secret code, and once everyone goes outside they will have to find their matching partner by using the code.
3. Practice on the sample code with the flashlights so everyone knows how to use the flashlight with the code. Show the girls that they need to count to ten between each time they use the code.
4. Hand out the codes and take the girls outside.
5. Show the girls the boundaries, then let them start using their code to find their partner without talking.
6. Once they think they've found their partner, have them come to you so you can check their codes. Once a few partners have found each other, you can switch the code cards around and have those girls re-join the game.
7. If the girls pick up the game quickly, you can ask them to count to five between their code signals to make it a little harder.

Codes:

(Sample) Long – Short – Long	Short – Short – Short – Short	Long – Long
Short – Long – Short	Short – Short – Long	Short – Short – Short
Long – Long – Long	Long – Short – Short – Long	Short – Long – Short - Long