**A Cat, a Parrot, and a Bag of Seed:**

A man finds himself on a riverbank with a cat, a parrot and a bag of seed. He needs to transport all three to the other side of the river in his boat. However, the boat has room for only the man himself and one other item (either the cat, parrot or seed). In his absence, the cat could eat the parrot, and the parrot would eat the bag of seed. Show how he can get all the passengers to the other side, without leaving the wrong ones alone together.

**1) Define the problem:**

1. The man needs to transport himself, a cat, parrot, and seeds across a river. He has a boat that will carry himself and one other piece of cargo. He must take caution in how he moves the cargo. If he leaves the cat and parrot, the cat may eat the parrot, if he leaves the parrot and seed, the parrot may eat the seed.
2. Assumption is the animals are free roaming, which is why they cannot be left alone
3. The overall goal is to cross the river and not lose any item or creature

**2) Break the problem apart**

1. The river, the boat size and the items that need to be transported are the constraints, leaving the cat with the parrot, or the parrot with the seeds will result in unfavorable outcome.
2. Crossing the river and all cargo unharmed

**3) Identify potential solutions**

1. To cross the river with all cargo unharmed, the parrot must remain separated from the cat and seeds.

4) **Evaluate each solution**

A. Yes as long as the parrot stays with the man or is left opposite of the other cargo the scenario will be effective.

**5) Choose solution and implement it**

A. The solution I will implement is to take the parrot across, come back for the cat, trade the cat for the parrot and return with the parrot. Trade the parrot for the seed. Return to opposite shoreline and drop seed. Retrieve parrot and cross river for the final time.