A cat, a Parrot, and a Bag of Seed

1. **Define the problem**
2. Do this in your own words.

- A man has to carry a cat, a parrot, and a bag of seed in a boat. However, there are three problems.

1. What insight can you offer into the problem that is not immediately visible from the word problem alone?

* People can guess the man can carry the cat first and bring the parrot and a bag of seed later. However, the parrot could eat a bag of seed.
* People can think the man can carry all of them together. However, the boat does not have enough room for all of them.
* People can assume the man can carry a bag of seed first and bring the parrot and a cat later. However, the cat could eat the parrot.

1. What is the overall goal?

- The overall goal is that a man carries a cat, a parrot, and a bag of seed to the other side using a boat.

1. **Break the problem a part**
2. What are the constraints?

- The boat has room for only the man himself and one other item.

- In his absence, the cat eats the parrot and the parrot eats a bag of seed.

- The man should not leave the wrong ones alone together.

1. What are the sub-goals?

* Move all passengers several times.
* I

1. **Identify potential solutions.**
2. For each of the sub-problems you’ve discussed in #2, what is a possible solution?

* To make sure the parrot does not eat a bag of seed, he would carry the parrot to the other side first and go back to another side to take the cat and a bag of seed.
* He could make the cat inside the bag of seed and carry them to the other side first and then carry the parrot later.

1. Evaluate each potential solution
2. Does each solution meet the goal?