The Castaway

Background
You have been stranded on a deserted island. With only your surroundings and the items in your bag, you will need to complete at least four of the various survival scenarios using your knowledge of the properties of matter to determine how items in your bag can assist you in surviving.

Procedure
1. Review the lists of your surroundings and the items in your bag. These are the only items you have on the island.
2. Review the Survival Scenarios and pick at least four scenarios.
3. Make a list of the specific items selected for each scenario.
4. Use your knowledge of the properties of matter to select items and create and/or design items that will help you survive for each scenario. Use only items you have on the island.
5. Include a detailed, labeled drawing or a 3-D model of what you created or designed to help you survive for each scenario.
6. Include a written explanation of why you chose the objects you did, how you created or designed your item, and how the item assisted you in surviving.

Mission
Use your knowledge of the properties of matter to create and/or design items needed for survival on a deserted island.

<table>
<thead>
<tr>
<th>Survival Items</th>
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<tbody>
<tr>
<td><strong>Surroundings</strong></td>
</tr>
<tr>
<td>- Sun</td>
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<tr>
<td>- Sand</td>
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<tr>
<td>- Ocean water with shells and fish</td>
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<tr>
<td>- Trees</td>
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<tr>
<td>- Coconuts</td>
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<tr>
<td>- Rocks of various shapes and sizes</td>
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Survival Scenarios (choose 4)

- Scenario #1: Create freshwater so you have something to drink.
- Scenario #2: Design a way to keep yourself warm during the cold nights.
- Scenario #3: Create a way to separate sand from seashells.
- Scenario #4: You found cool water on a hike. Design a container that will keep the water cool.
- Scenario #5: Design a way to catch fish.
- Scenario #6: Explain how you will cook food in the evening.
- Scenario #7: Design a tool to stir hot items.
- Scenario #8: Determine which objects you will use to hold down your shelter.

Analysis
Remember you need to complete the following for each of the survival scenarios that you choose:

- Make a list of the specific items selected for each scenario.
- Use your knowledge of the properties of matter to select items and create and/or design items that will help you survive for each scenario. Use only items you have on the island.
- Include a detailed, labeled drawing or a 3-D model of what you created or designed to help you survive for each scenario.
- Include a written explanation of why you chose the objects you did, how you created or designed your item, and how the item assisted you in surviving.