



Waiter: Hey, cooks! We've got a new order!

Cook B: What!? The last order is over!

**Narrator: At this moment, the Cook B is so angry. And he punches the bench hard. A bottle of oil and a bottle of alkaline salt fall onto the ground and they are mixed up together.**

Cook A: Haha... you are so careless! You now have even more work to do! You need to clean the floor up!

Cook B: Fine! Fine! Fine! (Cook B cleans the mixture with his own hands.)

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**SCENE 4:**

**Narrator: After a few hours...**

Cook B: Finally... finally... I've cleaned up all the mess. Let me wash my hands...

Cook B: Oh mine! What's happened? My hands..... so smooth....

Cook A: Wow! Amazing! How come?!!

Cook B: Can't believe it! The mixture not only cleans the dirt up, it also cleans up all the oily deposits on my hands which have been with me for years! I want to hug my son immediately!

**Narrator: After the mistake made by the cook, soap is invented. After that, soap is widely used in Egypt, like bathing, doing dishes and washing hands!**

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**SCENE 5:**

Girl A: So this is the history of the invention of soap. But why the mixture of ashes and oil can clean up the dirt?

Girl B: Haha! I know! Let me introduce the underlying principles to you two!

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**SCENE 6:**

**Narrator: this is the simulation demonstration. Students with blue symbol represents grease, Red symbol represent soap.**

Girl A: The hydrophobic tails of soap molecules embed in grease and oil. They break the grease and oil up into small particles which lift the oil off the surface and disperse into water.

Girl B: Incredible! Can we make it by ourselves?

Girl A: I know that soap can be easily made with fat and sodium hydroxide. We all have fat acid at home and we can buy sodium hydroxide from Japan Home Centre.

GirlsA&B: Let's make the soap..... as Xmas gifts.... for our family and friends. Yeah!

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**Conclusion:**

Actually, soap is a commodity item for external use only. No matter how much the soap is, the basic structure of all soaps is essentially the same. The extra money you spent is simply on its brand-name and packaging which is not worth it. Soap can be made in the least expensive possible way. Save the money for the needy and try to make a DIY soap as a Xmas gift this year! :)