

20: Chemistry in the 23rd Century



eye protection
must be worn

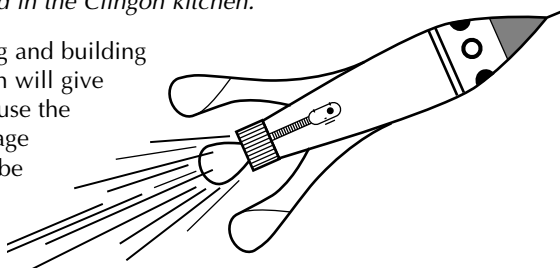


ask your teacher to
check that your
plans are safe

A. Battery Enterprise

"Captain Pickard, I think I know how we can get in touch with the Enterprise. All we need is a simple cell or even a battery to power our communicator. I think I saw just what I needed in the Clingon kitchen."

Help Dr Crusher by designing and building a cell or even a battery which will give the highest voltage. You can use the equipment found in the average human kitchen. You need to be quick because Geordie will be here soon to connect it to an ammeter.



B. Chemical Power

"If only I could lift the dilithium crystal up at least 10 cm I could work on it safely. I've got an idea! Data ask the computer to provide 5 g of sodium hydrogencarbonate and 15 g of citric acid."

Design and build a device to lift the dilithium crystal at least 10 cm using the reaction between sodium hydrogencarbonate and citric acid. The dilithium crystal must stay up once lifted.

C. Dr Who's Sherbet Mixture

*"Doctor!" shouted Ace. "The time travel control is about to overheat!"
"I have just the thing," said the Doctor. "Pity, I was looking forward to eating the sherbet."*

Help the Doctor out by producing a sherbet mixture which will cool the control down.