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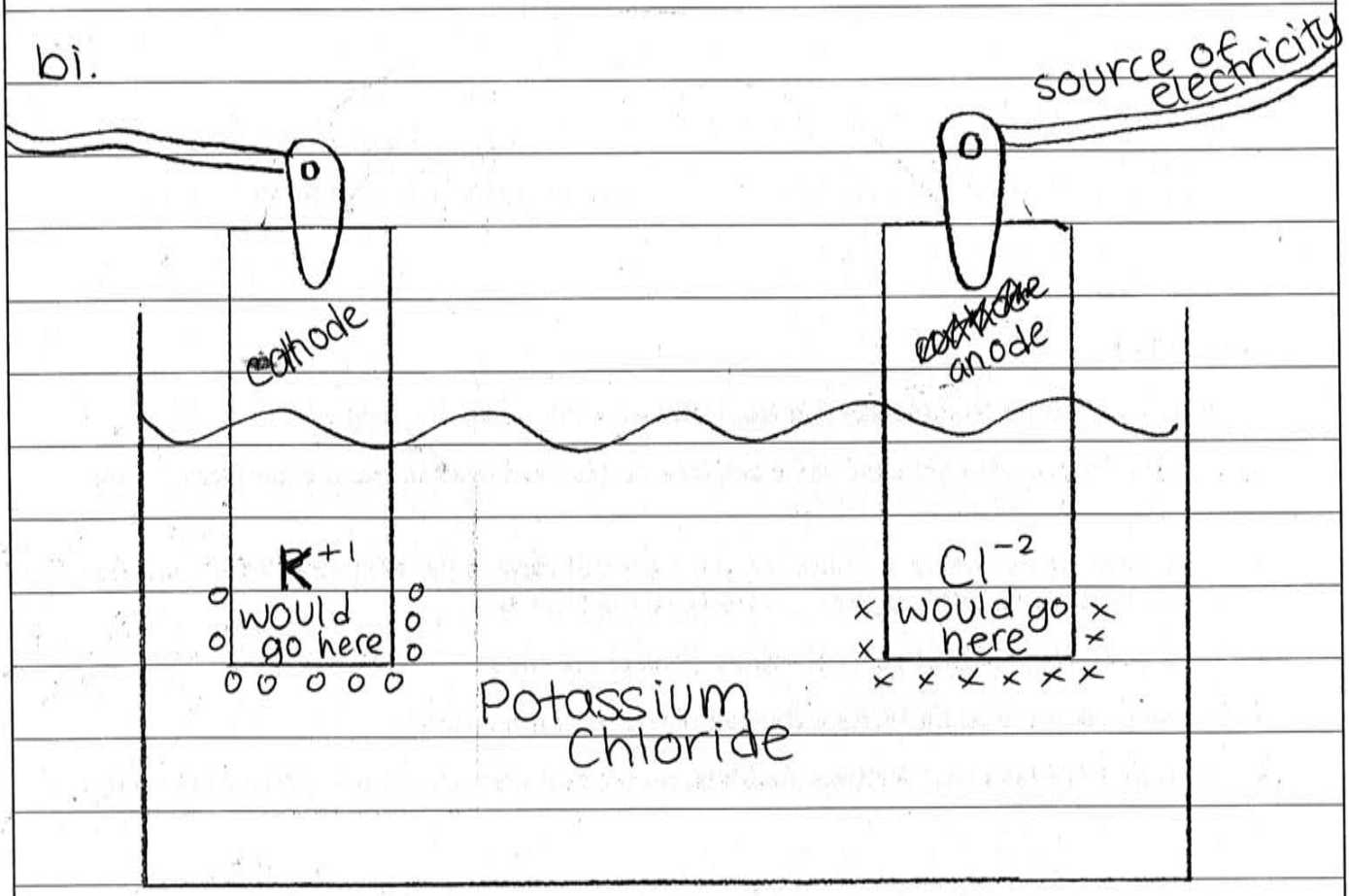
33a. Calcium carbonate skeletons would cover the artefact, having shells encrusted on the outside and possibly inside of the artefact due to its nature. Boring worms and other organisms may have found their way into the wood. The wood would also be logged with salt water, creating problems if the artefact were to dry without care. The metal rings would have also been corroded.

bi.



ii. It would be the sheet getting covered in Potassium. Whether just in the water, or on the Stee There would also be bubbling.

c. Combining steel with new elements gives it new properties, meaning it can be used in different ways. Adding carbon to iron in a small amount makes pretty normal steel. It becomes harder and tougher, but more brittle at the same time. Steel 3 is stainless steel, having a very shiny appearance and being used in all sorts of things, from kitchen appliances through to watches. Steel 4 is cast-iron steel. It is a very rough and dense metal, and used for things that need to be used for years to come. As you can see, when steel/iron has something added to it, it takes on some of its properties, thus making it useful in all kinds of situations.

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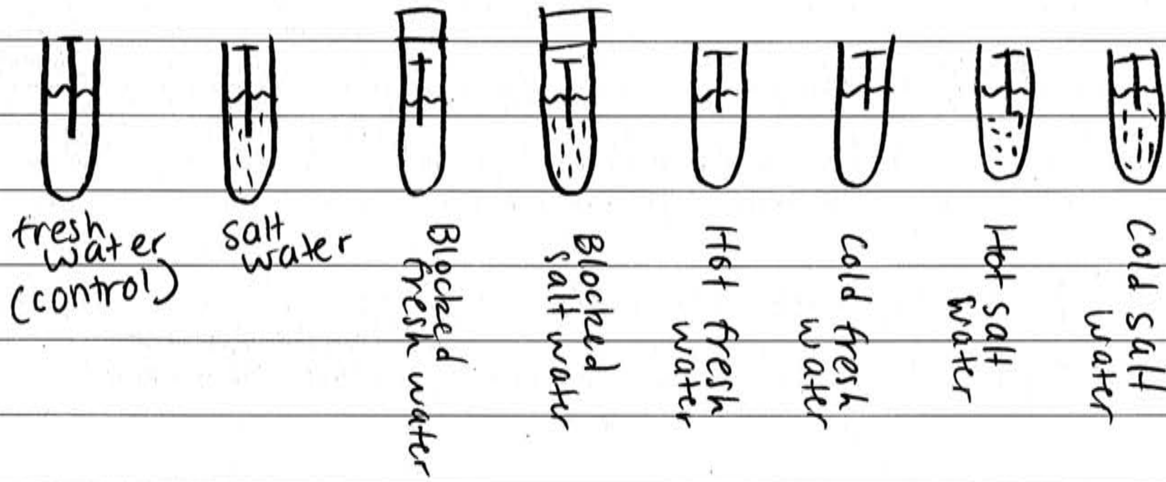
33di. ~~The~~ Three environmental factors that affect the rate of irons corrosion are air, salinity of water and ~~[illegible]~~ temperature. In a school laboratory, you could use iron nails in test tubes under the different circumstances, like so.



Observing the rates of corrosion and comparing them will give detailed results on how these environmental factors affect the rate of corrosion of iron.

ii. By monitoring ocean environments and making sure that everything is alright, and along a natural course of measure, the salinity of water could have less affect on the rate of corrosion.

e. The techniques used in restoring and conserving wooden and copper artefacts that have been submerged in the ocean for 100+ years are tedious. They are generally effective at ~~restoring~~ conserving what is left of an artefact, and putting it in slightly better condition than what it was found in, but the techniques ~~are~~ we use today are not ideal. In the preservation of wooden artefacts, they are taken from water and placed in fresh water which is monitored and changed every now and then, after ~~shells~~ calcium carbonate skeletons have been removed and organisms (such as boreing worms) purged. After this, it is left in a PEG (poly ethylene glycol) solution, or if it is a bigger artefact, sprayed with it. This fills the holes that salt crystals once inhabited. After a coating, the artefact is considered completely restored. This process is too long in my opinion, but until a better alternative is found, it will stay. Copper artefacts are slightly easier to handle. Once out of the water and into fresh water, the copper is cleaned with a chisel. After this, electrolysis is performed to clean the last of the metal, and remove any ions that are still

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present. After electrolysis, the metal might be painted with a paint or coated with a lacquer as to preserve further corrosion. Both of these processes are long and tedious (wood being more than copper) and I believe that they are not an efficient use of time and money. We need to find an alternative to keep our history safe.

You may ask for an extra Writing Booklet if you need more space.

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