

What changes in temperature and appearance did you observe with each liquid?

Both the temperature and the amount of corrosion seen should rise in the following order: oil, then water, then vinegar.

Did the reactions release or absorb heat from the environment?

They released heat.

What substances are necessary for rusting to take place?

Iron, oxygen, and an electrolyte to transfer electrons between them are necessary.

How can one account for the changes in each jar? Recall what the process of rusting requires.

Oil is a poor electrolyte, which does not readily facilitate the transfer of electrons. Water is a better electrolyte, and vinegar is the best electrolyte.