

How hard is hardness?

Give students a number of common objects and have them place them in order of hardness. For older students you can NOT tell them how to do this and have them figure out a way to do it. For a younger students you may want to hint to them that something hard will scratch something soft. Suggested items include:

Glass (a mason jar is perfect - strong and safe)
 Piece of wood
 Chalk
 Copper coin
 Quarter (other coin)
 Metal spoon (or some other metal item)
 Soap
 Rock (any would work)

At the end of the activity you can discuss how they worked out the order and see if different groups had a different order and why.

Another neat way is to have students complete the logic matrix below (larger one attached). They do a scratch test, for example, does wood scratch glass (the answer will be 'no'). In the box wood (side) and glass (top) they can write NO or an X. Try the test does a copper coin scratch soap. In that box they write YES or write a tick.

This logic matrix can then help them to work out the order.

	glass	wood	chalk	copper coin	silver coin	spoon	soap	rock
glass								
wood								
chalk								
copper coin								
silver coin								
spoon								
soap								
rock								

Name _____

How hard is hardness?

Can you work out the order of hardness of the following objects from HARDEST to SOFTEST?

Try using this logic matrix to work out the order. You can run a test, then mark the result on the matrix.

	glass	wood	chalk	copper coin	silver coin	spoon	soap	rock
glass								
wood								
chalk								
copper coin								
silver coin								
spoon								
soap								
rock								

HARDEST

SOFTEST
