

## Episode 2 Games

Using the pirate hooks you made last time find somewhere to attach them to a wall, or similar, and make some light weight hoops. String or rubber bands work well but anything you can find that works is great! Start about 50cm away and see if you can throw the hoop on the hook. If you are successful move back another 50cm and repeat until you can't do it anymore. Let us know how far back you managed to do it.

In the story today Peter and Jesus did the actually impossible. We have an activity that at first seems impossible. Let's have a look. Drop a paperclip into a bowl of water. Does it float or sink? What if you lay it flat and place it really gently? Nope they still sink right? When you place the paperclip one side will be pointing down lower and contact the water first. When this happens, the weight of the paperclip as well as the force of your hand moving the object downwards all act through the relatively small area of that bit of paperclip and it sinks.

When you place the paperclip on the tissue instead, the weight of the paperclip is spread out over the whole area of the tissue, spreading the weight over a greater area of water. This means that there is more surface tension from the water holding up the tissue and the paperclip. When you carefully pull away the tissue, the paperclip can stay floating because now it is flat and there are no other forces (like your hand pushing the clip down) to encourage the clip to break through the surface. Floaty metal!

