**Exhibit building secrets 1: What exhibit builders do**

Written by Ian Simmons, Director of the Inspire science centre in Norwich from information supplied by Steve Pizzey, Roger Coleman, Ben Gammon, Andy Lloyd, Paul Orselli and Claire Pilsbury.  
  
**Think about opportunities, not messages**When developing an exhibit, thinking in terms of creating something for people to explore, rather than something to put a point over, tends to lead to a more satisfying and communicative result.  
  
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**Don't try and make an exhibit do too much**Adding extra options, bells and whistles confuses people instead of enriching the experience. Stick to providing one experience well, save the other options for separate exhibits.  
  
**Try and make an exhibit intuitive**People usually don't read the labels first, a good interactive is simple enough so that people don't need to be told what to do first. If it has an intuitiveness that makes people "noodle around" and achieve different effects it enriches the user's experience.  
  
**Be prepared to throw away a prototype**Don't make a meal of prototyping an exhibit, otherwise you lose sight of why you are doing it. Keep the end in sight and ditch it if it is not working - there is no shame in a good idea turning out to be impractical to build, that's what prototyping should be finding out.  
  
**Make things simpler, not more complex**When prototyping an exhibit, try and solve problems by making things simpler rather than adding another bolt-on unit. The temptation is to get ever more complex, ending up with an exhibit which is so constrained in its operation and has so many things which could go wrong that it is both unpopular and evil to maintain.  
  
**Think outside the case**It is tempting to try and make an exhibit "bulletproof" by putting working parts in a case and limiting people's interaction to pulling a lever or pressing a button in the hope it will make it maintenance-free. Usually this not only bores the user, but often increases maintenance problems. An open design which can be easily fixed is far more satisfying.  
  
**Frame, sub-frame, sub-unit**Think FRAME, SUB-FRAME, SUB-UNIT when designing exhibits. Imagine a broken-down part needs to be air-freighted or the exhibit needs to be transported. It also makes on-gallery maintenance a lot easier.  
  
**Use a minimum number of screws**Use a minimum number of screws to secure things in place and make sure there are generous sized spaces through which to gain access to an exhibit's innards. This can make the difference between a quick fix on gallery and taking an exhibit off the floor for several days.  
  
**Use consistent fixers on all exhibits**In that way staff need only carry round a couple of allen keys instead of an armoury of screwdrivers in order to do maintenance.  
  
**Beware things which look like interface controls**Prominent rivets, bright knob-like fixers, lights which look like buttons etc all confuse users who will enthusiastically press them and pull them, at best ending up baffled, at worst breaking the exhibit.  
  
**Beware reset mechanisms**If an exhibit has to pause to reset itself it can make users think they have broken it or done something wrong. Ideally, an exhibit should only reset after it has been untouched for 3 or 4 minutes.  
  
**Filters get blocked**Filters on fans etc get clogged in no time and reduce efficiency. If you must have them make them accessible and carry plenty of spares. Use open grills rather than fine meshes for air inlets, meshes swiftly felt up with hair and fluff.  
  
**Water exhibits and shed skin**If an exhibit includes water which people can put their hands in, don't underestimate the amount of "customer residue" (shed skin) they'll leave behind and make sure you have included a way of dealing with it - filters clog too quickly to be really useful.  
  
**Polycarbonate absorbs water**Polycarbonate absorbs up to 5% water, which its specs don't tell you, so any exhibit with polycarbonate tanks will swell and distort over time unless steps are taken to prevent this.  
  
**Kneel like a child**To get the height right for children, get the fabricator to try it out while kneeling down.  
  
**Check finger pinches**Thoroughly check any finished exhibit for finger pinching zones before putting it out on the floor.  
  
**Labels should be obvious**Even though label reading is usually a last resort, labels should be clearly visible. They need to be no more than 0.5m from the exhibit, and ideally should be on the exhibit, and should be in the users line of sight both when they are using the exhibit and when they are approaching it.  
  
**Maintenance**Remember - somebody has to maintain the exhibits, and it could be you.  
  
**Be prepared to scrap an exhibit**Be prepared to scrap an exhibit at any time, even once it is on the floor. Keeping a duff exhibit on the gallery does no one any favours.