

The Hirstwood



Training 2-Day course notes

Design and equipment ideas

Course Tutor

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**By all means copy these sheets but leave this footnote on.
Equipment and Ideas.**

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Developing and Designing a Multi Sensory Room.

The size of the room is dependent on what you intend to do with it. Small rooms work just as well as large rooms. If you want to work in groups of students then your room may need to be larger than a room for one to one work. The best room is around the size of a smaller classroom, this way you have the best of both worlds, and will be able to curtain an area off to make a small one to one area.

The colour of the room is really up to you! Many rooms have been white, but this has been due to two factors. The first being it is true to the original white tower in Holland and two, you can project all round it. In reality, projecting on to nets and sheets will make projected effects more accessible for most users.

Consideration should be given to the contrast of **colour in a room**. Not only do most of us find a totally white room very clinical, it will give little clues to visually impaired people about distance and orientation within it. Remember that if you are looking at a sideglow fibre optic against a white surface you will get less visual impact than if you had the sideglow on a black surface. The same applies to many pieces of equipment and not just fibre optics.

People are now finding that two colour rooms (black and white) can work well as it gives you the flexibility of colour contrasts. There should be no reason why the room could be pastel colours, but remember to offer contrasts within the room. If a person is happy in their surroundings they will be more at ease with the surroundings.

Blackout is important to gain the best visual preference for a visual effect. If the room is dark then it will mean that the most prominent effect is the one you are using, not the sunlight shining through the curtains. The best way to black out the room is professional blackout curtains. You should always check the fire retardancy of the material you are using.

You decide to velcro the blackout material to the window frame. This will also work very well but may be as costly as curtains. If you decide to paint the windows out that's fine, but make sure you can still open the windows for ventilation purposes.

Ventilation will make a room a comfortable place to work in. Some rooms can get very hot, depending on the activity and equipment used. In many rooms you have the addition of soft floor and wall padding which will insulate the heat.

Air conditioning is the best, but the restriction on most budgets will mean that fans will be the most cost-effective option. Extractor fans will work well but look out for the one's that let in too much light when you pull the cord to start it off as noise is a problem with an extractor fan. If the budget will not stretch to extractor fans, then the windows and doors could be opened after a session. Any movement of air is better than none.

Room Lighting (white) is still needed in the MSR for moving people in and out, cleaning and preparation for the next session. Most people do not like to be led into a dark room or a strange room with very few visual clues. Strip or fluorescent lighting is still commonly used in many rooms but is insistent, instant and often very bright.

It could be very unnerving at the beginning of a session as the room goes from light to dark in a split second or at the end of a session when we are all relaxed and it suddenly starts flashing and then ends up bright white. If you have just had a relaxing session then this may be a way to reverse the good that just took 15 minutes to create. Lighting on dimmers will be much more subtle and less stressful as you slowly take the room lighting up or down to an acceptable level.

Plug sockets will be determined by the equipment. The socket position should always be as close to the appliance as possible. If you have a solar 250 on a shelf at 6ft then that is where the socket should be. Avoid trailing leads at all costs; do not, wherever possible use extension leads and adapter plugs, as these will encourage trailing leads. When planning the room its always better to have too many sockets than too few. The sockets in an MSR should always have RCCD (or RCD) protection. This device will cut the power to a cable should it be severed or in the unlikely event of an appliance developing serious fault.

Furnishings in the MSR will depend on the students needs. Comfortable and correct positioning is very important. Some rooms will have the walls and floor covered in soft play. If you are having soft walls and floor then always make sure it meets the current fire regulations for your authority and British Standards in the U.K. Always allow wheelchair access as some people will find it much more comfortable to access effects from their chair.

Allow room for lifting a person in and out of a wheel chair and other mobility aids. The soft mats should be used to help people access the equipment, not hinder it. Before you buy soft mats and wall padding think how comfortable you will be sat on plastic for any period of time and do you really need it?

Although soft play padding has many disadvantages it can be a very good option for a room. It will be comfortable (when covered in appropriate materials) for some and will make an area safer if you are worried about hard floors and walls. Soft play can also help to vary the colour of the room. If you are buying soft mats then get them manufactured with different colours, for example white on one side and black on the other.

Having a multi-coloured floor using floor mats can change a room's ambience. Wedges, rolls, etc can function as good furnishings for support and access to the visual and sound effects in the room. We often hear that non-supportive items like Bean Bags should not be used as they can encourage unusual

body postures and over a long period of time cause problems. But if only used for short periods of time they should be ok.

Like soft play, **beanbags** should meet the current fire standards. Don't forget that most rooms both look and function better with appropriate furniture, try looking at IKEA and other suppliers for ordinary furniture, this often helps take the 'special' out of the room.

Waterbeds are available in many sizes. Costs also vary from company to company. Some give a price with supporting walls and some will give a price just for the water mattress. In my experience a bed will perform best with retaining walls. The bed will, in most cases, need to be fitted by the company who supplied it. When having a waterbed in an MSR it could be preferential to make the bed a contrasting colour to the rest of the floor area. Lastly make sure the waterbed does not take up all of the floor space in the room. If you are not sure if there is enough space? Forget it!

Vibro floor and Vibro mattress have been around for many years and can be a useful addition to the MSR. Most have a frequency control and are a therapeutic tool in their own right. These consist of a section of floor, which vibrates either via a motor with a concentric weight or speakers placed under the floor area. The frequency is determined by the speed the motor rotates or the sound frequency and level. You will find that only specialist companies sell these items and they vary in quality. Make sure that the company selling the items knows what they are doing; ask for research about the product, as the effects of this type of vibration are not always good.

Ball Pools can be part of the MSR or can be the MSR themselves. Not everyone will like a ball pool and they should be treated like a swimming pool in terms of the use.

Suddenly being placed in an environment, which surrounds you and moves, can be unnerving. Ball pools can be made in many sizes and costs again will vary. The walls of a ball pool can be made to any colour you wish and again could add contrast to the room.

The balls can be multi coloured or your supplier can get white balls, which may be useful for projection. Netting around the ball pool will also be an idea for a projector. Optical fibres could be laid in the pool, but do not put the light source in the pool. Watch for people getting tangled in the optics. **Lit ball pools** using clear balls and lighting underneath have been put in to MSR's and are reasonably successful, although expensive.

Lighting Equipment

One of the most flexible systems for the MSR is the Solar 250 Projector (available from all companies and disco shops) and the Mirage Projector (available from Spacekraft). The projector is the only effect projector on the market at the moment, which can take rotating wheels, cassettes and other

accessories. Price can vary as can the specification of the projector. Some companies will sell the projector more cheaply because it has a standard lens included; some will offer a wide-angle lens as standard at very little extra cost. Lenses will be the only difference in the standard specification of the unit.

Effect Wheels are the most popular effect for the projector. They can be supplied with all types of images ranging from fireworks, balloons and cogs to space scenes, underwater scenes and prehistoric impressions. When working with visually impaired people and choosing a wheel, is important look for more than the pattern or image - consider the colours too.

To make a wheel rotate you should always have a rotator. For most wheels a ½ RPM (Revolution Per Minute) rotator will be slow enough to allow students to track and follow the image. Rotators come in many different speeds, which can create slower or faster images. You can also create effects with two rotators, a deep wheel used with a distortion wheel will give a shimmering undersea effect, and a balloon wheel will change colour when used with a spectraflash wheel on a 5rpm rotator. Liquid wheels are often the first choice when choosing, but be careful- they can break easily. You would be advised to buy a wheelsafe rotator, for use only with the liquid wheel, which will protect it from damage. It is also possible to use blank wheels to create your own effects. Use film slides and OHP paper to create your own effects by inserting them between the wheel plates. Late in the 1990's we have found we can make wheels with computer programmes using clipart. If you make your own wheels you will find they are much more appropriate to your students.

Making your own Projector Wheels

Blank wheels can be purchased from most of the sensory companies. The interior of the wheel is best made from photocopy able acetate; it is possible to get 2 x 6" discs from an A4 sheet.

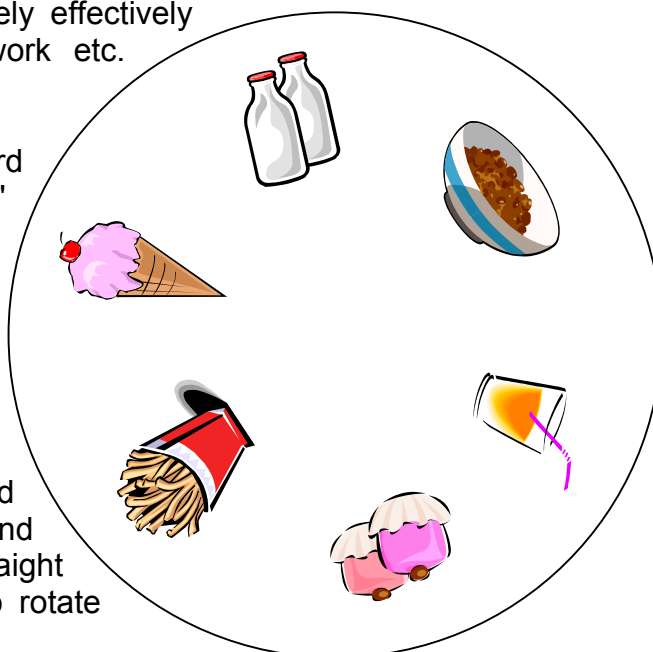
You can use non-permanent OHP pens and draw whatever you wish. It is possible to use colour gel or coloured cellophane like sweet wrappers. To get different effects you can use doilies, burst bubble wrap etc. etc. It is possible to make a dot wheel with a hole punch, or a leather punch on card if you want different sized holes.

Using Clipart

Clipart can be used extremely effectively for theme work, number work etc.

Here's how you do it: -

1. Using Microsoft Word go into "draw" and draw a 6" circle.
2. Import clipart-using acetate suitable for an inkjet/laser printer.
3. You will need to rotate the clipart and place it in the circle as shown. To do this, click on the clipart, and then find the command ungroup, then regroup straight away in order to be able to rotate the picture you want.



It is also possible to use Corel draw, paintshop pro and other art packages on the PC and ClarisWorks and other draw packages on the Macintosh.

Photo Wheels

These are terrific for personalising your sensory sessions. Take photos with a slide film in the camera. After they are developed take the frames off the slides and put the pictures in the wheels. The photos can be of a particular group of students or people's families and pets, or a theme such as a fire station or airplanes. You could always use a digital camera and create the wheel in Microsoft word. The making of wheels is very much fun and limited only by the imagination! It is possible to use leaves, Letraset, string ... anything you want.

On the course you will have learned about many of the safety issues with projectors but as a reminder:

1. Never have a wheel stationary in the gate of the projector, as it will melt.
2. Always have effects in the gate (where the wheels go) otherwise you will melt the lens.
3. Always make sure air can get into the grill on the underside of the projector otherwise it will overheat!

Effect Cassettes are smaller than the six-inch wheels. A three-inch diameter means that rather than a tracking movement you will see the whole image. They can only be used with a single speed cassette rotator. Cassettes are all a little like a kaleidoscope pattern design. Again when choosing cassettes look at the colour contrast as well as the patterns. Two cassettes, which may be effective, are number 13 and number 22 as they both offer interesting patterns for visual stimulation. As an alternative to the standard cassette rotator you can buy a cassette auto-changer. If a projector is in a place where it cannot be reached easily then the auto-changer will automatically change 1 of 4 cassettes in rotation and show the cassette for a variable time from around 10 seconds to 15 minutes.

Point the Projector on the wall, the floor, the ceiling, a Mirror, a mirror ball, at a net (called back projection), on to Mosquito Nets, a sheet, on the body, on to a play tent, in a box, at hologram sheets, at a survival blanket, at glitter Pom Poms, Christmas decorations, rough surfaces, Opaque Perspex, at a parachute, at Lumi Glow, Corrugated Sheet, or even at a Tree, it works!

Point the projector wherever you want and try!

Colour Wheels, Acetate, Symbols, Faces, Flower wheels, Getting Dressed wheel, Black and White Wheels (lines or holes), Photo copy wheels, Ink Jet or Bubble Jet Wheels, Slide Wheels, Leaf Wheels, Cut Out Silhouette Wheels, Bubble Wrap Wheels, Letraset Wheels, String Wheels.

Night Scene: Clouds, Moon Stars. Transport: Airplanes, Cars, Trucks, and Helicopters. Sequencing wheels: Clothing, Feeding, and Toileting Etc. Four season wheels, Story wheels, Communication wheels, Outings, Own Artwork, Slide wheels...

Mirror Ball and Pin spots are an effect, which will give well all round coverage of light in the room. If you are thinking about a mirror ball first make sure the ceiling will be high enough, so the ball cannot be reached. Will the ceiling be strong enough to take the weight of the ball?

The pin spot will supply the light for the ball and should be mounted at a distance from the ball, so the light covers the surface or mirror facets of the ball. The pin spot can be single colour or be fitted with a colour wheel. Half mirror balls can be supplied if you have a low ceiling. Always have the mirror ball rotator wired separately to the pin spot so enabling you to light the ball without having it rotating, which can be disorientating. Remember excellent effects can be created with a torch and a Christmas tree bauble, so try that first.

Bubble Tubes are a visually pleasing effect, which can be supplied, in different heights from 1/2m, 1m, 1.5m, 1.75m to 2m. Mostly seen as a visual effect, the tube also makes noise and vibrates. But like many effects the sound may make this a difficult piece of equipment to carry out visual assessment.

Make sure you buy a low voltage tube as water and 240v don't mix! A recent development is the Interactive Bubble Tube - this tube, although more expensive, will have coloured switches attached and the colour of the tube can be controlled by the user. Bubbles can be switched on and off and the control of the tube may make these a better long-term investment. Some cheap bubble tubes available on the high street may not be suitable as they may be 240v in the base, so although they are cheaper you will need to make sure they are going to be safe. If in doubt don't buy it from a shop, buy it from a supplier who knows how you are going to use it and has designed the bubble tube for use in education. Remember to make sure you can access the lamp in the tube or tubes. Large bases are fine if you can get to the lamp. Make the tube or tubes are accessible and always have a bracket supporting your tube if its height is above 1m

With a bubble tube you could try.

1. Visual Stimulation
2. Cause and Effect
3. Colour Sequencing
4. Colour Matching
5. Counting the Balls
6. Touch the Tube (Vibro)
7. Fibre Optics round the base
8. Projects: with interactive switches, Seasons, Christmas, Pictures of students or parents, Names (writing or Symbols)
9. Cellophane wraps around the tube.
10. Use it as a lighthouse or other prop in a theme

Bubble Tube Water. There is some risk to health if you do not either change the water in the tube every **six weeks** or condition the water with commercially available tablets. The risk is very low; so do not believe scare stories.

Fibre Optic Products are good for the MSR as the fibre optics used carry no heat or no electricity, which makes them very safe to touch. Most fibre optic effects will be best shown on a dark background or area. Sideglow fibre optics glow and change colour through the sides as the name suggests. They can be made in many different sizes from 1/2m to 5m, with varying amounts of strands from 50 to 500.

The most popular sizes are 2m long x 200 ends or 3m long x 300 ends (the latter are on the course). Sideglow fibres are often used on the floor, but some people do hang them from the wall. Sideglow chandeliers and sideglow curtains can produce dramatic entrances and fountains, but are far from essential. If you do hang sideglow fibres do not expect the light source alone to be able take the weight of the harness. Always buy a light source, which is fan-cooled and never put the light source on to soft play mats. On the Hirstwood training course I use 100-watt light sources, which offer a much brighter effect at little extra cost. Although we do not think there is a major

danger in mouthing the strands, if somebody was to bite through the strand then you could have problems. If a strand breaks it is easy to repair by heat-sealing the end.

With fibre optics you could try:

1. Lay the students on the floor and spread out fibre optics over them
2. Movement: Walk, crawl and explore
3. Visual tracking skills.
4. Tactile Work.
5. Reinforce teaching concepts, colour matching, directional skills, relaxation, fun.
6. Use with a switching system.
7. Treading fibres
8. Communication.

Light Pens are really optical light guides and are used with LumiGlow Sheet. The sheet stores light, (it is often used aboard ships and rigs for signs to show muster stations should the power go off and leave the area dark.) It is good in the MSR because a child or client can place shapes or their hands on the board, you then 'charge' the board with light. When the light source is removed the shadow effect remains. The light pen is used to write in light on the surface of the board.

A very cheap alternative is the **Dulux 'Kidzone'** or **'Benneton 'Glow'** they are both types of glow in the dark paint' and **Princetontech blast torches**. If you have problems getting these, call Hirstwood Training for a supply.

Infinity Tunnels have an interesting visual effect. The bulbs in the box appear to go back forever. Unless somebody is very attracted to the effect the tunnels longevity has to be questioned, as it is the same all the time. To address these problems some companies are now making interactive infinity tunnels. Some are sound activated and some will change colour depending on the colour switch you use. This does give this effect a more qualifiable use.

Travelling Light Tubes / Rope Lights come in two main types, mains voltage and low voltage. They all have small lamps down the length of the long tube. The lights will run down the tube at different speeds and in different directions, depending on the setting of the controller. If you have mains voltage rope light then either get it well out of reach, sell it to a mobile disco or use it with great care. Low voltage lights are safer and can be handled with care, however the bulbs and wires down the tube can break. Standing on the rope light will destroy the lamps and constant bending back and forth can break the internal wires. No product of this nature is cost effective to repair, so if you have lamps out, you will not get them fixed unless someone is very enthusiastic about spending days on them.

Ultra Violet Light (Backlight) can be used very effectively with white or fluorescent items. Many visual impairment specialists use UV (Blacklight) as a means of determining light perception and other visual disabilities. UV (Blacklight) will fluoresce objects very brightly, so create a very bright visual

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preference. Fluorescent face paints, putty, balls, white gloves and many other items can be used. One product, which is sold for use with UV, is Line Lite. This is designed to glow and is like brightly coloured bootlaces. (But don't forget the homemade line lite I told you about on the course.) When fitting an UV tube, remember that the effect works by light reflected from an object, so you may need to think about the positioning of the tube.

When considering the safety of UV (Blacklight) please refer to a paper available from Hirstwood Training on 'Ultraviolet Blacklight Lamps for Visual Stimulation.'

Sound

Sound Sources like a small domestic **Hi Fi system** will allow music to be used. The speakers can be fixed to the wall and the whole system made inaccessible. The fact that most systems are stereo will mean that you can pan the sound between the speakers. This can be interesting for sound tracking and location.

A portable system to move around the room would be a viable option so long as the sound quality is good. This will allow you to move the sound around and lock it away at night should you need to. If you wish to take sound further, then a professional sound system will serve the room in a preferential way. It will not only allow you to use microphones and echo/delay units but will also last much longer and offer a superior sound to that of a domestic hi fi system. Although the new age music is nice for some people to listen to, not everybody will want to listen to it.

Echo units, delay systems will require a separate amplifier and speaker with microphone input. The unit used on the course is the **Microverb 4** Music should be chosen for the individual. Don't forget the vibration ideas with the inflatable lilo and chairs.

Soundbeam is an excellent tool when it has been mastered. It is an independent creation originally designed to enable professional dancers to make music through expressive movement. Connected to a keyboard via a (Midi) interface the Soundbeam converts movement via ultra sound into an electrical signal. This is then translated into musical notes on the keyboard. Music therapists, teachers and other professionals are using Soundbeam both in and outside the MSR - it has found a unique place in the MSR repertoire. Soundbeam can now be connected to a switching system so movements can also control lighting equipment in the room. It is advisable however, to use pin spots and other effects, which do not mind being flashed on and off quickly. The Projector could blow lamps if attached to this system. Soundbeam can also be used with resonance boards with deaf blind people. Perhaps the best of all is its ability to focus the beam from a large space to that of small finger movements. This will allow multiply disabled people not only to maintain motor control and muscle tone but also to create music in an exiting way previously unavailable.

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Tactile Walls are often seen as brush heads and mops stuck on to big wall cabinets, which can easily be made, by children or client. The Multi Sensory Companies are now manufacturing tactile walls, which are more interactive. Some have areas that make sounds, some have switches and some have built in lights. They are getting more complex but hopefully more meaningful. If a person's major co-ordinating sense is touch it should be used for more than just a meaningless tactile experience.

Switching systems vary, but try to get the radio control type, which are cordless with obvious advantages.

A few ideas for switching systems:

1. Basic Cause and effect
2. Turn Taking
3. Emphasise class/home control work
4. Vocalisation
5. Hand eye Co-ordination
6. Make the switches accessible
7. Control
8. Making Choices
9. Integration for severely disabilities in normal class situations
10. Linking sounds, pictures, stories
11. Encouraging body awareness and movement
12. Having Fun
13. Interaction between Pupils
14. Learning from each other
15. Co-operation

Make sure the system will do what you want. Does it need to be fixed or portable? Keep the switch simple. Make sure you know how to use the system. Don't make the operation too hard or repetitive.

The Suppliers List

This sheet lists some of the companies who supply equipment for Multi Sensory Rooms. The companies marked with an * are companies who offer a range of services from the supply of single items to full room installations. The other companies may offer equipment, which is often used in the MSR and may have been used on a course. As always, shop around for whatever you need. If you require a larger order then see if a representative can visit and show their range of equipment. You will find some of them are very knowledgeable. Most of the MSR companies are small and the representative may have travelled a long way to visit you, so always remember a friendly face and a cup of coffee will be welcome!

Make sure the products you buy will help you fulfil your aims in the room. People are often taken by the glitz of the equipment but have little long term planning in mind. Ask about the service a company can offer after the sale. It's pointless having a room if it is out of action for weeks waiting to be repaired. Make sure that you receive good written instructions for the operation of the product and when you get your products label them, so other staff know where it was purchased. If the product needs a repair then they will need to know who to contact.

Mike Ayres Design, Unit 8 Shepherds Grove, Stanton, Suffolk, IP31 2AR 01 359 251 551 Fax 01 359 251 707

Spacekraft Ltd, Titus House, 29 Saltaire Rd, Shipley, West Yorkshire, BD18 3HH. Tel 01 274 581 007 Fax 01 274 531 966

The Sensory Company, U13 Broad Lane Business Centre, Westfield Lane, South Elmsall, West Yorkshire, WF9 2JX, Tel 01977 646414, Fax 01977 646416, e-mail enquiries@sensoryco.fsnet.co.uk

Rompa Ltd, Goyt Side Rd, Chesterfield, Derbyshire, S40 2PH Tel 01246 211 777 Fax 01 246 221 802

Sensory Developments, 4 Gents Lane, Shimpling, Bury-St-Edmunds, Suffolk, IP29 4HP Tel 01284 827467.

Toys For the Handicapped, 76 Barracks Rd, Sandy Lane Ind Est, Stourport on Severn, Worcestershire, DY13 9QB Tel 01 299 827 820 Fax 01 299 827 035 (The book Practical Guide to Multi Sensory Rooms can be purchased at TFH)

***Kirton Litework**, 23 Rookwood Way, Haverhill, Suffolk, CB9 8PB Tel 01440 705 352 Fax 01440 706 199

Soundbeam Project, Unit 3 Highbury Villas, St Michael's Hill, Bristol BS2 8BY Tel 01 603 507 788 Fax 01 603 507 877(As well as selling the new 2000 Soundbeam which is easier to use, they offer training and support for current users.)

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Optikinetics Ltd, 38 Cromwell Rd, Luton, LU3 1DN Tel 01582 411 413 Fax 01582 400 613 (Manufacture the Solar 250 they can put you in touch with dealers and offer technical advice.)

Messenger Sensory, Postland Station House, Postland, Crowland, Peterborough PE6 0JT Tel 01 406 330 916

Knight Air Products Ltd, Unit 1 to 2 The Old Mill, Lidun Park Industrial Estate, Boundary Rd, Lytham, FY8 5HU. Tel 01253 732 902 Fax 01253 732 251 Web site
(May supply a range of smells mentioned on the course)

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