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**MARK RUTHERFORD
SCHOOL**

Mark Rutherford School Harpur Trust Portable Planetarium Set up and take down task list.

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Remember safety first.

The Planetarium and the inflatable dome are heavy follow best practice for handling heavy items. It is recommended that both the dome and the Planetarium are moved by two people.

It is recommended that you use a flat trolley to move the Planetarium from the car to the location where it is being used.

Setup Tasks

1. Open the blue bag containing the dome and roll it out. Put the bag to one side (where you'll find it later!) It could be put in the Planetarium box once the Planetarium is out.
2. Unroll the dome. The entrance is the first thing unrolled so you are unrolling front to back.
3. The dome should be folded to protect the projection surface, you'll need to spread it out before inflating. One side is on top the other underneath. Pull it out into a rough circle, try and ensure that there are as few fold overs as possible.
4. Connect the fan to the air tube. If necessary use the straps to tie this on but the Velcro will hold if you've put it on tight enough.
5. Switch fan on to L (low) and help the ring inflate into a circle.
6. Once the ring is fully inflated hold the entrance up and 'encourage' the dome to inflate – where the dome is folded over itself try and pull these out.
7. Turn the fan to H (high)
8. When the dome is about halfway inflated the entrance should be self-supporting
9. Open the projector box and take out the torches.
10. Slide the projector (box and all), extension lead and speakers under the dome away from the entrance. Remember to plug the extension in and switch the socket on (guess who keeps forgetting!)
11. When the dome is more or less fully inflated turn the fan back to L

12. Enter through the entrance, remember to turn on a torch, there is a zip that opens bottom to top and a velco flap - the Velcro is to the left of the zip. Open both fully and go into the dome.

DO NOT FORCE THE ZIP gently ease it up. If it sticks find out why.

13. Move the projector box to the middle of the dome, take out the light and the cables.
14. Plug the white extension into the extension reel.
15. Plug the light into the white extension and switch on (press the middle button three times for the brightest setting)
16. Now take out the projector and all the boxes (except the blue box file – unless told to do so by MRS staff).
17. Take the speakers out of the speaker box
18. Put the speaker box and dome bag into the projector box out of the way.
19. Close the projector box and put the projector on top of it. I think it is best to have the projector at right angles to the line from the entrance to the back of the dome with the opening end flap pointing to where you intend sitting. I suggest leaving this flap closed for now.

Note: Whilst this is the recommend setup, it may be better positioning the presenting position either by the dome entrance or at the back of the dome, this depends on you and the room you place the dome in.

20. Position the projector so that there is a shelf (about 20cm)
Connect the Green speaker plug to the audio socket (green tape above) and the red and white plugs to the large speaker (bottom pair of red and white sockets).
21. Connect the small satellite speakers to the large speaker. Place one on either side of the projector box. Strictly speaking White is the left speaker and red is the right speaker.
22. Plug the large speaker into the mains (euro eight lead) and check the green LED is on (if not switch the speakers on!)
23. Plug the two USB extenders into the two USB sockets (labelled with yellow tape). The hard disk, the mouse and the two 'dongles' are already in place. Please don't unplug anything.



24. Plug the monitor lead into the HDMI plughole (red tape) and plug into the mains.
25. If using Stellarium take the keyboard out of its' box and switch on.
26. Position the monitor, mouse, keyboard, volume control and light so you can reach them from your 'control' position (in line with the opening end flap).
27. If everything is switched on and plugged in, plug the Planetarium 'kettle' lead into the Planetarium and then into the mains. The system will boot up immediately.



If the system doesn't boot up after a few minutes check your connections etc. If the LED is lit on the projector but the fans aren't working press the reset switch.

Otherwise unplug the kettle lead from the mains, wait a couple of minutes and then plug it in again.

28. Open the end flap.
29. Remove the lens cap from the projector (and put somewhere safe (e.g. the end flap))
30. Open the door in the top of the Planetarium and switch the projector on. Close the door.
31. Everything should now spring into life with an alignment grid being projected. If necessary adjust the position of the projector.
32. Select the show you want to use, if it appears on the monitor drag it over to the projector (drag left).
33. Adjust the volume according to needs and switch off the light and the monitor.
34. ENJOY
35. If using Stellarium refer to the separate notes (*yet to be written*)

Entering and leaving the dome.

1. NO FOOD and DRINK to be allowed in the dome, the exception is a bottle of water for the presenter.
2. It is recommended that you have an additional member of staff in the dome to control the door. They should have a torch.
3. Enter the dome first and stand holding the door up.
4. Students to enter the dome one by one.
5. Second member of staff to be the last one in.
6. **Carefully** zip the door closed and put the Velcro flap over it.

DO NOT FORCE the zip. This type of zip is prone to the slider coming off if you force it. If it is being stiff pull one side of the zip towards the other until the pressure is eased.

If the zip does come apart when the dome is deflated you will need to manually close the zip from the top to the bottom, use the Velcro flap to help hold things together. Once fully closed remove the staple opposite the slider and ease that side of the zip through the slider.

The zip should now work.

Let MRS know the zip was broken and especially if you were unable to repair it.

The zip should only break if excessive force is used.

7. Students should sit down during all shows. They should not lean back on the dome surface this can damage the projection surface.
8. Once the show starts try not to let students in or out.
9. Domes transmit sound so talking etc. should be discouraged.
10. Leaving the dome is the reverse of entering.
11. Open the Velcro flap.
12. Gently pull the zip up
13. Leave one by one.

Take down tasks

1. Open the door on top of the Planetarium and switch the projector off (double press). This will need about 10 minutes to cool down. The blue light will flash. **DO NOT** switch off and/or unplug the Planetarium until the projector has had chance to cool down.
2. While the projector is cooling down you can disconnect the speakers. If you didn't store the speaker box in the Planetarium box you can put them away.
3. Check the projector is cool to the touch and the LED turned orange.
4. On the monitor shut down the Planetarium (same way as any other Windows computer).
5. When it has shut down unplug everything except the light and put everything away in the appropriate boxes.
6. Put the lens cap back on the lens and close the flap.
7. Lift off of the box and remove anything you've stored inside.
8. Put the Planetarium back into its' box, flap towards the blue box file (or the slots for the light) followed by the boxes for the ancillary equipment and the cables.
9. Turn on your torches.
10. Turn off the light and put away in the Planetarium box (in its' slots).
11. Push all the boxes out of the dome under the skirt
12. Ideally two people stay in the dome; however, the fan needs turning off, so one person turn the fan off and return to the dome.
13. Zip and Velcro the door closed.
14. Using two people stand on opposite sides of the dome roughly 90° from the door. (one person take down see below).
15. One person pulls their side just over half way across on the floor.
16. The other person pulls their side to the middle lifting it over both of you. Keep lifting the sides to let the air out.
17. The idea is to completely enclose the projection surface.
18. Stretch out the dome and check the seam tape and stick back as needed.
19. Fold the dome until it is about a 1m strip and will fit in the bag.
20. Roll from the end opposite the door and air inlet.
21. Squeeze as much air as possible as you roll – gently kneel on the roll if necessary.
22. Keep bunching the material in as you go (remember it has to fit in the blue bag).
23. Roll over the top of the air inlet.

24. Place the bag over the dome – closing the bag zip slightly may help (it might not)
25. Roll the dome into the bag so the bag zip is uppermost.
26. Close the zip being careful not to trap any of the dome material.
27. Turn off your torches and return to the torch box.
28. Put the torch box into the Planetarium box
29. Fasten the Planetarium box back up
30. Safely transport back to the car or to secure storage.

Single handed take down

1. Only do single handed take down if absolutely necessary, remember safety first.
2. These replace steps 14, 15 and 16 above.
3. Stand a quarter way round from the door.
4. Get hold of the skirt and quickly pull over to the other side.
5. The other side should rise off of the floor.
6. Let go of the side you've just been pulling and grab the opposite side and lift over yourself so that it collapses on top of the other side
7. Take frequent rests.

**REPORT any concerns or damage immediately to
MRS on Planetarium@mrus.co.uk**