



From Youtubing to Telescoping the Stars

To watch or not to watch; that is the question. Adults such as you and I have devoted so much time to looking at smart phones or tablets, as a parent I have never wanted my kids to develop this addiction. As Rumors had it the late Mr. Steve Jobs never allowed his children or grandchildren to use the iPhone or iPad. However perhaps there are some merits to smartphones and computers for gaining knowledge and to stimulate thinking.

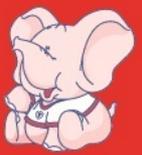
My son was so obsessed with colourful rolling balls, just like many children of his age, and he became more obsessed when watching videos of virtual or real balls and marbles

running fancy tracks spinning and looping through hurdles. Adults can hardly imagine how popular this search subject could be. As he grew more obsessed, he was demanding to watch these videos on the internet thrice a day and trying to turn over control of the computer by himself, I found him a "marble run" toy with customisable tracks and looping tricks. Ever since, he has stopped watching this genre of video and he (and I) were then busy building up matrices of tracks and experimenting with motion, for some months. To be honest, seeing chains of marbles running over the hurdles and eventually rest in a tray was a somewhat healing process for me, which is perhaps why children like it. Equally or



more attractive to children of his age was the cult of celestial "balls" , what we call stars and planets, and soon he picked up this habit of searching for knowledge of planets, stars, satellites, solar systems and beyond... anything astronomical, from the internet. It may sound a little more appealing to parents if children opt to obsess in a recognised school of knowledge such as astronomy. Yes, my son loves to read astronomy books for children, but he is just fonder of watching those videos on the internet. By the same token, I am trying to pull him out from virtual to reality – by buying him an affordable telescope but not a spaceship or sending him up to Mars.

Children entering the world of astronomy usually first fantasise about the "King of the Planets" Jupiter, and the "Lord of the Rings" Saturn, just as my son was no exception. My quest was to buy a telescope sufficiently powerful just to have a glance of these real planets with his own eyes. Much research had been done for me as an outsider in finding the right gear for a low price. The effort of maintaining a telescope should be considered a hobby but not child' s play, as the pain to an uninterested adult in researching optics and product review is supposedly part of an astronomers' joy. Once you have defined the objective of your observation, which in my case was to see Jupiter and Saturn in clear sight, it



should take you some dedicated research to find the right telescope. Telescopes could be highly specific depending on the class of celestial objects you may want to observe. A blind purchase would not only cost you money, it would lead to eventual disappointment when you end up seeing nothing or just bright dots of out-focus images, and not to mention that it would be taking up space at home. Consulting the internet about the specification of telescope equipment required for seeing Jupiter and Saturn, I kicked out my decision to purchase a telescope with the right set of eyepieces and mounting, delivered to me. It was in a big box and was about 10kg in weight and assembly took some

hours of simple fabrications and calibration before it was ready for use.

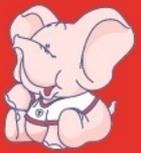
Finding the right place and the right time for observation was the next challenge. An ideal dark, deep sky for stargazing is rare unless that you take up a mission to go to some exotic, rural parts of Hong Kong late at night, which may not be a convenient option, particularly with my son at his age. Luckily, seeing those big planets like Jupiter and Saturn is beginner-level, and indeed they always appeared as bright big stars in a clear sky despite urban lighting conditions, and often they rise high into the night sky early enough for you to watch just after dinner. On a clear night with no clouds, we packed this new toy in a large



luggage bag, while holding the mounting tripod, and went to the park with our son, embarking on the grand journey just down to the park near home for the observation. Luckily he was not too reluctant with walking this short trip. Jupiter was seasonal by the time of our observation as it could be easily identified as a bright star in the sky. In the past, it would have taken some studies learning to use charts and calculations for locating stars and planets before the observation, but nowadays it is as easy as a click from a star map app in the smartphone while pointing it to the sky.

The final challenge was to set up the telescope at field and to point it correctly to the location of Jupiter.

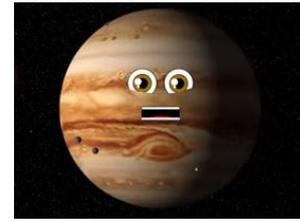
This was a lesson on patience for a 3-year old and also on tolerance for the parents. My son was keen on "helping" me with setting up the telescope and I tried to assign him whatever he might be capable of, from turning screw nuts to unpacking lenses, all of which he completed too soon while I was still busy with the set up and he began bothering me again. We also realized that Jupiter and other stars were actually moving reasonably fast in the night sky, and that it wouldn't take long before it disappeared from within our field of view and then we would need to readjust the telescope alignment for the enjoyment of observation to continue. My son and I soon understood that it took much



more work locating and actually seeing planets in the sky than it was just a few clicks from the internet, and this task could hardly be accomplished without my wife diverting his attention to stories about stars and planets while I was fine-tuning. Yet it was all worthwhile when you actually see Jupiter with your own eyes and see the difference between an animated Jupiter for children on the internet. My son was most excited and we taught him to have one eye closed in order to look into the eyepiece.



Jupiter as we saw from telescope on
26 May 2017



Jupiter, as seen by kids from Youtube

The brightest star in the sky, as we can easily observe on a cloudless night in summer, is indeed no other but Jupiter. Most of the time you can see it composed of the main body of Jupiter plus its four "Galilean" major moons known as Io, Europa, Ganymede & Callisto – after the discovery by Renaissance scholar Galileo Galilei back in 1610, using an early telescope, probably pretty similar to what we did for this observation. My son's interest in celestial objects soon extended with whatever namable moons of the planets. At the age of 3 my son has kept reminding me that there were 67



moons revolving Jupiter, and tales about space journeys and astronomical facts often replaced typical bedtime stories. These may sound somewhat beyond his age, yet so long as he was so devoted to this proper subject, parents in any case would try to promote his interest to the best of their ability. It is not always possible to mobilize an observation but we tried to arrange such opportunities from time to time. There were times we observed the Moon, as the easiest object to locate in the sky, where Moon craters appeared to us in true depths. There were also times when the night sky was hardly visible, covered in a blanket of clouds, but we did mobilize and try to

observe just to honour our earlier promise to our son.



A night in the park with the telescope set

I've lost count of when the last time was which I had drilled into a subject of knowledge that was new to me after graduation and beyond work. Now it has been a motivation from my son and incidentally I found stargazing a hobby at my age, with the joy of seeing real planets rather than printed pictures. I hope that the telescope will



still be useful for some years to come and one day I will just sit back and wait for my son to set it up for me to watch the stars. It could be unwise (and indeed impossible) seeing only evils from information technology against child development and to isolate the children from any such exposures, yet knowing their subject interest and intervening appropriately would be the key, as I believe, to instilling values. The internet is no doubt a convenient platform for learning when it is not always practicable to outreach reality just as hiking the Moon, yet by all means experience solidifies learning into true knowledge and consolidates the kids' interest than purely imaginations from within the computer

screen. With this stargazing experience we hoped to bridge up between his imaginations about the universe with the real world. To compare with the "marble run" toy, the effect of reducing youtubing with telescoping is less conspicuous as my son is still very much fond of video topics in astronomy. Yet we parents are pleased to see that he has been continuing to develop his interest in astronomical knowledge and expanding this interest into wider topics.

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