

#### School Products Catalogue get your students addicted to astronomy

# Coming to the Observatory for a School Day Tour? We have some fanastic products to get

Globes

your students hooked on astronomy.

All products in this catalogue can be bought before or during your tour.

## Glass Prism

#### \$8.50

This prism is made using optical glass and will demonstrate that white light is made up of the colours of the rainbow. This is known as a spectrum. Sir Isaac Newton in the 17th century was the first to prove that white light was in fact made up of different colours. He used a glass prism in his experiments. The corners of the prism are ground for safety.

Dimensions: 50mm long with each face being 28mm wide Item code: 656558050136 GLASS PRISM



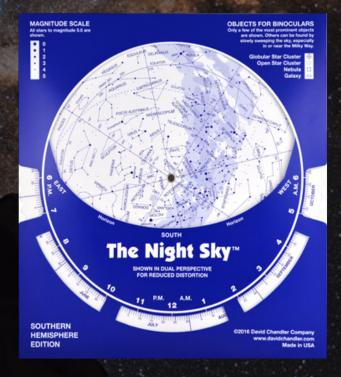
Ages 10 and up

### Planisphere

#### \$10.00 or buy 10+ for \$9 each

A planisphere, also called a Star Chart or, sometimes, a Star Wheel is a flat multi-part chart that displays the stars visible from a particular latitude for any time and date. The Night Sky<sup>™</sup> planisphere, uses a two-sided map projection to produce a low-distortion, simple to use guide to the night sky. With The Night Sky<sup>™</sup> even a newcomer will be finding constellations in the night sky within a few minutes!

Dimensions: 228 mm high and 216 mm wide Item Code: 721212000038



### Gyroscope

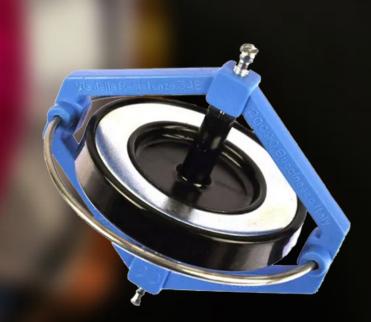
#### \$19.90

Use the included cord to unleash the inertia of centrifugal forces and watch as it spins and balances in your hand or on a pedestal or table.

Gyroscopes are classic scientific marvels that seem to defy the forces of gravity. You'll be amazed by its capacity to stay upright in a range of unlikely positions.

Gyroscopes make great educational toys and are an excellent introduction into the realms of science and physics. Try it out today!

Dimensions: 53 mm in diameter Item Code: 8006944601015



## Planets of the Solar System Magnets

#### \$12.00

12 magnets featuring all 8 planets, plus Pluto and Charon, Asteroid and comets, plus bonus Rocket and Astronaut magnets for kids to play with!

Dimensions: planets are 50 mm in diameter, Saturn is 47 mm high by 92 mm wide Item Code: 0793573589255

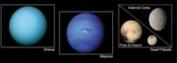








PLANETS OF THE SOLAR SYSTEM



### **Embroidered Patch**

#### \$5.00

Specially designed for Perth Observatory, this embroidered Patch can be used to embellish any garment or bag.

Item Code: 24002



Embroidered Patch Proudly designed in Australia by Davik Australia IRON-ON



### Hoberman Sphere - Expanding Universe

#### \$54.50

It's the original Hoberman toy and its now a classic and a favourite of kids and adults everywhere. It expands from 228mm to 762mm in diameter with a magical motion that amazes everyone that sees it. Everyone in the house should have their own, because nobody will want to share.

All Spheres comes with a pulley, hardware and instructions to hang as a cool, kinetic mobile; an educational booklet about the geometry of the Sphere; and a 21 Cool Things to Do activity sheet.

Ages 4 and up.

Dimensions: Expands from 228mm to 762mm in diameter Item Code: 780358101191



# Hoberman Sphere - Moon Glow

#### \$60.00

It's the original Hoberman toy and its now a classic and a favourite of kids and adults everywhere. It expands from 9" to 30" (228mm to 762mm) in diameter with a magical motion that amazes everyone that sees it. Everyone in the house should have their own, because nobody will want to share.

All Spheres comes with a pulley, hardware and instructions to hang as a cool, kinetic mobile; an educational booklet about the geometry of the Sphere; and a 21 Cool Things to Do activity sheet.

Ages 4 and up.

Dimensions: Expands from 228mm to 762mm in diameter Item Code: 025766011060



# Liquifly Fizz Rocket

#### \$9.65

With a little bit of bi-carb and a dash of vinegar, you have yourself a cool chemical reaction. Set your rocket flying as high as 5 metres and this rocket can be used time and time again.

What's in the box:

- 1 Rocket
- 1 Stand
- 1 Measuring scoop
- Instructions
- Adult Supervision is required for children under 14yrs.

Item Code: 9341570003864



# Stickers – Solar System

MARS

EARTH

MERCURY

ASTEROIDS OR PALLAS

S I RUS

FLORA

JUNOS

MINOR

### \$4.00

Great for school projects, gifts and generally to get a collection of great pics!

WSTA

CERES 0

SATURN

Dimensions: 290 mm high and 210 wide Item Code: 9330412005401

SOLAR SYSTEM 20 STICKERS

URANUS

# Stickers – Space Flight

#### \$4.00

Great for school projects, gifts and generally to get a collection of great pics!

Dimensions: 290 mm high and 210 wide Item Code: 9330412005395



### Stickers – The Universe

#### \$4.00

Great for school projects, gifts and generally to get a collection of great pics!

Dimensions: 290 mm high and 210 wide Item Code: 9330412005418



# Voyager Space Probe 3D Puzzle

#### \$23.00

Voyager Space Probe were consisted of two unmanned outer solar system space probes by NASA. On Aug 20th,1977, Voyager 2 was launched in America. On Sept 5th, 1977 Voyager 1 was launched. Voyager Probes finally gathered precious data of 4 planets and 48 satellites. The Voyager Probes carried a disc containing information of the Earth and how to get there.

Voyager Space Probe 3D jigsaw Puzzle is great gift idea for kids and adult. It is full of educational; beneficial the kids to develop their creativity, expand and practice their patience, assembly ability and broaden their horizon to develop intelligence; it is also a good family activity.

Dimensions: 339 mm long, 225 mm wide and 264 mm high Item Code: 6944588206543

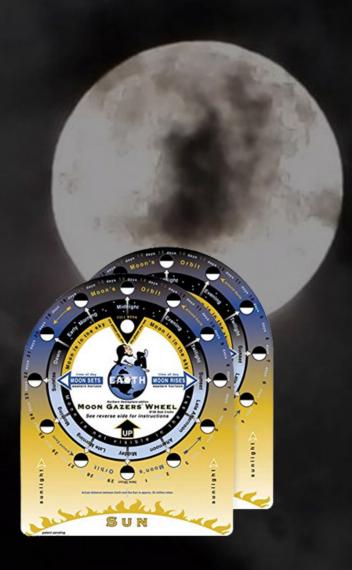
# Moon Gazers Wheel

#### \$5.95

The Moon Gazers' Wheel is a unique, new interactive guide to the Moon, it's sure to make Moon gazing fun, informative and easy for anyone. Just rotate the chart to match the Moon phase illustrations in the cut-out. When the phases match, it tells you:

- The name of the phase and position in orbit
- The day of the lunar month
- The Moon's rise and set time, and
- The time of day, or night that this phase is visible in the sky.

All you ever needed to know about the Moon in the palm of your hand. A wonderful field guide to explore our Moon and the celestial workings behind her ever-changing face.



Item Code: 97806153663885

### Sun Disc

#### \$39.95

The Sun Disc represents a revolution in Sundial design. Unlike other Sundials (which can generally be used only in one place) the Sun Disc can be used anywhere on Earth. Its rotatable disc even allows it to be adjusted for Daylight Saving Time and other factors, making it one of the few Sundials to consistently read the actual time!

Invented, designed and manufactured in Australia, the Sun Disc uses modern materials and design to create a new twist on one of the world's oldest measuring devices.

Dimensions: 210 mm in diameter Item Code: 793573621979





### Rainbow Glasses

#### \$2.50

The hottest item since the sparkler.... specially treated holographic lenses break light into the spectrum.

Put on these bright, paper-framed glasses and watch rainbows appear before your eyes...

Item Code: 175



### Celestial Buddy - Sun

#### \$44.95

I'm a real hottie! The temperature at my centre is a sizzling 15,000,000 Kelvin and on my surface 6,000 Kelvin. I am the star located at the centre of your Solar System and I am one among an estimated 200-400 billion stars orbiting in the Milky Way Galaxy. I am composed of mostly hydrogen and helium with trace amounts of other elements. All my energy is produced in my core by nuclear fusion. This energy travels to the surface and is emitted as visible light reaching the Earth in 8 minutes.

Dimensions: 229 mm high Item Code: 736211358974

# Celestial Buddy - Mercury

#### \$32.95

I am the closest planet to the Sun and named after the messenger to the Roman Gods, whose speed was enhanced by his winged sandals. I am the fastest planet in the Solar System, flying around the Sun in a mere 88 days. I race through space at 30 miles (48km) per second, outpacing the Earth, who clocks in at 19 miles (~31km) a second. Although I am the smallest planet in the Solar System, my large iron core makes me the second heaviest, only slightly lighter than Earth. My appearance is similar to the Earth's Moon, for I am heavily cratered, lack an atmosphere and have no natural satellite.

Dimensions: 127 mm high Item Code: 713757470513



# Celestial Buddy - Venus

#### \$32.95

I'm so pretty, but: You can look, but you better not touch! Named after the Roman Goddess of Love and Beauty, I am the brightest object in the night sky (except the Moon). Earth is my twin in terms of size and it is closer to me than to any other Planet. But there our similarities end: I am the only planet to rotate backwards, and very slowly, so a day lasts longer than my year! Carbon dioxide makes me the hottest planet in the Solar System. I'm hot enough to melt lead.

Dimensions: 152 mm high Item Code: 748252471710

# Celestial Buddy - Earth

#### \$32.95

I am home to millions of different forms of life including bacteria, animals, plants and you humans. At present I am the only place in the Universe where any kind of life, simple or complex, is known to exist. About 71% of my surface is covered with water, giving me my characteristic blue appearance from space. This presence and abundance of liquid water makes me unique compared to my planetary neighbours. Liquid water is a fundamental element for life to exist.

Dimensions: 152 mm high Item Code: 736211358875

# Celestial Buddy - Our Precious Planet

#### \$38.95

Is extra-terrestrial life out there? While the search continues, we have found no evidence of any other planet with such an amazing variety of living things and ecosystems as Our Precious Planet, so let's not take it for granted.

Earth was formed 4.53 billion years ago; the earliest forms of life appeared at least 3.5 billion years ago; and we people . . . homo sapiens . . . have been living on it for only around 200,000 years. Although the Earth's climate can change gradually over time, human activities, such as industry, deforestation, pollution and urban development, have speeded up the pace of climate change and are increasing the amount of global warming.

Dimensions: 228 mm high Item Code: 644216551507

## Celestial Buddy - Moon

#### \$32.95

I am the Earth's only natural satellite. I am held in orbit by a mutual attraction to Earth's gravity. The ocean's tides are a direct result of my gravitational forces pulling on the Earth. I was created when Earth was impacted by a massive object at the beginning of the Universe. The expelled material formed me! The half million craters on my surface were created by impacting meteors and asteroids. I don't emit my own light. It is the Sun's rays reflecting off my face that cause my brightness.

Dimensions: 127 mm high Item Code: 736211358776

# Celestial Buddy - Mars

#### \$32.95

I am the fourth planet from the Sun and Earth's nearest planetary neighbour. I can pass as close as 56 million km away. My most distinctive characteristic is my rusty red colour caused by iron rich minerals in my rocks. When viewed from space the only areas not red are the white patches at my poles, my polar ice caps, frozen all year round. I am named after the Roman God of War because my red colour is reminiscent of blood. But don't worry, I'm a peace loving, friendly Martian!

Dimensions: 138 mm high Item Code: 736211358677

### Celestial Buddy - Jupiter

#### \$38.95

I am the largest planet of the Solar System, 2 ½ times the mass of all the other planets combined, so it makes sense that I am named after the Roman King of the gods! I am the fifth planet and first gas giant from the Sun. Gas giants have thick atmospheres of hydrogen and helium that become denser closer to the core. The distinctive stripes on my exterior are a result of my rapid rotation which generates high velocity winds that create the dynamic horizontal bands of clouds. The Giant Red Spot, my most recognizable feature, is a hurricane-like storm almost the same size as the Earth.

Dimensions: 178 mm high Item Code: 713757470612

# Celestial Buddy - Saturn

#### \$38.95

I am the sixth planet from the Sun and second largest in the Solar System. I am easily recognized by my extraordinary rings. Jupiter, Uranus and Neptune have rings too, but while theirs are narrow and dark, mine are bright, due to the light reflecting qualities of the ice crystals that make up the majority of my rings. My rings extend hundreds of thousands of miles into space. Interspersed throughout are particles ranging in size from specks of dust to large rocky objects 30 feet in diameter. My rings were formed a few hundred million years ago from the remnants of comets, asteroids or shattered moons.

Dimensions: 178 mm high Item Code: 713757470711

# Celestial Buddy - Uranus

#### \$32.95

I'm the seventh planet from the Sun, named for the Greek God of the Heavens. A thick cloud cover of methane gas, which absorbs red and reflects blue, gives me my teal tint. I have rings and over 27 moons. My most unique feature is that my axis is tilted 98 degrees, so, I rotate on my side rolling around the Sun like a ball, not spinning like a top like all the other planets. It is believed that in the early stages of my formation, an Earth-sized object crashed into me, knocking me over on my side.

Dimensions: 190 mm high Item Code: 019962000478

# Celestial Buddy - Neptune

#### \$32.95

The farthest planet from the Sun, I'm named for the Roman God of the Sea, but it's not water that makes me so blue. It's the methane in my atmosphere. Because I am so far away, you can't see me with the naked eye. I was the first planet found through mathematical prediction, rather than direct observation. My most defining characteristic is the active storm system similar to Jupiter's Red Spot. Surrounded by white cirrus clouds of frozen methane, I have winds stronger than any other planet's – as high as 2,100km per hour!

Dimensions: 165 mm high Item Code: 019962000577

### Celestial Buddy - Pluto & Charon

#### \$41.95

Pluto is a dwarf with a heart! I was discovered in 1930 by the astronomer Clyde Tombaugh as the ninth planet but was reclassified as a "dwarf planet" in 2006. In 2015, NASA's New Horizons Spacecraft took beautiful photos of me and sent back lots of scientific data, but you wouldn't want to try to live on me.

Charon was discovered in 1978 and am the largest of Pluto's five moons, but I'm more than just a satellite. I'm more than half as big as Pluto, and because Pluto and I actually revolve around each other, we are sometimes called a "double planet".

Dimensions: 127 mm high (Pluto) & 102 mm (Charon) Item Code: 748252135193

### Celestial Buddy - Comet

#### \$32.95

I can be described as a dirty snowball because I'm made mostly of frozen water and dust. Some scientists believe that comets are responsible for bringing some water and organic molecules to Earth's surface at the beginning of the Solar System. My most distinctive characteristic is my coma sweeping out behind me as I travel through space. This tail is a result of passing close to the Sun, evaporating my ice into water and releasing dust. We comets orbit the Sun, but in elongated orbits, not circular ones, sending me far out into space, but always to return back again.

Dimensions: 102mm high Item Code: 748252471611

### Celestial Buddy - Black Hole

#### \$32.95

I may be invisible, but I matter a lot! My gravity is so strong because a lot of matter has been squeezed into a very tiny space. One atom may weigh as much as a mountain! As no light can get out, I can't be seen in the ordinary sense. Scientists have to use clever methods to detect my presence by observing my effects on the stars and gases around me. As surrounding dust and gasses get sucked inside me, they are heated to very high temperatures, releasing x rays and gamma rays which scientists can "see" with special telescopes. There is still a lot of research to be done. Until then, nobody really understands me!

Dimensions: 457mm long and 419mm wide Item Code: 748252233295



### Celestial Buddy - Polaris

#### \$59.95

I'm also part of a multiple star system orbited by my two little companions, Polaris Ab and Polaris B. I am located almost directly above the Earth's North Pole. I do not appear to "rise" or "set" but seem almost motionless while the other stars of the northern sky appear to revolve around me. Locate me in the sky and follow me, and you will be heading north. I helped sailors and explorers (like Christopher Columbus) navigate across the Atlantic Ocean into uncharted territory, and I will also keep you safe and guide you through the night.

Dimensions: 254 mm (Polaris A), 89 mm (Polaris Ab) & 102 mm (Polaris B) Item Code: 754830665767

# Celestial Buddy - Apollo

#### \$65.00 (Saving of over 10%)

The Moon and Our Precious Planet are combined to celebrate the 50th year of the Apollo Moon Landing

Dimensions: 228 mm high (Earth) & 127 mm (Moon) Item Code: 23004

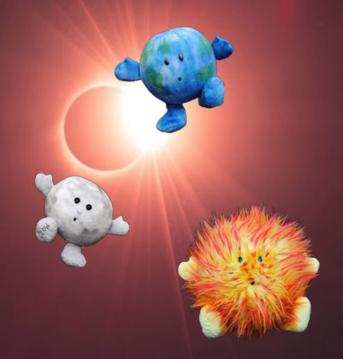


# Celestial Buddy - Eclipse

#### \$100.00 (Saving of over 10%)

Make your own Eclipse. This pack contains the Earth, Moon and Sun.

Dimensions: 229 mm (Sun), 152 mm (Earth) & 127 mm (Moon) Item Code: 23003



### Celestial Buddy - Solar System

#### \$355.00 (Saving of over 10%)

Contains Sun, Mercury, Venus, Earth, Moon, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto & Charon

Dimensions: 229 mm (Sun), 127 mm high (Mercury), 152 mm high (Venus), 159 mm high (Earth), 127 mm (Moon), 138 mm high (Mars), 178 mm high (Jupiter), 178 mm high (Saturn), 190 mm high (Uranus), 165 mm high (Neptune), 127 mm high (Pluto) & 102 mm (Charon) Item Code: 23001

### Celestial Buddy - Universe

#### \$450.00 (Education special save of over 15%)

The whole universe at once - Black Hole, Sun, Mercury, Venus, Earth, Moon, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto & Charon, Comet and Polaris

Dimensions: 229 mm (Sun), 127 mm high (Mercury), 152 mm high (Venus), 159 mm high (Earth), 127 mm (Moon), 138 mm high (Mars), 178 mm high (Jupiter), 178 mm high (Saturn), 190 mm high (Uranus), 165 mm high (Neptune), 127 mm high (Pluto), 102 mm (Charon), 102mm high (Comet), 457mm long and 419mm wide (Black Hole), 254 mm (Polaris A), 89 mm (Polaris Ab) & 102 mm (Polaris B) Item Code: 23002

### Develop a passion for learning. If you do, you will never cease to grow. Anthony J. D'Angelo

#### Perth Observatory

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