

Virgin Money Schools Concert 2018 Teachers' Resource Pack

Holst The Planets







Resource pack created by Andrew Lockyer

These resources are designed to let you and your pupils prepare for the Virgin Money Schools Concert on Monday 27 August 2018 and to continue exploring some of the themes afterwards. We will be playing four movements from Gustav Holst's orchestral suite *The Planets*, conducted by Clark Rundell. Rachel Leach will present the concert, which will last for 45 minutes, and lead the audience of around 2,000 P7 pupils through the music.

THE MUSIC



Gustav Holst (Photo: Public Domain)

The Composer: Gustav Holst

Born: 1874 in Cheltenham Died: 1934 in London, aged 59

Gustav Holst was a British composer living and working in London 100 years ago. He was fascinated by space, astrology, religion, meditation and vegetarianism - in many ways he was completely ahead of his time. His father, grandfather and great-grandfather were all professional musicians so it wasn't a surprise to his parents when he decided to learn the piano. Sadly an injury to his arm meant that he had to give up and so he took up composing and, because it made more money, he played trombone in theatre bands. His biggest success came with his suite *The Planets* - a set of pieces for orchestra that describes the character of each planet. Holst didn't like the fame that this piece brought him. He wouldn't sign autographs, do interviews or accept awards and as the years went by he spent more and more time teaching. He inspired and taught many young composers.

| THE F GUSTA MARS.the brin bringer of peace messenger.JUF SATURN.theb the magician.N | LAN by HOL ger of war. VENI e.MERCURVithe ITER, the bringer inger of old age. UF VEPTUNE, the n | ST. US, the winged of jollity. RANUS mystic. | |
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Holst's conducting score of *The Planets* (courtesy of The Holst Archive) This is copy no. 1 of a first edition of 200 copies published in 1921.

Four movements from The Planets Suite, Op. 32

Holst was kept busy working as a teacher and it took him two years to write *The Planets* between 1914 and 1916. As he suffered from neuritis - an inflammation of the nerves in his right arm - Holst found it painful to write or play the piano for long periods. So, he would ask two of his colleagues to play the pieces for him, while he was still working on them, in a version for two pianos. When he was satisfied, they helped write out the full score for orchestra. Although various movements were performed from 1919 onwards, the first full public performance did not take place until 15 November 1920.

When Holst was composing *The Planets* a century ago, the best telescopes of the time were only just beginning to reveal the true nature of the planets. The pieces are therefore not designed to reflect the physical characteristics of the planets, nor of the Greek and Roman gods after whom the planets were named. Instead, Holst was interested in their astrological characters. Astrology is founded on the beliefs that where the planets are in the sky can affect how we feel here on Earth, and that where the planets are at the moment you are born can have an effect on the sort of person you are. Each movement is a portrait of the particular aspect of personality attributed to that planet. Holst used to cast horoscopes for other people as a hobby. He was born on 21 September 1874 under the sign of Virgo, ruled by the planet Mercury.

Only eight planets were known when Holst wrote the piece, though he didn't include Earth, probably because it's not astrologically significant. Pluto was discovered in 1930, four years before Holst died, but he clearly didn't feel obliged to add an extra movement for it. In 2000, the composer Colin Matthews did write a piece movement for Pluto to 'complete' the suite. Ironically, in 2006, Pluto was reclassified as a dwarf planet and so not a proper planet after all. We're going to look at the four planets featured in the concert.

The words in italics below come from a book about astrology owned by Holst and are descriptions of the characteristics supposedly produced by that planet's influence.

Mars, the Bringer of War - "headstrong and at times too forceful"

Holst finished writing Mars early in 1914, before the First World War began, but audiences at the premiere in 1920 might have heard its powerful combination of drums and brass instruments as a reference to the mechanised fighting of the Great War.

We now know that Mars - known as the Red Planet - is covered with towering dormant volcanoes and craters. The surface is a very hostile environment so it is appropriate that Holst's music is quite aggressive and threatening. The piece is driven by an insistent rhythm of five beats, repeated over and over again. It has a military feel but most military marches have four beats repeating. It's hard to march to five if you have two legs.

Mars Learning Video Mars Rhythm Learning Video



The opening of Mars in Holst's own score (courtesy of The Holst Archive) The timpani, harps and strings are playing the distinctive 5-beat rhythm **Saturn, The Bringer of Old Age** - "more plodding and persevering than brilliant and active" This was Holst's favourite movement and the most reflective of his own personality. He was not a well man and did not enjoy public acclaim or attention. This piece tries to convey in music what it feels like to get old. You don't move as fast. Everyday tasks take longer. The opening alternating chords sound like the ticking of a clock; the long notes might depict tired, dragging limbs. Holst's Saturn is peaceful at times, and ominous, almost chaotic, at others. For the Romans, Saturn was a god of time, which may have influenced Holst's subtitle, 'The Bringer of Old Age.' In fact, Saturn is the same age as every other planet in our solar system, 4.5 billion years or so.

Saturn Learning Video Saturn Old Age Learning Video

Uranus, the Magician - "eccentric, strange and erratic...a nervously organised temperament, quite out of the common"

This sounds more like a comic and bumbling wizard than a frightening one. The opening four notes are quite imposing and even sinister, but the music soon turns into a jerky dance. At the end, it sounds like the wizard vanishes into thin air. Every other planet in the solar system spins more or less like a top while circling the sun, but Uranus rolls sideways and appears somersault through space.

Uranus Learning Video

Jupiter, the Bringer of Jollity - "an abundance of life and vitality"

This piece sounds celebratory and climactic, but Holst actually placed it halfway through the suite. The big tune in the middle was turned into the popular patriotic hymn "I vow to thee my country" and, much later, the song "World in Union", which has been the theme of the Rugby World Cup since 1991.

Jupiter Learning Video

IDEAS FOR CLASSROOM ACTIVITIES

Mars

Rhythm is one of the elements that composers manipulate to express different feelings. Film music in particular is designed to make us feel different things. Horror and suspense films build tension with rhythms which get faster and faster and then sometimes stop abruptly. It might feel like "my heart missed a beat".

- What things that you do every day produce rhythm?
- Walking and running
- Breathing and heartbeats (slow when you're sitting, fast when you're running)
- Brushing teeth
- Drumming or clicking fingers
- Clapping

What rhythms are around us? Trains, road drills, ticking clocks, sirens...

How does rhythm affect us?

Rhythmic music is often made to be danced to. Dance music rhythms are measured in BPM beats per minute. For some reason 128 BPM is the most popular speed for electronic dance music. Try it! What effect do faster and slower speeds produce? **Metronome at 128 BPM** <u>https://www.youtube.com/watch?v=oZa3EJuMFNY</u>

Saturn

When you're in primary school, getting old seems a very long way away. Do you know anyone who is in their seventies or eighties, or even older? What will it feel like to be their age? What aspects of life will get easier and what will get more difficult?

Life expectancy has increased dramatically as people's lives have become safer, medical care has improved and food supplies have become more reliable. Since 1900, the average life expectancy around the world has more than doubled. The current record was set by a French woman called Jeanne Calment who died at the age of 122 in 1997. Some scientist think that, in theory, there's no limit to how long humans could live. Would you want to live forever? What would you do with all that time? How would we cope with so many people on Earth?

Uranus

Holst called Uranus 'The Magician'. What sort of person makes a good magician and why do we enjoy being deceived so much? Nowadays, computer generated imagery can make anything happen in films and TV shows but it's still impressive when an illusion is created live, before your very eyes. Can you learn some magic tricks to impress your friends?

There's a thin line between being deceived by an illusion and being conned. The same techniques that magicians use can also be used by thieves to distract their victims while, for example, picking their pockets. How can you spot when you're being conned and how can you avoid it?

Jupiter

Holst reused the big tune from Jupiter as a hymn tune he called "Thaxted" after a village where he lived for many years. It sets words by Cecil Spring-Rice.

I vow to thee my country https://www.youtube.com/watch?v=bvouc8Qs_MI

The same tune also became the song "World in Union", the theme for the Rugby World Cup with words by Charlie Skarbek.

World in Union sung by Kiri Te Kanawa https://www.youtube.com/watch?v=fQS3kzgLYkg

There's even a version in Japanese by Ayaka Hirahara which was a big hit in Japan in 2004.

Jupiter by Ayaka Hirahara https://www.youtube.com/watch?v=eH9fCps9SFs

Why not take a fragment from one of Holst's Planets to create some new music of your own? It could just be a rhythm or a few notes or you could write words for a whole section.

You could create a whole piece for Earth, the only planet that Holst didn't write a piece for. If you need an extra incentive, the BBC is launching the Ten Pieces Earth Mission (<u>http://www.bbc.co.uk/programmes/articles/11qWcSrfM1KLyHKBpMpDVYf/ten-pieces-earth-mission</u>):

Earth is the only planet not to be named after a Greek or Roman god. What would have been a suitable alternative name from mythology?

What characteristics does Earth have, seen from far away or close-up? What sort of music would reflect that?

MUSIC RESOURCES

The **BBC** included Mars in its first selection of **Ten Pieces** (<u>https://www.bbc.co.uk/programmes/p04pc0j8</u>). Resources include a full performance, an introduction by Dick and Dom and a lesson plan: <u>http://www.bbc.co.uk/programmes/articles/14ZjT5yjnKQRdKVsqrLzk1x/mars-from-the-planets-by-gustav-holst</u>

The **BBC Bitesize** website also features Mars with a film presented by Katie Melua. <u>https://www.bbc.com/education/clips/zkkpr82</u>

Our presenter Rachel Leach has written detailed lesson plans for work around *The Planets* and Mars in particular. They are aimed at English Key Stage 2 but may be useful. <u>https://www.lpo.org.uk/creative-classrooms-connect/holst-s-the-planets-for-key-stage-2.html</u>

There are many performances of *The Planets* on YouTube and Spotify. Here are performances by the London Symphony Orchestra, conducted by Richard Hickox. **Mars** <u>https://www.youtube.com/watch?v=FQBOcDbzYMw</u> **Saturn** <u>https://www.youtube.com/watch?v=VKkmEHeTVGI</u> **Uranus** <u>https://www.youtube.com/watch?v=FK_QkS6uZeE</u> **Jupiter** <u>https://www.youtube.com/watch?v=j8J1SL-KhlQ</u>

For variety you might want to sample the rather weird versions created by the Japanese musician Tomita using synthesisers.

Mars <u>https://www.youtube.com/watch?v=hsZqXdPZb8s</u> Jupiter <u>https://www.youtube.com/watch?v=tDFocqYSrfE</u>

You can hear the extra movement that Colin Matthews wrote for Pluto. **Pluto, the Renewer** <u>https://www.youtube.com/watch?v= T5BM BE8iQ</u>

The American conductor and composer Leonard Bernstein got the New York Philharmonic Orchestra to make up a movement for Pluto on the spot in 1972 **Pluto the Unpredictable** <u>https://www.youtube.com/watch?v=R7xlK5d7Kiq</u>

PLANET FACTS

Marvellous Mars

- Mars is the fourth planet from the Sun.
- It is named after the Roman god of war.
- Mars is a terrestrial planet which means that, like Earth, it has a solid surface.
- You can easily see it from Earth and it looks red because of the iron oxide on the surface. It appears to have lots of frozen water at both poles but because the planet has so little atmosphere, water can't stay liquid. Long ago there probably was liquid water on the planet's surface because we can see the traces it left. We can also see volcanoes but they are not currently active. Mars has two moons called Phobos and Deimos.
- Mars orbits the Sun at an average distance of 228 million km, half as far again as the Earth, so human visitors would find it very cold. Although summers near the equator can be quite warm, the average temperature is 63 degrees Celsius below zero similar to winters in Antarctica. The nights are also bitterly cold.
- The first humans on Mars will have other problems to face. The air is 100 times thinner than on Earth, and mostly made up of carbon dioxide. Human explorers will have to wear oxygen masks and special suits every time they step outside their sealed homes.
- Violent storms can whip up clouds of dust. Sometimes these spread rapidly around the entire planet, hiding the surface from view.



Mars (Photo: NASA)

Sensational Saturn

- Saturn is the sixth planet from the sun and the second largest in the solar system.
- Saturn was the Roman god of agriculture.
- It is a gas giant which means is made mainly of hydrogen and helium and it doesn't have a solid surface.
- It has an average radius about nine times that of Earth. The planet's most famous feature are its rings made of ice, rocks and dust.
- The planet has at least 62 moons the largest of which, Titan, is bigger than the planet Mercury.
- 764 Earths would fit inside Saturn, but the gas giant weighs only 95 times as much as our rocky world. If you could put all of the planets in a pool of water, Saturn is the only one that would float.
- Despite its size, Saturn spins once in a little more than 10 hours. Its spin is so rapid that it bulges outwards at the equator, making it look like a ball that has been squashed.

- In a telescope, Saturn appears a pale yellow colour. It has no solid surface, so what we are seeing are clouds that appear as light and dark bands. These clouds are blown along by very strong winds. Much of the heat that drives these winds comes from inside the planet.
- The Cassini probe orbited Saturn 294 times between 2004 and 2017 and explored many of Saturn's moons. The Huygens lander parachuted onto the surface of Titan in 2005. It was the first soft landing on another planetary satellite (apart from our Moon). Orange Titan was found to be a strange, icy world where methane rain fills lakes and rivers.



Saturn (Photo: NASA)

Unbelievable Uranus

- Uranus is the seventh planet from the Sun, names after the Greek god of the sky.
- It moves quite slowly and has a long way to travel, so each orbit of the sun lasts 84 years.
- Uranus is a giant world, the third largest planet in our Solar System. 64 Earths would fit inside it. Despite its size, it spins rapidly. A day on Uranus lasts only 17 hours 14 minutes. Uranus spins like a top knocked over on its side. This means that the Sun is sometimes directly overhead at the poles.
- Each pole has a summer and a winter lasting 21 years, making them the hottest and coldest places on the planet.
- The main gases in its thick atmosphere are hydrogen and helium, with a small amount of methane. The methane scatters blue light, which is why Uranus appears blue.
- Uranus is mainly made of 'ices' a mixture of water, methane and ammonia. At its centre there may be a small rocky core. This means that it is very lightweight for its size.
- Uranus has 27 known moons. None of these are very big. The largest satellites are Oberon and Titania, both more than 1,500 km in diameter.
- Uranus also has at least a dozen dark, dusty rings.
- Voyager 2 is the only spacecraft to have flown past Uranus.



Uranus (Photo: NASA)

Jolly Jupiter

- Jupiter is the largest and oldest planet in the solar system, born about 4.5 billion years ago.
- It is the fifth planet from the sun and is another gas giant.
- It is made mainly of hydrogen with a quarter helium and has at least 69 moons.
- Jupiter is named after the Roman king of the gods.
- Jupiter is so big that it could easily swallow all of the other planets (or more than 1,300 Earths). It also weighs more than twice as much as all the other planets.
- Despite its huge size, Jupiter is the fastest-spinning planet, rotating once in less than 10 hours.
- Jupiter is five times as far from the Sun as the Earth, so its surface temperature is low, around -145°C. Every 13 months or so it comes closer to us and becomes very bright in the night sky.
- Jupiter is a giant ball of gas, with no solid surface. It is mainly made of the very light gases, hydrogen and helium. Telescopes show a cloudy atmosphere with colourful belts and spots.

- The largest feature called the Great Red Spot is a giant storm, several times the size of the Earth. It has been blowing non-stop for more than 300 years.
- Jupiter has a faint ring of dust, over 100,000 km wide, that was discovered by the Voyager spacecraft. It is also orbited by the largest family of satellites (63 at the latest count).
- Four of these, discovered by the Italian scientist Galileo in 1610, are very big. Io has hundreds of volcanoes that cover its surface with yellow-orange sulphur. Europa has a smooth, icy surface that looks like a cracked egg shell. Ganymede has light and dark patches with grooves and craters. Callisto has an ancient, cratered surface.



Jupiter (Photo: NASA)

PLANETS RESOURCES

NASA - the National Aeronautics and Space Administration of the United States - has an abundance of material about the planets on their website, including text, stills and videos:

The Planets <u>https://solarsystem.nasa.gov/planets/overview/</u> Mars <u>https://solarsystem.nasa.gov/planets/mars/overview/</u> Saturn <u>https://solarsystem.nasa.gov/planets/saturn/overview/</u> Uranus <u>https://solarsystem.nasa.gov/planets/uranus/overview/</u> Jupiter <u>https://solarsystem.nasa.gov/planets/jupiter/overview/</u>

NASA has created 20" x 30" posters for each of the planets and other 'tourist attractions' in space which are free to download and print. <u>https://www.jpl.nasa.gov/visions-of-the-future/</u>

BIOGRAPHIES

The Presenter: Rachel Leach

Rachel Leach is a composer and presenter. She was born in Sheffield and studied composition with Simon Bainbridge, Robert Saxton and Louis Andriessen. Rachel has worked within the education departments of most of the UK's orchestras and opera companies, mainly with the London Symphony Orchestra and the London Philharmonic Orchestra. She is the presenter of the LSO St Lukes lunchtime concert series and regularly presents children's concerts and pre-concert events for LSO, LPO, BBC Proms, Wigmore Hall and the SCO.



Rachel Leach (Photo: rachelleachmusic.com)

The Conductor: Clark Rundell

Clark Rundell is a conductor who specialises in contemporary music. He grew up in Minnesota in the USA but now lives with his wife and two children just outside Manchester where he is Professor of Conducting at the Royal Northern College of Music. He also works as a guest conductor with many of the world's leading orchestras, opera houses and ensembles. Clark has given numerous world premières of works by composers such as Steve Reich, Mark-Anthony Turnage, Sir James MacMillan and Django Bates.



Clark Rundell (Photo: operaomnia.co.uk)

The Orchestra: Scottish Chamber Orchestra

The world-renowned Scottish Chamber Orchestra is made up of a unique collection of talented musicians who inspire and connect with people of all ages. The SCO aims to provide as many opportunities as possible for people to hear their music by touring the length and breadth of Scotland and around the world as proud ambassadors for Scottish cultural excellence. In recent years, the Orchestra has travelled throughout Europe, the Far East, India and the USA.

The SCO makes a significant contribution to Scottish life both on the concert platform and beyond, working in schools, universities, hospitals, care homes, places of work and community centres through the SCO Connect creative learning programme. The orchestra receives funding from the Scottish Government as one of Scotland's five National Performing Arts Companies and is based in Edinburgh.



The Scottish Chamber Orchestra (Photo: Marco Borggreve 2016)