In this Learning Pack you will find five different activities for this week covering different foundation subjects. These activities can be completed in any order. We hope you enjoy them.

1. History – The Northern Lights
2. Music – Gustav Holst
3. Art – Islamic Repeating Pattern
4. Science – Jane Goodall/David Attenborough
5. R.E. – Design a mosque
The Northern Lights (also known as Aurora Borealis) are a spectacular light show created by the interaction of electronically charged particles in our atmosphere. They are caused by the interaction of the solar wind - a stream of charged particles escaping the Sun - and our planet's magnetic field and atmosphere. As the solar wind approaches, it changes the Earth's magnetic field and allows some charged particles from the Sun to enter the Earth's atmosphere. These become gases in our atmosphere, they make them glow - just like glow sticks.

Before we knew what the Northern Lights really were, many myths and legends were shared to explain the beautiful colours in the night sky.

**Vikings** - Odin was the chief god and ruler of Asgard, admired by all Vikings. They believed he lived in Valhalla (a great hall where all the Gods lived - like a heaven). During every battle on Earth, Odin would pick the warriors who would die and join him in Valhalla. The Vikings believed the Northern Lights illuminating the sky were the reflections of the Vikings who died in battle, their armour as they came to Valhalla - their heros lighting up the sky.

**French and Itailians** - They believed the lights were a bad omen (sign). A sign that in the near future there would be an outbreak of some sort from war, plague or death. The lights across their skies were more a deep red.

**Scotland and England** - A red sky was seen as a bad omen, very similar to the French belief. However, when the lights were green, it was seen as a good omen - a celebration up in the sky.

**Activity** -
Using the information above and your own research. Select your time period - perhaps you want to be in the Viking period, Anglo-Saxon, a Scott or French soldier. You are seeing the Northern lights for the very first time. What do you see, how do you feel? What do you do? Write a diary entry about your experience. You may want to add a photo underneath your writing.
Music -

Today we are looking into Gustav Holst - a British composer. He famously composed *The Planets* also known as *Seven Pieces for Large Orchestra*. This consisted of seven short tone poems, the most well known are "Mars" and "Jupiter."

Holst was born on September 21, 1874 in Cheltenham, Gloucestershire. He Died May 25, 1934 in London. During his time, Holst studied music at the Royal College in London where he specialised in the trombone. After leaving college, he worked as a trombone player in the Carl Rosa Opera Company. He then became a music master at St. Paul's school in 1905 and director of music.

You can listen to the seven pieces of music on the link below.

**Website –**
https://www.britannica.com/topic/The-Planets#ref1185784

Activity -

As you go through the different pieces of music, make a few notes on the sheet below about each one. As you listen, describe the type of music. Is the tempo slow or fast, is the pitch high or low? Can you name any of the instruments you hear? Do you think the music represents the planet - how? Draw a smiley face or a sad face, depending on whether you like what you hear or not. Why do you feel that way?

![Venn Diagram](Mars, Venus)
Mercury

Jupiter

Saturn

Uranus

Neptune
The term Islamic art represents all art created in the Islamic empire which was vast and varied in terms of style. As the Muslims took over more land, they inherited the art and culture of those lands also. This means that in the early days, Islamic art was built upon the styles and techniques of a wide range of earlier artistic forms, such as those developed under Byzantine or Sasanian rule.

It was during the Umayyad dynasty (AD 661 – 750) that an artistic style which could be clearly defined as Islamic began to develop.

Some forms of Islamic art are shown below. These art forms could be used on their own or in combination with each other.

Geometric patterns were very popular, as was the use of leaves and flowers, in early Islamic designs. However, it is very rare for Islamic art to include images of people or animals.

**Your task:**

See if you can create your own Islamic design – you can use the template below, or simply draw your own on some paper. Remember to stay true to the Islamic style and use lots of colour to make your design stand out. If you don’t usually take part in R.E. lessons, can you simply create your own repeating pattern?
There are many important people involved with the conservation of animals and their environments. I’m sure many of you have heard of Sir David Attenborough – he is a natural historian and TV presenter. He is passionate about protecting our planet and is a true animal lover. Another such person is Jane Goodall. Her passion is chimpanzees! She has lived and worked with them for over half a century and is an expert in her field.

Your task:

Using the information below, or your own research, can you create a biography of one of these two amazing people? Remember, a biography is a written account of someone else’s life. It should include the following:

- Write in past tense and third person
- Key events written in chronological order
- Information about early life/education/family
- Achievements
- Conclude with what they are doing now/how they will be remembered
Jane Goodall

Early Life

Jane Goodall was born on April 3, 1934 in London, England. Her father was a businessman and her mother an author. Growing up, Jane loved animals. She dreamt of someday going to Africa in order to see some of her favorite animals in the wild. She particularly liked chimpanzees. One of her favorite toys as a child was a toy chimpanzee which she loved to play with.

Going to Africa

Jane spent her late teens and early twenties saving money to go to Africa. She worked various jobs including as a secretary and a waitress. When she was twenty-three Jane finally had enough money to visit a friend who lived on a farm in Kenya.

Jane fell in love with Africa and decided to stay. She met British archaeologist Louis Leakey who offered her a job studying chimpanzees. Jane was so excited. She moved to the Gombe Stream National Park in Tanzania and began to observe the Chimpanzees.

Studying Chimpanzees

When Jane began studying chimpanzees in 1960 she had no formal training or education. This may have actually helped her as she had her own unique way of observing and recording the chimp’s actions and behaviors. Jane spent the next forty years of her life studying chimpanzees. She discovered many new and interesting things about the animals.

Naming the Animals

When Goodall first began studying chimpanzees she gave each chimp she observed a name. The standard scientific way of studying animals at the time was to assign each animal a number, but Jane was different. She gave the chimps unique names that reflected their appearance or personalities. For example, she named the chimpanzee which first approached her David Greybeard because he had a grey chin. Other names included Gigi, Mr. McGregor, Goliath, Flo, and Frodo.

Discoveries and Accomplishments

Jane learned a lot about chimpanzees and made some important discoveries:

- **Tools** - Jane observed a chimp using a piece of grass as a tool. The chimp would put the grass into a termite hole in order to catch termites to eat. She also saw chimps remove leaves from twigs in order to make a tool. This is first time that animals had been observed using and making tools. Prior to this it was thought that only humans used and made tools.
- **Meat eaters** - Jane also discovered that chimpanzees hunted for meat. They would actually hunt as packs, trap animals, and then kill them for food. Previously scientists thought that chimps only ate plants.
Personalities - Jane observed many different personalities in the chimpanzee community. Some were kind, quiet, and generous while others were bullies and aggressive. She saw the chimps express emotions such as sadness, anger, and joy.

Over time, Jane’s relationship grew closer and closer to the chimpanzees. For a period of nearly two years she became member of a chimpanzee troop, living with the chimps as part of their day to day lives. She was eventually kicked out when Frodo, a male chimp who didn't like Jane, became the leader of the troop.

Later Life

Jane wrote several articles and books about her experiences with chimpanzees including *In the Shadow of Man*, *The Chimpanzees of Gombe*, and *40 Years at Gombe*. She has spent much of her later years protecting chimpanzees and preserving the habitats of animals throughout the world.

Legacy

Jane won many awards for her environmental work including the J. Paul Getty Wildlife Conservations Prize, the Living Legacy Award, Disney's Eco Hero Award, and the Benjamin Franklin Medal in Life Science.

There have been several documentaries made about Jane's work with chimpanzees including *Among the Wild Chimpanzees*, *The Life and Legend of Jane Goodall*, and *Jane’s Journey*.

Interesting Facts about Jane Goodall

- There is a carving of the chimp David Greybeard on the Tree of Life at Disney World's Animal Kingdom theme park. Next to it is a plaque in honor of Goodall.
- She established the Jane Goodall Institute in 1977.
- Jane took a break from Africa in 1962 to attend Cambridge University where she earned a Ph.D. degree.
- Chimpanzees communicate through sounds, calls, touch, body language, and facial expressions.
- Jane was married twice and had a son named Hugo.
Sir David Attenborough

Early Life and Education

Famed naturalist and television personality David Frederick Attenborough was born on May 8, 1926, in a suburb of London, England. The second of three boys born to a university principal and a writer, he and his brothers would all find great success in their chosen careers. David’s older brother Richard would become an Academy Award-winning actor and director, and his younger brother, John would become a top executive at the Italian car company Alfa Romeo.

Attenborough’s fascination with the natural world developed early and by the age of seven, he had assembled a sizable collection of bird eggs and fossils. He attended a lecture by famous naturalist Grey Owl in 1936 which deepened his interest in the subject, and after graduating from high school, he was awarded a scholarship to study the natural sciences at the University of Cambridge. Upon completing his studies in 1947, Attenborough was called to serve for two years in the Royal Navy. However, any hopes he had that this would be his chance to see the world were dashed when he was posted to a ship in Wales.

In 1949, Attenborough returned to London and found work as an editor for an educational publisher. The following year he began a training program with the BBC. In 1952, Attenborough completed his training and began working for the television station as a producer, marking the beginning of what would be a milestone career, both at the BBC and beyond.

TV Shows & Documentaries at the BBC

At the BBC, Attenborough faced two obstacles. First, the station had little to no programming devoted to the natural sciences, and second, his boss thought that Attenborough’s teeth were too big for him to be an on-air personality. Despite these hindrances, however, Attenborough persevered, taking small steps forward on the path toward his ultimate destiny. He started out producing the quiz show Animal, Vegetable, Mineral? and then moved on to co-host a program called The Pattern of Animals with naturalist Sir Julian Huxley.

But Attenborough was dissatisfied with the format of shows such as these, which often brought animals out of their natural habitats and into the distressing environment of a television studio. Seeking to break with this unfortunate tradition, Attenborough launched a series titled Zoo Quest in 1954. The program filmed animals not only in captivity, but also in the wild, with the film crews traveling far and wide to capture images of the animals. The show was so successful with viewers that it led the BBC to establish its Natural History Unit in 1957.

Despite his growing success, Attenborough left the BBC in the early 1960s to study social anthropology at the London School of Economics. However, when BBC Two was created in 1965, Attenborough was asked to return to the station as its
controller. Yet Attenborough could not shake the passion that had remained with him since his youth, and in 1972, he resigned from his post at the BBC to follow his dreams into the wild.

‘Life on Earth’

After leaving the BBC, Attenborough began to write and produce TV series as a freelancer and quickly established himself with a string of successful programs, including *Eastwards with Attenborough* (1973), which featured an anthropological study of Indonesia, and *The Tribal Eye* (1975), which examined tribal art throughout the world. But Attenborough’s greatest success would come in 1976, when his program *Life on Earth* first aired. A 96-episode examination of the role of evolution in nature, the show took Attenborough and his crews around the globe, using cutting-edge filming techniques to bring wildlife into homes worldwide, gaining an estimated viewing audience of more than 500 million.

The success of *Life on Earth* made Attenborough a household name and, in the decades that followed, allowed him to write, produce and host countless other series.

Preserving Our Ecology

The advancement of his age has done little to slow the intrepid Attenborough, who into his 80s has continued both his globetrotting and his prolific output. Completing his *Life* trilogy, 2008 saw the airing of his series *Life in Cold Blood*, an examination of reptiles, and in 2012, he began a series of programs filmed in 3-D for the Sky television network. Attenborough’s lifelong commitment to the natural world has also led him toward ecological activism both on the air and offscreen. He wrote and produced the environmentally themed *State of the Planet* (2000) and *Saving Planet Earth* (2007). He is a patron of the organizations Population Matters, which examines the impact of human population growth on the natural world, and the World Land Trust, which buys rainforests around the globe with the aim of preserving their wildlife.

He was knighted in 1985, received the Order of Merit from Queen Elizabeth II in 2002 and holds at least 31 honorary degrees from British universities, including Oxford and Cambridge. In 2014, a poll revealed that he was considered to be the most trustworthy public figure in Britain. Attenborough is also the most travelled person in recorded human history and is the oldest person to have ever visited the North Pole.

Wife

Attenborough married Jane Oriel in 1950, the couple staying together until her death in 1997 from a brain hemorrhage. The pair had two children together: a son and daughter.
There are over 2.5 million Muslims in the UK and over 1,500 mosques. The mosque is a place to gather for prayers, to study and to celebrate festivals such as Ramadan. It can also be used to house schools and community centres.

The Arabic word for mosque, “masjid”, means “place of prostration”. The first mosque was the Prophet Muhammad's home in Medina, Saudi Arabia, a 7th-Century house with a large courtyard surrounded by long rooms.

Here are some pictures of mosques from around the world:
Your task:

Using one of the templates below, see if you can design your very own mosque! You can be as traditional or modern as you like – perhaps do some more research into mosques from around the world to give you some inspiration!