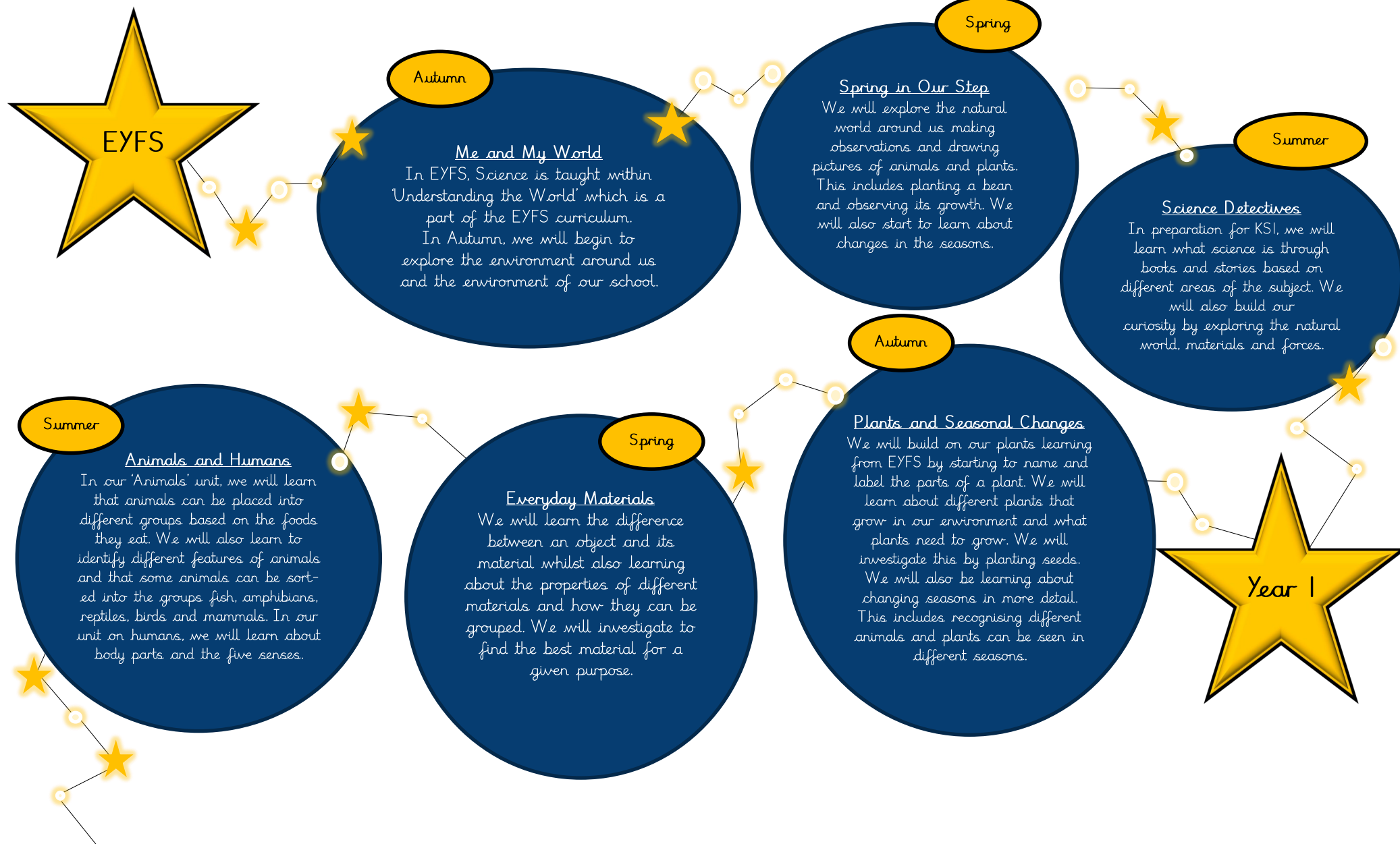


# Our Science Constellation Pathway

*Our learning is out of this world*



Year  
2

Autumn

Solids, Liquids and Gases  
We will begin to learn about the three states of matter. We will learn to identify the properties of solids, liquids and gases and use these to group objects. We will also learn how states of matter can change and what a mixture is.

Spring

Uses of materials and Living Thing & Habitats  
We will learn about physical properties of materials and how absorbent materials are. We will also investigate the best material for an umbrella and how materials can change shape. In Spring 2, we will learn about habitats and what animals need to stay alive.

Summer

Plant Growth and Needs of Animals  
We will build on what we have learned before by learning how plants grow from the germination of seeds. We will also build on our previous animal learning by exploring what animals need to survive and how different animals grow.

Spring

Organisms and Plants  
We will learn about the nutritional needs of humans, different food groups and what a balanced diet is. We will also learn about skeletons and organs. In our 'Plants' unit we will learn what plants need to survive and if all plants have the same requirements for life. We will build on our germination understanding from Year 2 by learning about the life cycle of plants.

Summer

Forces & Motion and Magnetism  
We will learn what forces are, how they are created and what they do. We will also learn about balanced and unbalanced forces and plan an investigation on friction. This learning will be built on in Summer 2 where we will learn about and investigate magnetism.

Autumn

Rocks and Light  
We will learn about the properties and uses of rocks. This includes learning about different types of rocks, how they are formed and the rock cycle. We will also learn what fossils are and investigate different types of soil. In our 'Light' unit, we will learn how we see and what a source of light is. We will also learn about shadows and investigate reflective materials.

Year  
3

Year 4

Autumn

### Classifying Organisms and Food & Digestion

We build on our understanding of animals and humans to learn about classification. We will learn about vertebrates and invertebrates and how to use classification keys. In 'Food and Digestion', we will learn about teeth and how our food is digested in our bodies. We will also learn more about food chains.

Spring

### States of matter and Sounds

We will build on our understanding from KSI to learn about the particle model in states of matter. This will include learning about temperature and investigating evaporation. In our 'Sounds' unit, we will learn how sounds are made and how animals hear. This will include us investigating volume and pitch.

Summer

### Electricity and Properties of Materials

We will learn how electrical appliances work before building complete circuits with switches. We will also learn about insulators and conductors of electricity. In Summer 2, we will learn more about the properties of different materials and investigate thermal insulators and conductors.

Spring

### Life Cycles and Human Development

We will learn about reproduction in animals and plants before exploring different life cycles. This will be developed further in Spring 2 with our learning on the human life cycle.

Summer

### Forces and Space

We will learn what gravity is and how it works before exploring levers, gears and pulleys. We will also learn about air resistance and surface area. In our unit on 'Space' we will learn about the planets in our solar system; what causes day and night; and the phases of the moon.

Autumn

### Separating Mixtures and Energy

We will learn more about mixtures and pure substances as well as investigating solubility. We will also explore what makes a change reversible or irreversible. In Autumn 2, we will learn about different types of energy and how they are stored and used. This includes understanding energy in food.

Year 5

Year 6

Autumn

### Electricity and Evolution

We will build on our previous learning by creating series circuits and investigating the effect of increased voltage on the brightness of a bulb. We will also learn how electricity is transmitted into our homes. In our 'Evolution' unit, we will learn about adaptation and Darwin's theory of natural selection.

Spring

### Light and Further Classification

We will revise and build on our previous learning on shadows and how we see. We will explore how we see in colour and investigate different types of reflection. In Spring 2, we will build a deeper understanding of our classification learning from Year 4. This includes learning about fungi and

Summer

### Functions of the Human Body and Physical & Chemical Changes

We will learn about the heart, blood and the circulatory system in the human body. We will investigate the effect of exercise on heart rate and how we can keep our body healthy. In Summer 2, we will learn about the processes of distillation and chromatography. We will learn to recognise the difference between a physical and chemical change.

At KS3 pupils will build on the skills they have developed at Nova and learn more about the following:

- Atoms
- There is attraction and repulsion between objects that are electrically charged.
- Visible light and radiation
- Links between changing motion and mass.
- The expanding universe
- Organisms are made of cells which can be seen under a microscope.
- Decomposers are essential for a stable ecosystem.
- The human body is made from cells that contain 23 pairs of chromosomes.
- Biological cause and effect of diseases.

KS3