Year 5/6
Topic
Week 1

Date			
Subject/s	Art		
Learning Objective 	To use inspiration from architects and artists for our own art work		
		SA 	TA 
Success Criteria 	I can create a clock with a correctly numbered clock face		
	I can relate my design back to artists and architects		
	I can justify my unique design choice		
Support	Independent Adult Support ( ) Group Work		

What do you notice about the clock faces below?
What other features are on the clocks?

Formal Clocks

There are lots of famous clocks that have been designed by architects around the world.
What makes the clocks so special/iconic?

Big Ben

Completed in 1858, the tower holds the largest four-faced chiming clock in the world and is the third-tallest free-standing clock tower.

The Prague astronomical clock, Prague
Many tourists arrive to the square and wait to a round hour just to watch the famous moving figures of the beautiful clock. The medieval clock was first installed in the year 1410, making it one of the oldest astronomical clocks in the world and the oldest one still in use.

Makkah Royal Clock Tower, Saudi Arabia
It's the tallest clock tower in the world and the world's largest clock face. Each of the four clocks (on four sides) is 43 × 43 meters (141 ft × 141 ft)!

Who is Salvador Dali?

- Dali was born May 11, 1904 in Spain.
- He was very talented from a young age and began taking art classes at 10 years old.
- Dali began to study art at the Royal Academy of Art in Madrid, he was expelled twice and never graduated.

- He became internationally known when 3 of his paintings, including The Basket of Bread were shown in the third annual Carnegie International Exhibition in Pittsburgh in 1928.

- Dali soon became a leader of the Surrealist Movement. His painting, The Persistence of Memory, with the soft or melting watches is still one of the best-known surrealist works.

The Persistence of Memory

What is Surrealism?

- Surrealism is a movement that happened early in the 1900s.
- It aimed at expressing imaginative thoughts free from any control.
- Salvador Dali was a main figure in surrealism.

What do you think Dali's thoughts were when he created 'The Persistence of Memory?'
What are the types of clocks you can see?

Task

Each clock that we have seen has been unique in its own way.
Your task is to design your own unique clock/clock face (Not a full building!)
Design it first on scrap paper, then do it on plain paper for display.
Things to think about:

- Is your clock face going to have numbers or roman numerals?
- What shape are the hands going to be?
- What colours are you going to use?
- Is there going to be anything else on your clock?
- Are you going to do it in pastel, paint or crayon?

Date			
Subject/s	Science		
Learning Objective 	To know how humans develop		
		SA 	TA 
Success Criteria 	I can name each stage of the human development		
	I can explain what changes during each stage of development		
	I can use my learning to write instructions on 'How to be a...'		
Support	Independent	Adult Support ( )	Group Work

What is the human life cycle?

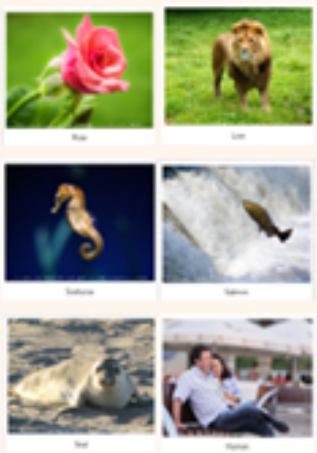
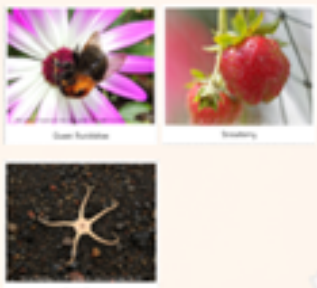
On a piece of paper, think about the timeline of a human from baby to adult. Then write down what things change as you get older? Think about what you can/cannot do at different ages.

How does new life start?

There are different types of reproduction.

	Asexual Reproduction:	**Sexual Reproduction:**	**Both sexual and asexual reproduction.**
What is it?	One parent produces new life.	Two parents – one male and one female – are required to produce new life.	Either with one or two parents.
How does it occur?	One cell simply starts to divide itself. All cells of the offspring are **identical** to the parent. This means that it is a **clone** of the parent.	Male sex cells (sperm/angiosperm/pollen are different versions of male sex cells) fertilise female sex cells (eggs). This fusion means that the offspring resembles but is **not** identical to the parents.	Some living things have the capacity to reproduce in sexually or asexually.

Reproduction examples

Asexual Reproduction:	Sexual Reproduction:	Both sexual and asexual reproduction.
		

Stages of Human Growth and Development

It is possible to study human growth in different ways.

In science, the focus is on the stages of human growth and development physically. The stages below are about the major changes that take place.

Prenatal

Prenatal means before birth. This stage of development is from the time of fertilisation (when the male and female sex cells fuse together) to the time of birth.


1 month


2 months

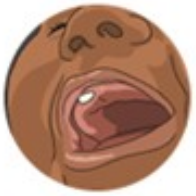

3 months


4 months


5 months


6 months


7 months


8 months


9 months


10 months


11 months


1 year


toddler

Adolescence

This stage of development lasts from the age of 11 to 19.

During this stage, puberty results in changes in the body.

These changes occur to enable reproduction during adulthood.

Adolescents are increasingly independent.

There is even more brain development.

Early Adulthood

This stage of development takes place from the ages of 18/19 to 39.

The human body is at its peak of fitness and strength.

There is still some growth but not of height.

This is the age that most humans reproduce.

Humans are able to take care of their physical needs completely independently.

Middle Adulthood

This stage of development takes place between 40 to 59 years of age.

Both male and female ability to reproduce declines with age.

Women experience menopause in their 40s or 50s when they no longer produce eggs.

Physical changes can include loss of hair among men and greying hair for both men and women.

Late Adulthood / Old Age

This is the last stage of human development and takes place after the age of 60.

There is no physical growth although mental development is possible.

The body declines in fitness and health.

Some older people can become more fragile physically.

This can sometimes result in increasing dependency on others to care for them.

The end of the human life cycle is when a human dies. (The age at which this happens varies and is not simply dependent on physical factors.)

Task

1. Create a timeline of human growth and development with notes of changes at each stage.
2. An alien has landed on planet earth and needs to learn how to blend in with the humans! Choose an age group to write introductions on 'How to be a...' think about what 'equipment' is needed, 'top tips' and what to 'avoid.' Use the template to support how to set it out.

Recap

What new vocabulary have you learnt?
Did you include all the stages of human growth and development on your timeline?
Which new stages did you learn about?

Date			
Subject/s	Science/Maths		
Learning Objective 	To analyse data		
		SA 	TA 
Success Criteria 	I know data over time can be shown on a line graph		
	I can answer key questions about how babies grow using the line graph		
	I can compare and contrast two factors: girls and boys		
Support	Independent	Adult Support ( )	Group Work

Information and Data

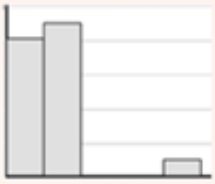
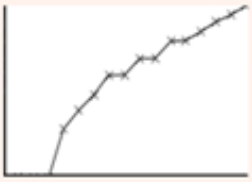
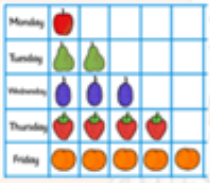
What is information?
What is data?
What is the difference between information and data?
Data are simply facts or figures — bits of information, but not information itself.
When data are processed, interpreted, organised, structured or presented so as to make them meaningful or useful, they are called information.

Data and Graphs

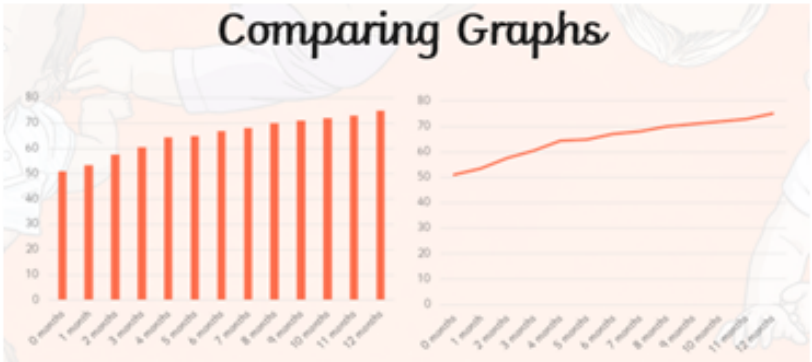
Age	Height of babies
0 months	51cm
1 month	53.5cm
2 months	57.5cm
3 months	60.5cm
4 months	64.5cm
5 months	65cm
6 months	67cm
7 months	68cm
8 months	70cm
9 months	71cm
10 months	72cm
11 months	73cm
12 months	75cm

What does this data show us?
What are the categories?
What is the unit of measurement?
If this data was presented in a graph, what should be shown on the x/y axis? Why?
What kinds of graph should be used to present this data? Why?

Types of graphs

Pie Chart	Bar Graph	Line Graph	Pictogram Graph
			
Shows the parts and the whole picture	Shows more than one set of data easily	Shows changes over time	Shows how many with a picture or an icon
Shows parts of a whole (percentages)	Compares choices – how many? how much?	Can adjust the scale easily	Good for showing what the data is about

Comparing Graphs



Which graph should the data be presented with? Why?

Why do scientists want to present their data clearly?

What are the problems if they don't?

Task

Put the data below in a graph to see the biggest growth periods over time and see how much is changes, to compare and contrast girls and boys

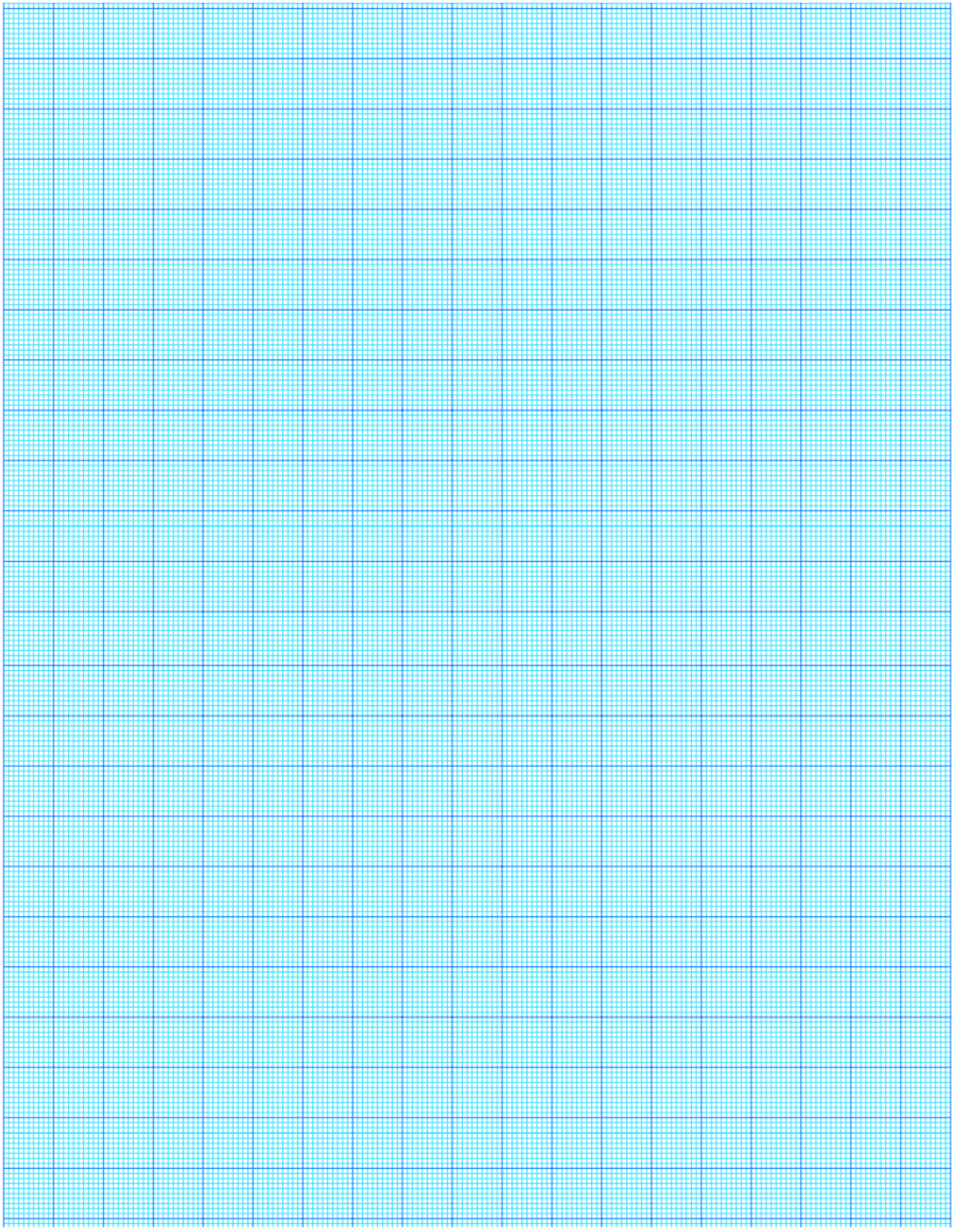
Looking at the data choose either girls or boys and draw a line graph to show the growth. Remember, we've chosen a line graph because it is about time.

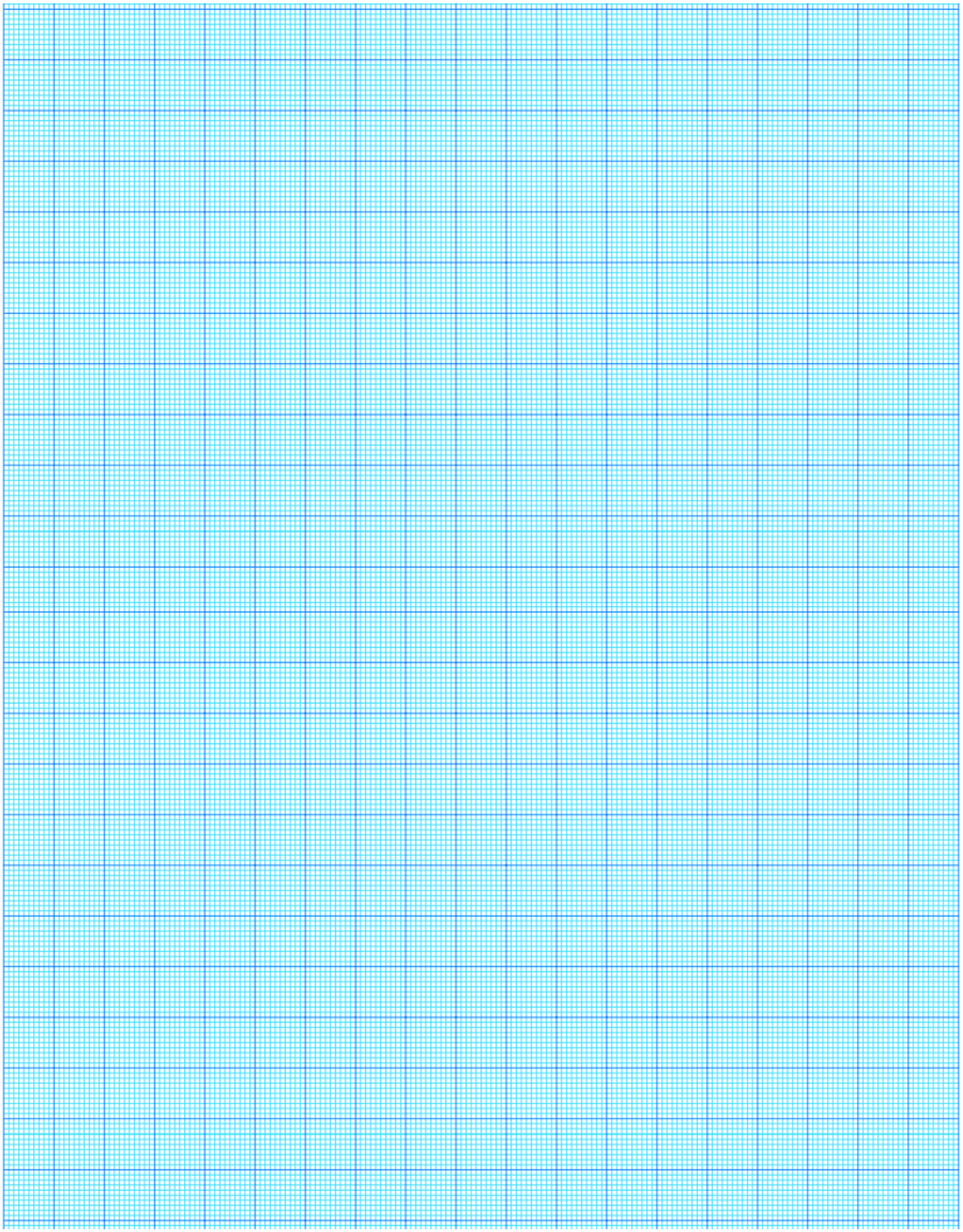
1. Use the graph paper to draw a line graph to show height for either boys or girls.
2. Use a second piece of graph paper to draw a line graph to show weight.
3. Write a summary of what the line graph shows.

Age	Height		Weight	
	Boys	Girls	Boys	Girls
0 months	52cm	50cm	3.5kg	3.5kg
1 month	54cm	53cm	4.5kg	4.3kg
2 months	58cm	57cm	5.6 kg	5.2kg
3 months	61cm	60cm	6.4kg	5.6kg
4 months	64cm	63cm	6.8kg	6.4kg
5 months	66cm	64cm	7.4kg	6.9kg
6 months	68cm	66cm	7.9kg	7.3kg
7 months	69cm	67cm	8.3kg	7.6kg
8 months	71cm	69cm	8.6kg	7.9kg
9 months	72cm	70cm	8.9kg	8.2kg
10 months	73cm	71cm	9.2kg	8.5kg
11 months	74cm	72cm	9.4kg	8.7kg
12 months	76cm	74cm	9.6kg	9kg

Plenary

Do you think all babies have the exact same height and weight? Why?
What does your data tell you about how babies grow?
What are the similarities and differences?
Your data was an average (it shows typical growth). Some babies grow more or less than this. Why do you think this might happen?


Height (cm)
Age (months)


Weight (kg)
Age (months)

Date			
Subject/s	Science		
Learning Objective	To identify changes from adult-hood to old-age		
		SA	TA
Success Criteria	I know some changes are shown in physical appearance		
	I know some changes are within the body e.g. bones, reactions, muscles		
	I can explain how to remain healthy in old-age		
Support	Independent Adult Support ( ) Group Work		

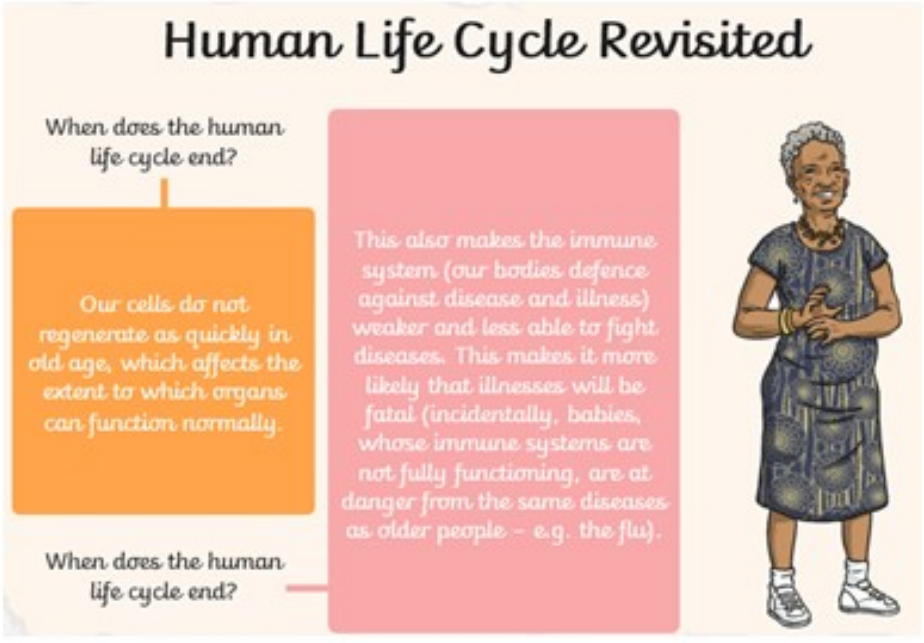
What changes occur to humans from adult-hood to old-age?

Think about the question above and organise your thoughts into two sections: physical changes and other changes.

Look at the true or false cards and decide on the answers. Why did you think that? What evidence do you have?

Answers

True	False
Older people need a different diet to stay healthy. At different stages of development we do need to adjust our diets.	All older people start to become senile (suffer memory loss). Only 30-40% of elderly people suffer from severe memory loss.
If you look after your teeth properly you won't lose them all when you are old. If you look after your adult teeth they should last you into old age!	In old age, it is normal to be sick. In old age, the immune system (which fights diseases) does get weaker. This does not mean it is normal to be sick.
Older people need to exercise. During all stages of human development exercise is important to stay healthy.	There is nothing you can do when you are younger to be healthier when you are older. Of course you can and must! If you are healthy when you are younger then it helps you to be healthier as an adult and in old age.
Older people can learn new skills. You are still developing mentally even in old age and older people can and do learn new skills. It can take them longer than a younger person but it is not less likely to happen.	Older people can't look after themselves. The amount of care and help you need when you are older is completely different for each person. Some older people do need a lot of care while others continue to be independent.
The changes people go through as they get old are different for each person. No two people age in the same way and how you age depends on your mental and physical health.	All older people need help to walk. The idea of old people needing walking sticks is not completely false – some do and some don't. We know more about how to stay healthy now so it isn't as normal as it was in the past to see someone in old age with a walking stick.
Old age is the final stage of development for humans. This is true – there are no further stages of development after old age.	Humans start to age at 60. You age throughout your whole life! Some people refer to 'becoming elderly' as 'aging' but the two are not the same thing.



Task

Use the example below to create an informative poster on what happens when people get older.

Old age is the last stage of human development. There are some physical changes that take place for all older people. The body is made up of cells and these cells age over time. All cells die because they are programmed to do so. They then get replaced by new cells. However in old age this process of generating new cells slows down for all people but the extent to which aging leads to ill health or problems does vary from person to person.

New nerve cells still form in old age. New connections are still being made. Lower chemical levels can make older people 'slower' but they are still do things accurately. The brain always has more cells than it needs.

Skin tends to become thinner and finely wrinkled. Less blood flow makes it harder for skin to heal.

As the organs don't function as well they do not always break down nutrients as well either. This can effect parts of the body such as bones. If bones are not absorbing the calcium they need they will get weaker and become more fragile.

Changes in vision are normal as the lens in the eyes stiffens making it harder to focus on closer objects. Also many older people need more light to be able to read.

Hearing decreases especially the ability to hear high pitched sounds.

Muscle strength does start to reduce from the age of 30. As you age you lose about 10 – 15% of muscle mass and strength.

Organs (such as the heart) are made of cells and if the process of new cells being created slows down it does decrease the ability of those organs to work effectively.

What can you do to remain healthy in old age?

Skin	The amount your skin wrinkles is affected by how well you look after it throughout your life and not just in old age. Spending too much time in the sun over your lifetime will eventually leave you with deeper wrinkles, skin blotches and skin reddening. Always use sun protection creams and avoid sun burn.
Muscles	All adults suffer muscle loss but if you exercise throughout your life, including when you are older, you can ensure that muscles remain strong and healthy.
Organs	The fact is that a normal heart will function well throughout your lifetime. Still it is easier for younger hearts to pump blood around the body than older hearts. So while an older person may not be able to outrun a younger person – it does not mean they can't run or be healthy. It is important to be active throughout your life.
Brain	The brain develops throughout your whole life. It is important to avoid activities that will damage brain cells as this damage can be permanent whatever your age. Some people do become senile due to age and due to factors they can't control. However, people who stay active and healthy are able to reduce the risk of such diseases when they are older.

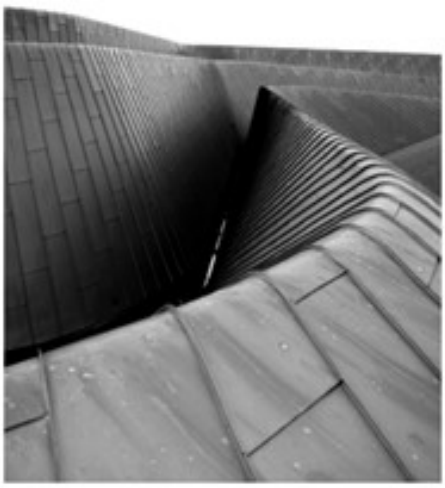
Date			
Subject/s	Art/D&T		
Learning Objective 	To identify great architects in history		
		SA 	TA 
Success Criteria 	I understand architects design buildings		
	I can identify the names of great architects in history		
	I can use famous architects designs to plan a building		
Support	Independent Adult Support ( ) Group Work		

Architects through time

Zaha Hadid (1950-2016)

Dame Zaha Mohammad Hadid was an Iraqi-born British architect.

Hadid's buildings are neo-futuristic, characterized by curving forms with "multiple perspective points and fragmented geometry to evoke the chaos of modern life".



172x172px

Hadid's fluid interior of the Silken Puerta America in Madrid

Maggie's Centre, Kirkcaldy, Scotland

CMA CGM Tower in Marseille, France

Vitra Fire Station in Weil am Rhein, Germany (1991–93)

Bergisel Ski Jump, Innsbruck, Austria (1999-2002)

Frank Lloyd Wright (1867-1959)

Frank Lloyd Wright was a famous American architect from the early 20th century. He designed all kinds of buildings including banks, holiday resorts, office buildings, churches, a synagogue, a gas station, a beer garden and an art museum.

Frank Lloyd Wright's Fallingwater, the house over the waterfall.

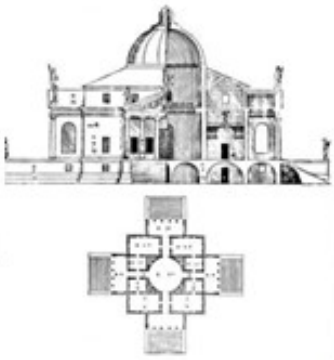
The Johnson Wax Headquarters

The Robie House

Andrea Palladio (1508-1580)

Andrea Palladio was an Italian architect. He was born in Padua and died at Maser, near Treviso. He worked in and around Venice. He was influenced by Greek and Roman architecture. He influenced architects for centuries.

One of the first works by Palladio, Villa Godi



Palladio's plan of Villa La Rotonda, in *I Quattro Libri dell'Architettura*, 1570

Villa La Rotonda

Villa Barbaro

Basilica Palladiana, Vicenza

Palazzo del Capitaniato, Vicenza

Task

Use famous architects designs above to design your own building. Try to include features that make your building special and different. In the next lesson, you will use your design to create a model of your building so your plan needs to be detailed.