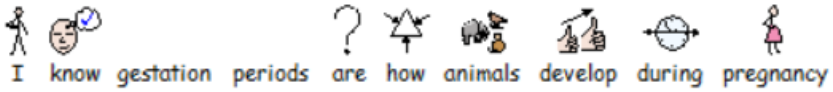
Year 5/6 Topic Booklet 2

Date			
Subject/s	Science		
Learning Objective 	To compare gestation periods		
		SA 	TA 
Success Criteria 			
			
			
Support	Independent Adult Support ( ) Group Work		

Gestation Period

- Has anyone heard the word 'gestation' before?
- What about pregnancy?
- Gestation is another word for pregnancy. So the words 'gestation period' mean how long animals / humans are pregnant for.

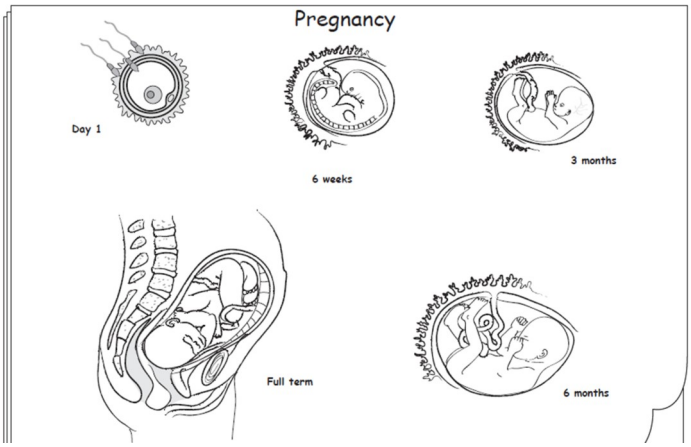
Humans

- Does anyone know how long humans are pregnant for?
- Why do you think humans are pregnant for that long? What is happening during that time?
- Humans are pregnant for 9 months as it allows the baby to grow properly (both inside and outside). By feeding the baby nutrients from the inside it also makes the baby strong enough to survive once it is born.

Human gestation period

- There are different stages of the human gestation period.

- Vocabulary:
- There is a special name for babies when they are still inside the mother.
- They are called 'embryo' as they begin to develop, then after 8 weeks they are called a 'foetus'

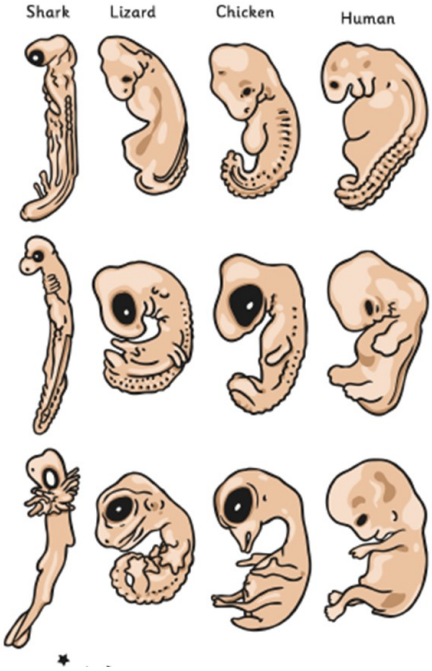


Have a look at how a baby develops

- https://www.youtube.com/watch?v=WH9ZJu4wRUE

Time (weeks)	Length (cm)	Mass (g)
8	1.5	**1**
12	6	**14**
16	13	**100**
20	25	**300**
24	30	**600**
28	37.5	**1005**
32	42	**1700**
36	47	**2620**
40	**51**	**3460**

Compare these animals during their gestation periods. What do you notice? What are the similarities? What are the differences?



Similarities	Differences

Humans vs animals

- If humans are pregnant for 9months (40 weeks), do you think it is the same for all animals as well?

What do you notice?

Animal	Av. Lifespan	Av. Gestation Period
Elephant	70 years	22 months
Hippopotamus	45 years	8 months
Chimpanzee	35 years	7 months
Dog	15 years	9 weeks
Mouse	3 years	4 weeks

Is it still true?

Animal	Av. Lifespan	Av. Gestation Period
Elephant	70 years	22 months
Hippopotamus	45 years	8 months
Chimpanzee	35 years	7 months
Dog	15 years	2 months (and a bit)
Mouse	3 years	1 month
Horse	30 years	11 months
Human	80 years	9 months
Dolphin	20 years	15 months

- Which animal has the longest gestation period?
- Which animal has the shortest gestation period?
- How many months longer is the dolphins gestation period compared to the dogs gestation period?

Task

Create a bar chart to show average gestation periods in animals.
Challenge – create a scatter graph to show average gestation periods.

Animal	Av. Gestation Period
Elephant	22 months
Hippopotamus	8 months
Chimpanzee	7 months
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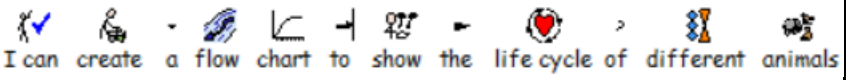
Human	9 months
Dolphin	15 months

Date			
Subject/s	Science		
Learning Objective 	To know how animals reproduce		
		SA 	TA 
Success Criteria 			
			
			
Support	Independent Adult Support ( ) Group Work		

Reproduction. Is it just for humans?

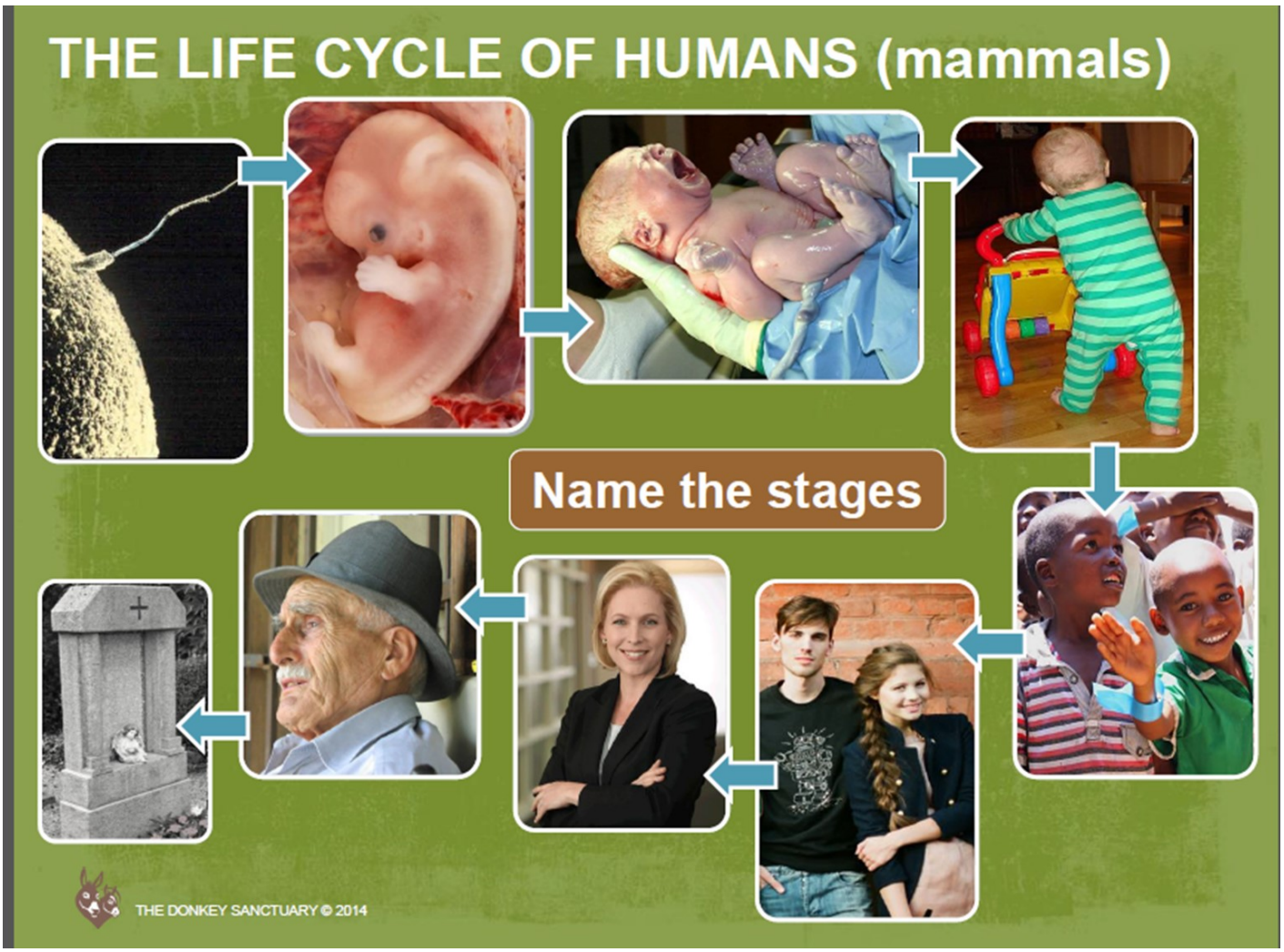
- What does the word reproduction mean?
  - Reproducing the DNA from your body to create offspring.
- So who/what reproduces?
  - Humans
  - Animals
  - Plants

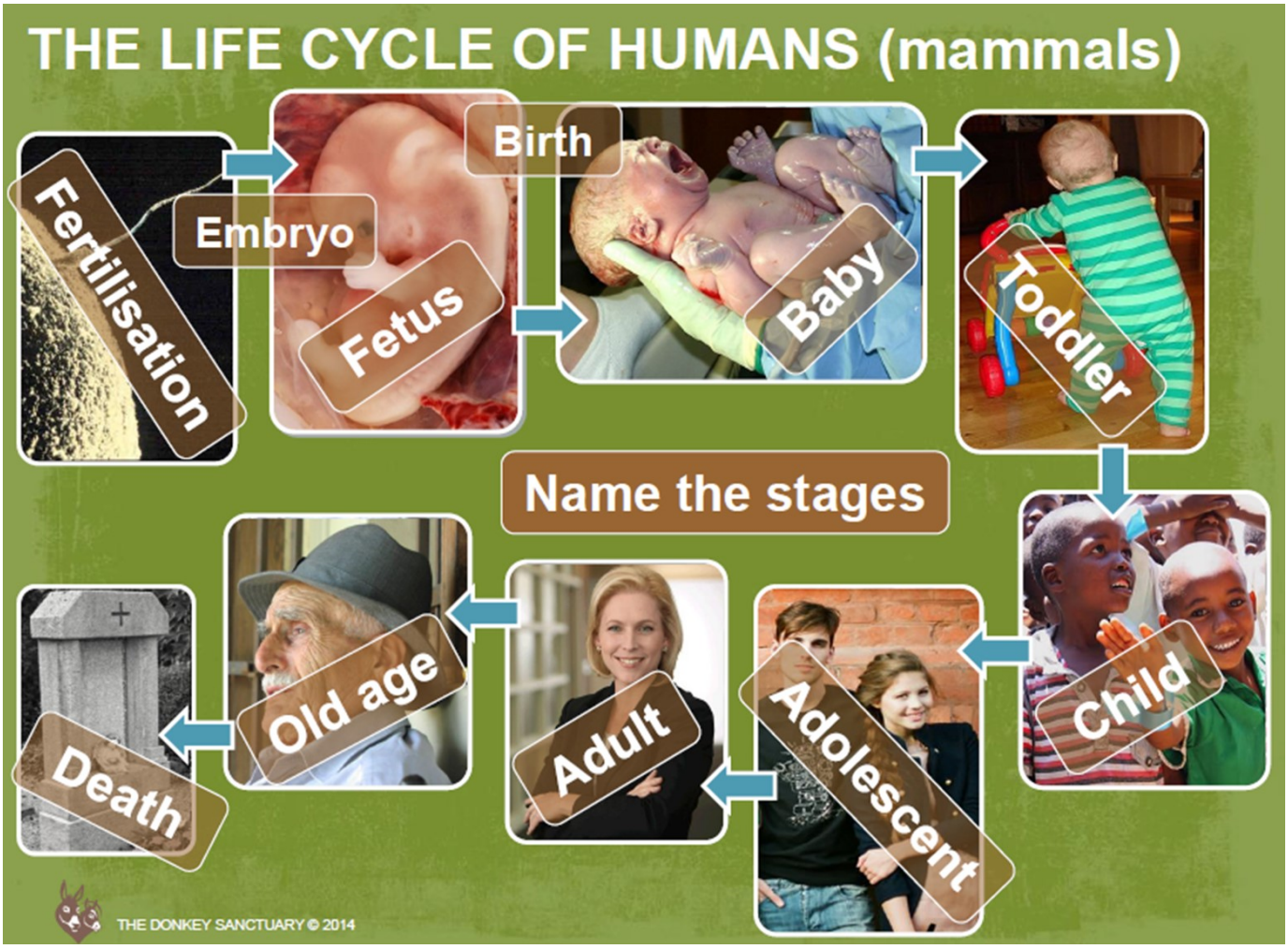
Why do you think animals, plants and humans need to reproduce?

Reproduction in plants

- How do you think/know plants reproduce?
  - When pollen produced by the male parts (stamen) touch the female parts (carpal). Then seeds are produced and then moved from the plant by animals or wind.

What do we already know about reproduction in humans?





Reproduction in animals.

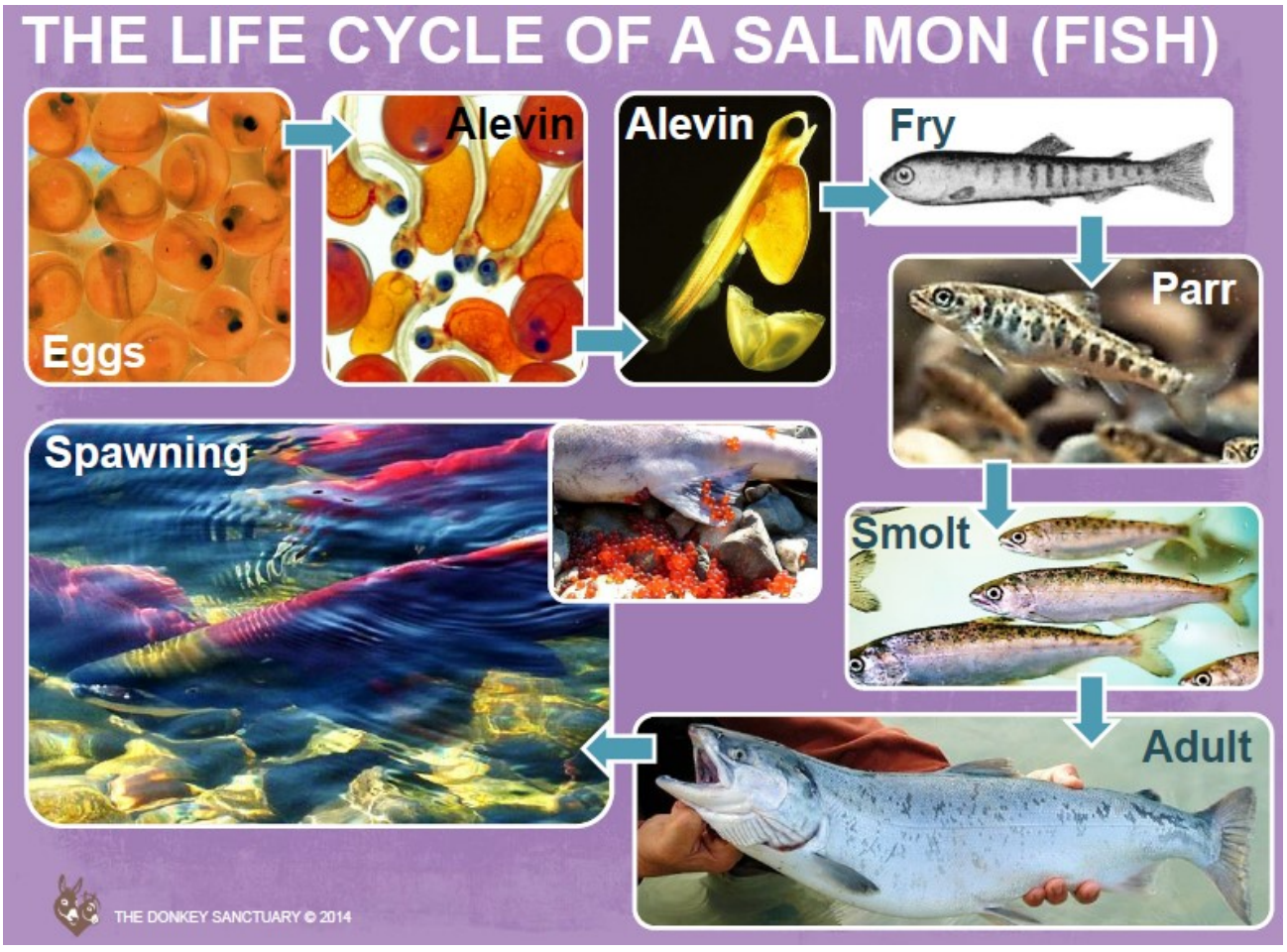
Do you think reproduction happens the same way in animals as it does humans? Talk to your partner.

- In some animals, it's the same as in humans. They must have sexual intercourse to allow the male sperm to fertilise the human egg. They then give birth to their offspring at the end of their gestation period.
- But what about in fish? They lay eggs in the water. So how do they reproduce?
- https://www.youtube.com/watch?v=tFZeyFbBLXE

Task

Use the captions and pictures below to draw and explain how fish reproduce.

The male will then release it's sperm over the eggs almost immediately after.
After 7 – 10 days the egg will hatch into fry.
The embryo begins to develop outside of the body.
The female releases her eggs on the bottom of the water. Usually somewhere safe so other animals don't eat the eggs, like between plants.
Fry is the word used to describe a recently hatched fish.



Date			
Subject/s	Art		
Learning Objective	To draw a self portrait		
		SA	TA
Success Criteria	I can find correct proportions using the step-by-step instructions		
	I can identify facial features		
	I can use different shading techniques to produce darker and lighter pencil tones		
Support	Independent	Adult Support ( )	Group Work

Look closely at the portraits. Pay attention to how the facial features are different in each one. You will notice that some parts of the face are darker and some are lighter, depending where the light hits.

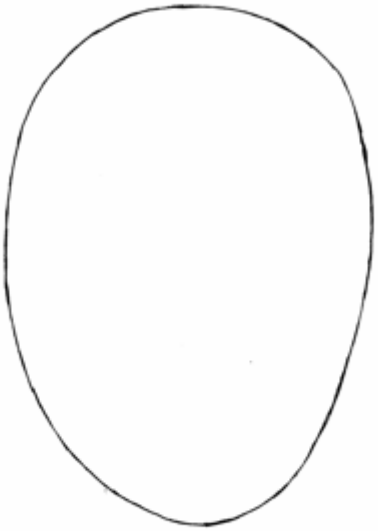
Using the space below, have a go at creating light tones and darker tones with your pencil.

Look at yourself in a mirror or in a photograph. What do you notice about your facial features? What makes your face so unique? Where are your eyes in relation to your ears and nose? How big is your mouth? If you look at yourself straight on, can you see your ears?

Using a photograph of yourself, we are going to learn how to draw a self-portrait.

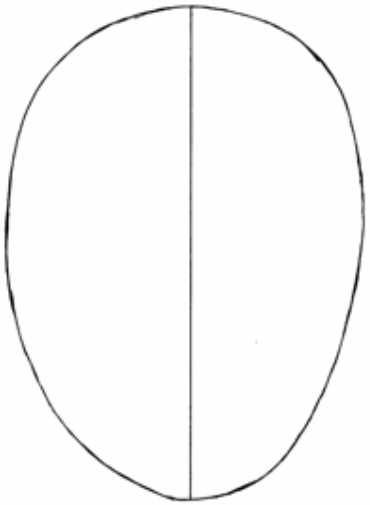
Now follow the step-by-step guide to drawing a portrait.

1. Draw an egg shape (but remember not all faces are egg shaped!)



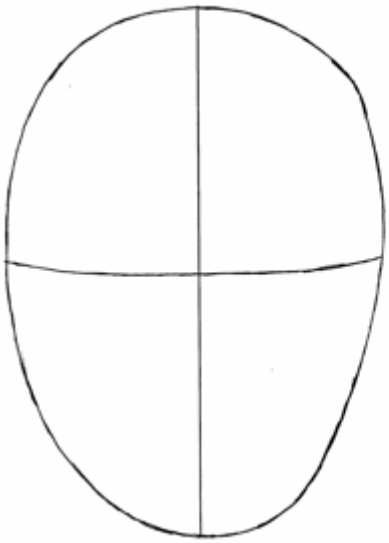
This bit can be difficult so remember to use your pencil **lightly**, just in case you need to rub out mistakes!

2. Draw a centre line vertically right through the centre of the egg



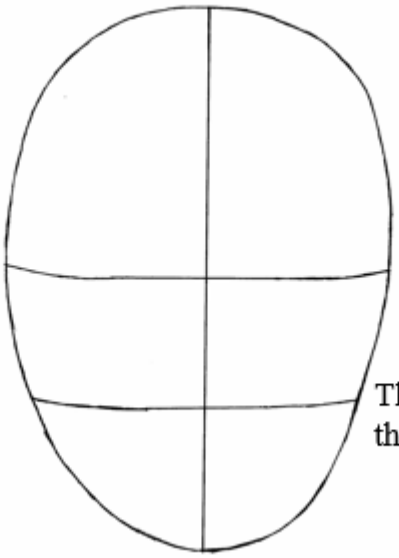
This helps you make sure that you line up the nose, mouth and eyes correctly

3. Draw a horizontal line ½ way down the egg



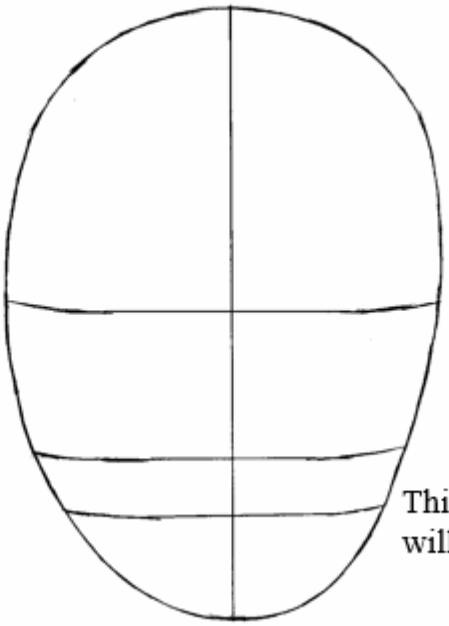
This is where the eyes and top of the ears will go

4. ½ way between the eye line and the chin draw a 2nd horizontal line



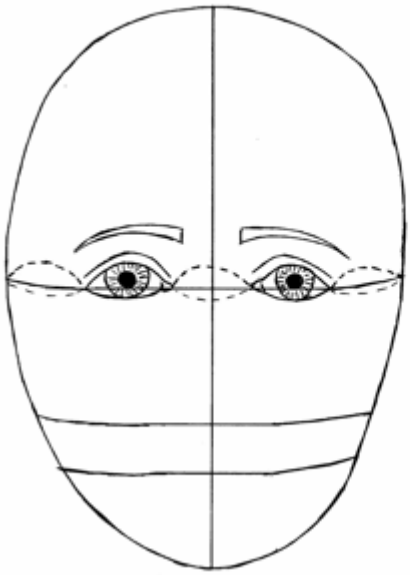
This is where the bottom of the nose and ears will go.

5. 1/3 of the way down from the nose draw a 3rd horizontal line



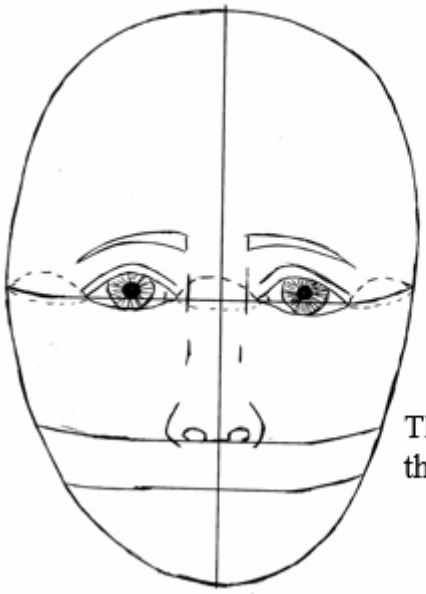
This is where the mouth will go.

6. Draw in the eyes with the corners on the line



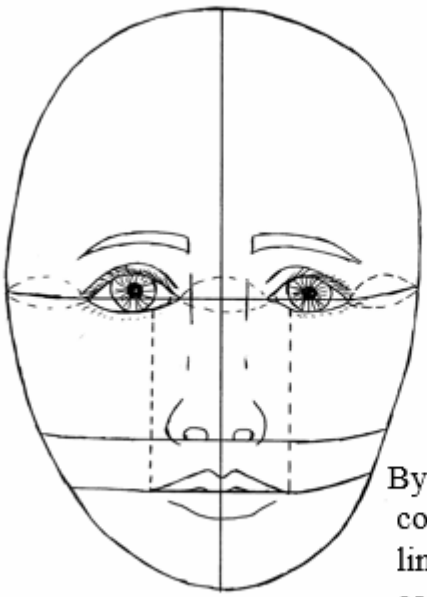
To ensure the eyes are the correct size you should be able to fit 5 equal eye widths across the head.

7. Draw the bottom of the nose



The nostrils should rest on the line.

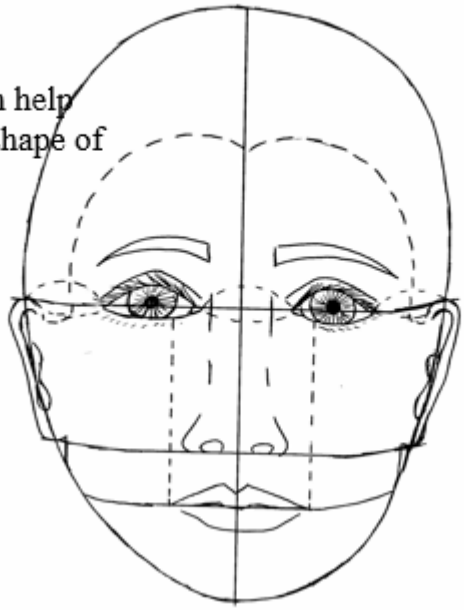
8. Draw in the mouth with the line dividing the 2 lips



By measuring 1/3 in from the corner of the eye and drawing a line vertically on each side, you can achieve an accurate mouth width

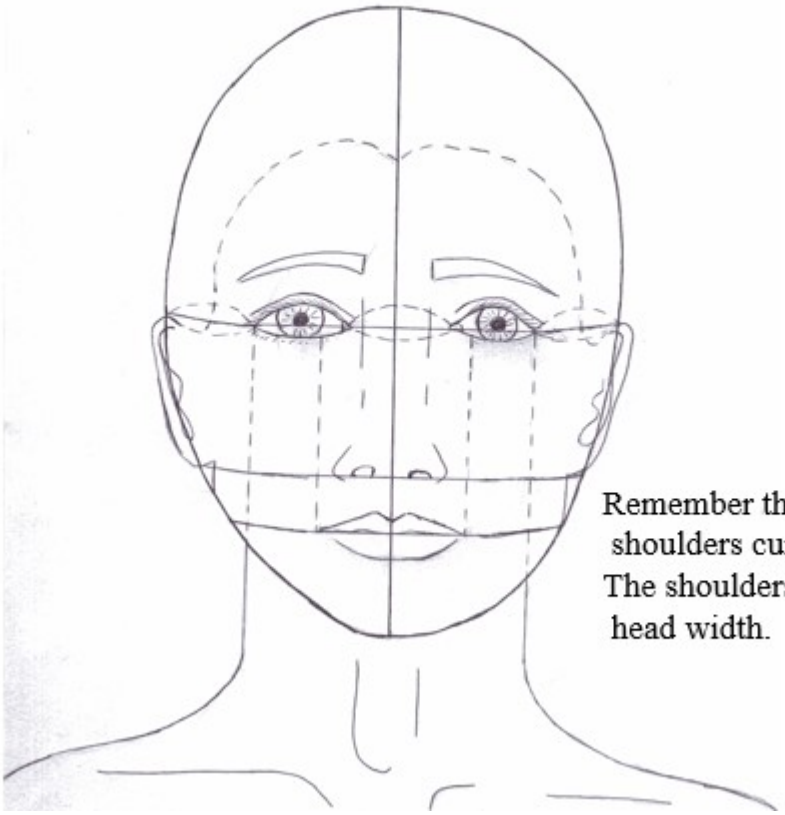
9. Draw in the ears and the hairline

The hairline can help determine the shape of the face



Remember the ears should fit snugly between the eye and nose lines

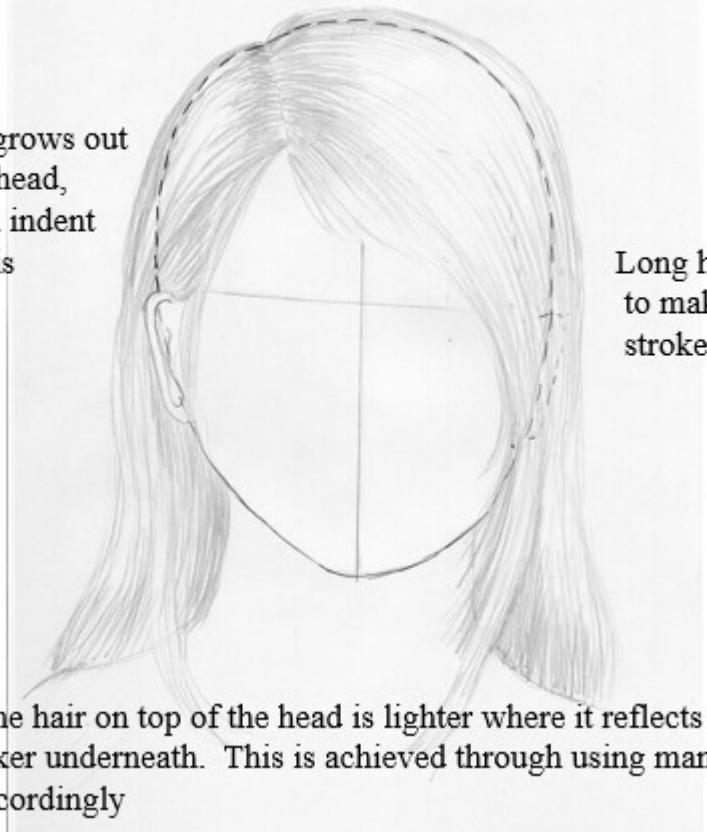
10. Draw the neck by drawing a vertical line from the outer corner of the eye on each side to achieve the correct width



Remember the neck to the shoulders curves gently. The shoulders are 3x the head width.

11. Now add the hairstyle of your choice!

Notice the hair grows out away from the head, appearing as an indent where the hair is parted

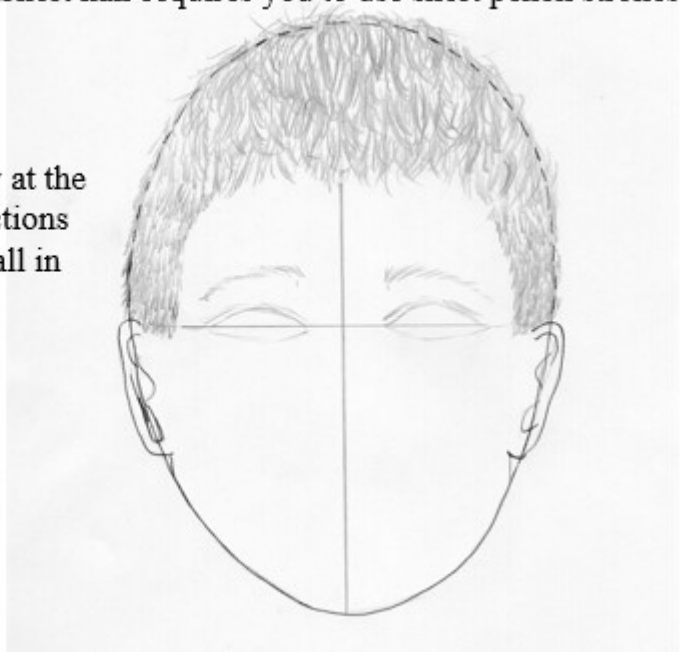


Long hair requires you to make long pencil strokes

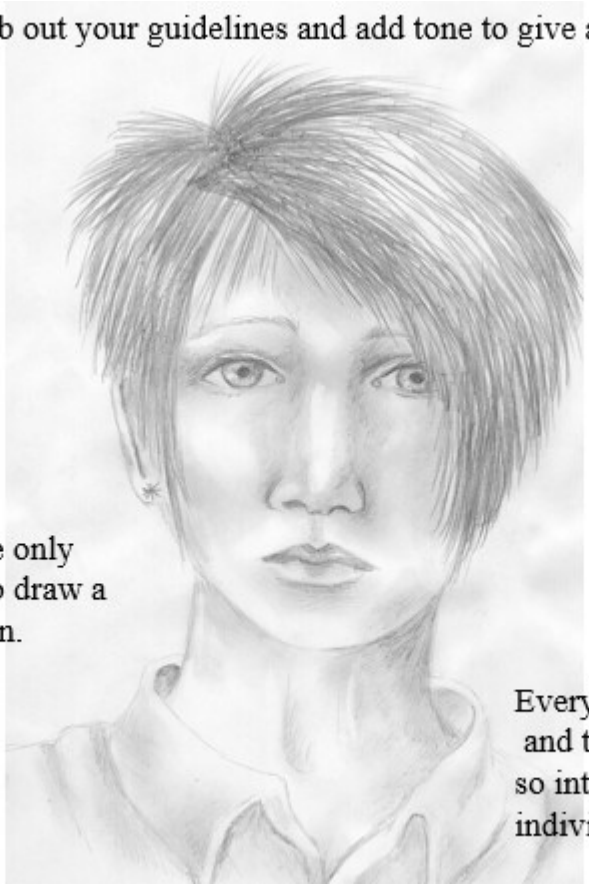
Notice the hair on top of the head is lighter where it reflects the light and darker underneath. This is achieved through using many or few lines accordingly

Short hair requires you to use short pencil strokes

Look carefully at the different directions that the hair fall in

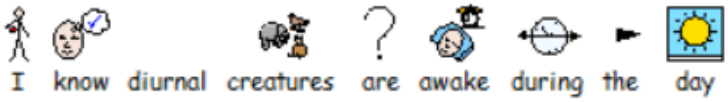
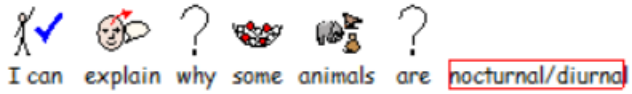


12. You can then rub out your guidelines and add tone to give a more realistic appearance



Remember, these are only guidelines in how to draw a portrait in proportion.

Everybody varies slightly and that is what makes us so interesting, unique and individual!

Date			
Subject/s	Science		
Learning Objective 	I know the difference between diurnal and nocturnal		
		SA 	TA 
Success Criteria 			
			
			
Support	Independent Adult Support ( ) Group Work		

Why is time so important?

So we know when to eat, when to sleep, changing lessons in schools, new day etc.
We rely on clocks to know when to be active and when to rest and when to be active.

If we took all the clocks down around and outside school and didn't have any phones/laptops, how could we tell the time?

Have you ever heard the word nocturnal? What do you think it means?
Answer = active in the night time.

What do you think diurnal means?
Answer = active in the day time.

Animals that are either nocturnal/diurnal rely on other aspects to tell the time such as the sun.
Watch: http://www.bbc.co.uk/education/clips/z9fpyrd

Can you think of any nocturnal and diurnal creatures?

Watch: http://www.bbc.co.uk/education/clips/zw62tfr

Task 1

Sort animals into diurnal and nocturnal creatures.

Diurnal	Nocturnal

Task 2

Write two paragraphs explaining the difference between nocturnal and diurnal. Why are some animals nocturnal and which animals fit into which category?

Challenge: Do you think humans could be nocturnal? Why?