

MOON

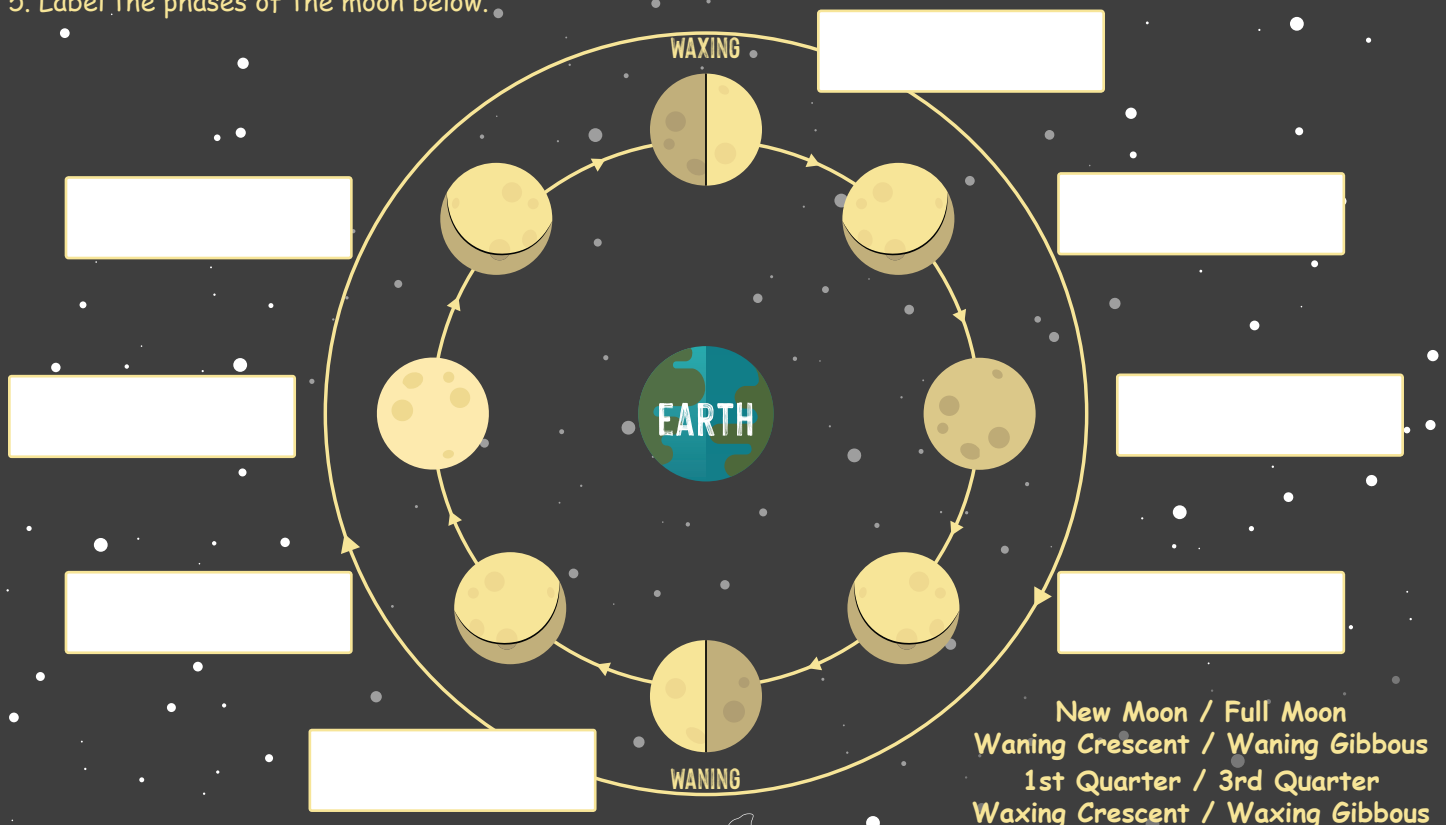
Much closer to Earth than either Mars or Venus is the Moon. The only other place that humans have been other than Earth it is known as a natural satellite because it orbits Earth. The Moon is thought to be 4.51 billion years old. Current theory, in its simplest form, is that a collision between Earth and an asteroid known as Theia caused part of the Earth to break away but the debris remained within our orbit and due to gravity this matter resolidified into our Moon. Collisions between asteroids and planets occurred often in the creation of the universe and can be seen in the craters which cover the moon. Some of these craters are up to 90kms in diameter and because there is no weather on the moon the craters have not eroded as they would have on Earth.

Although the moon looks bright in our night sky it does not actually produce any light. The light from the sun comes from excess energy created when nuclear fusion occurs in the sun's core radiating as light. The Moon on the other hand is a solid mass and merely reflects the sun's light and radiates it back to Earth. As the Moon orbits the Earth we see differing amounts of its sunlit side which makes the moon appear to grow and shrink. These are known as phases of the moon.

See if you can answer the questions about the moon and label its phases.

1. How old is the Moon?
2. In your own words how did the Moon form?
3. Why have the craters on the Moon not eroded?
4. Why does the Moon look like it is shining?

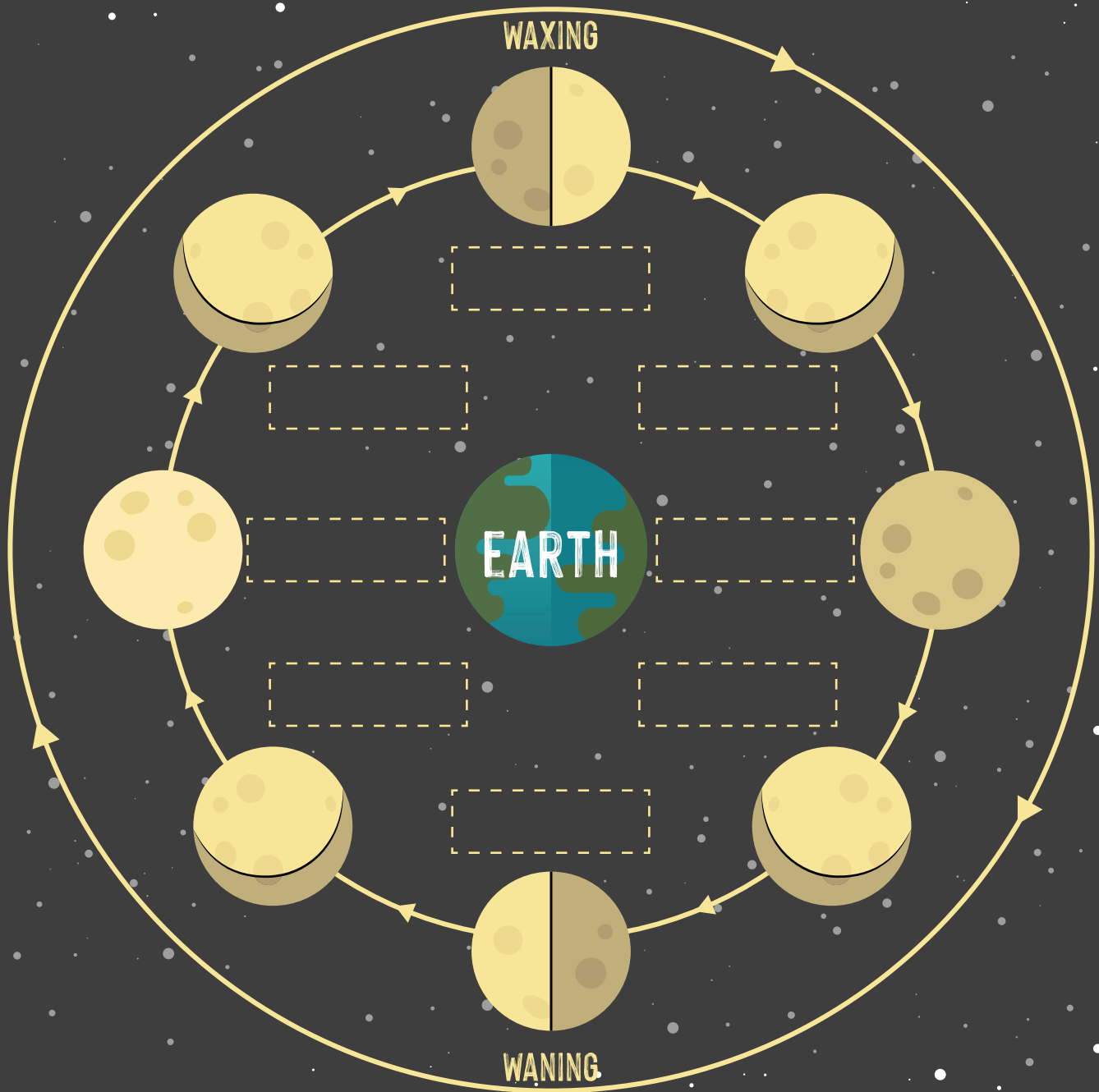
5. Label the phases of the moon below.



MOON

Our Moon is known a natural satellite because it orbits Earth. Thought to be 4.5 billion years old it formed when an asteroid crashed into Earth and caused debris to enter the atmosphere. This dust and dirt eventually reformed as our Moon. Collisions between asteroids and planets occurred often in the creation of the universe and can be seen in the craters which cover the moon. Some of these craters are up to 90kms in diameter and because there is no weather on the moon the craters have not eroded as they would have on Earth.

Although the moon looks bright in our night sky it does not actually produce any light it just reflects the sun's light back to Earth. As the Moon orbits the Earth we see differing amounts of its sunlit side which makes the moon appear to grow and shrink. These are known as phases of the moon. Cut out the phases of the moon and paste them onto the flow chart below.



New Moon

Full Moon

Waxing Crescent

Waxing Gibbous

1st Quarter

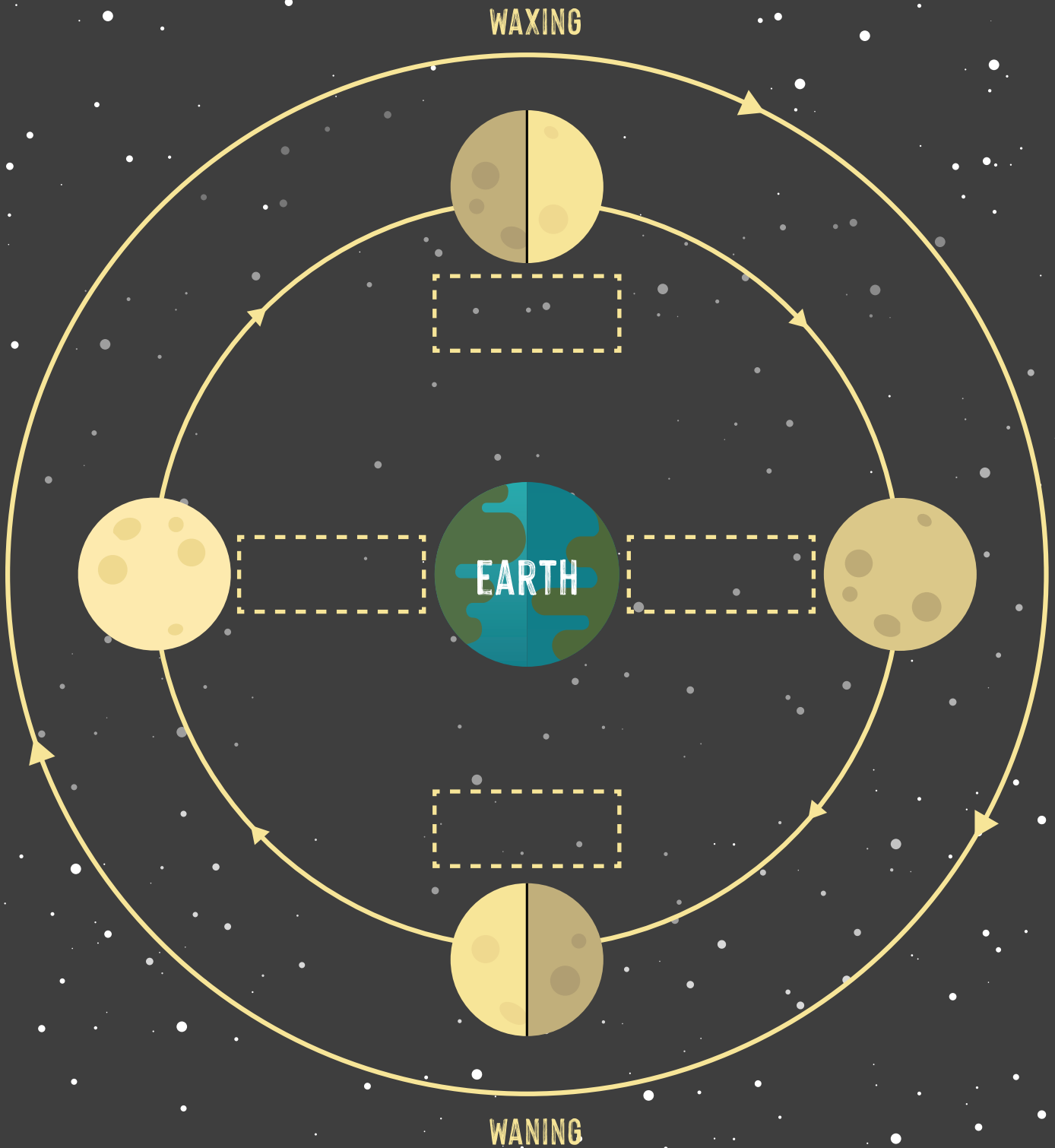
3rd Quarter

Waning Gibbous

Waning Crescent

MOON

Our Moon is the 2nd biggest object in our sky after the Sun. It does not make its own light but reflects the sun's light back to Earth. As the Moon orbits the Earth we see more or less of its sunlit side which makes the moon look like it is growing and shrinking. These are known as phases of the moon. Cut out the phases of the moon and paste them below.



New Moon

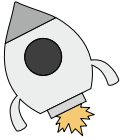
First Quarter

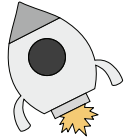
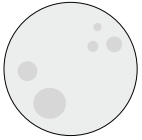
Full Moon

Last Quarter

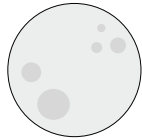
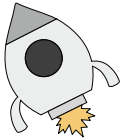
Continue these patterns.



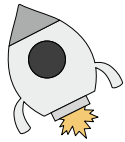
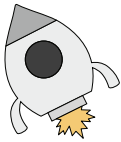


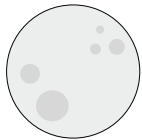
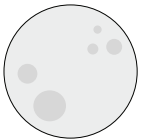




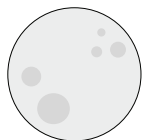
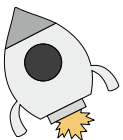












MATHS ACTIVITY

THE MOON

On the Moon there is reduced gravity so the mass of items is $\frac{1}{6}$ what they are on Earth. Complete this table of items on Earth versus the Moon.

Item	Earth	The Moon
Child	30kg	
Car		100kg
Chair	6kg	
Teacher		10kg
Caravan	1200kg	
Mug of milk	600g	
School bag		400g
A packet of crisps	60g	
A school table		1200g
A bag of potatoes		50g

Using this same logic if you could jump $\frac{1}{2}$ metre high you would jump 3 metres high on The Moon. See how far you and 5 other people can jump from a standing start. Now compare this to if they were on the moon.

Person	Earth Length	Moon Length (Earth Length \times 6)

MOON

Make Moon and Star cookies

Ingredients

- 125g softened butter
- $\frac{1}{2}$ cup caster sugar
- $\frac{1}{2}$ teaspoon vanilla extract
- 1 large egg at room temp.
- $\frac{1}{4}$ teaspoon salt
- 1 teaspoon baking powder
- 2-2 $\frac{1}{2}$ cups plain flour



Directions

1. Cream butter and sugar until light and fluffy.
2. Beat in egg and vanilla.
3. Sift in premixed flour, baking powder and salt.
4. Beat slowly into creamed mixture.
5. Place dough in fridge for 30 minutes to firm up and reduce the stickiness. If it is still sticky, roll in additional plain flour.
6. Using a floured rolling pin, roll the dough to approximately 5cm in thickness and allow children to shape into phases of the moon and stars.
7. Place shaped biscuits on a lined tray and bake in pre heated 180° oven for about 15 minutes or until golden.