

Match the following statements:



Click mouse to reveal answer

The Saturn rockets launched the Apollo missions which resulted in the...



The more thrust it requires to escape Earth's gravity.

The European rocket which launches communication satellites is called...



Earth's rotation speed is highest, which helps rockets escape Earth's gravity.

Rockets have a pointed, streamlined nose cone so that they can...



First man on the moon.

The larger a rocket the more fuel it needs because...



Reduce air resistance during flight through Earth's atmosphere.

Rockets are launched close to the equator because...



Ariane.

Rockets use fuels like hydrogen and oxygen because...



They are light and give out lots of forward thrust during take off.

plenary one

Answer:

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9J Gravity and space...Rockets and space exploration

level 5

level 6

level 7

plenary two

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Decide whether the following statements are true or false:



Click mouse to reveal answer

Statements:	True	False
Rockets are made from lightweight materials like aluminium and carbon fibre ?	True	False
A faulty 'O' ring seal allowed fuel to escape and explode killing all space shuttle crew ?	True	False
Rockets use diesel or petrol for their fuel during take off ?	True	False
The Apollo lunar missions were launched into space by Jupiter rockets ?	True	False
The space shuttle launch uses the most energetic manmade chemical reaction ?	True	False
The space shuttle and part of its launch rockets are designed to be reused ?	True	False
The titan rocket is larger than both the ariane or delta rockets ?	True	False
Neil Armstrong, the first man on the moon was launched into space by the space shuttle ?	True	False
Rockets must have a speed of over $40,000\text{kmhr}^{-1}$ in order to escape Earth's gravity ?	True	False
Take off from the moon's requires less engine thrust when compared to take from Earth ?	True	False

plenary two

Answer:

Statements:	True	False
Rockets are made from lightweight materials like aluminium and carbon fibre ?	True	
A faulty 'O' ring seal allowed fuel to escape and explode killing all space shuttle crew ?	True	
Rockets use diesel or petrol for their fuel during take off ?		False
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The space shuttle and part of its launch rockets are designed to be reused ?	True	
The titan rocket is larger than both the ariane or delta rockets ?	True	
Neil Armstrong, the first man on the moon was launched into space by the space shuttle ?		False
Rockets must have a speed of over 40,000kmhr ⁻¹ in order to escape Earth's gravity ?	True	
Take off from the moon's requires less engine thrust when compared to take from Earth ?	True	

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plenary three

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These statements describes a sequence of events that occur prior to launch to 'take off' of the space shuttle. Place them in their correct order:



Click mouse to reveal answer

The flight deck of the shuttle is checked to ensure all switches are in the right position and the explosive bolts which hold and then release the shuttle during launch are working.

At 48 hours before launch, the final countdown begins and follows three volumes of instructions. If a problem arises, then the shuttle launch is postponed to a later date or cancelled altogether.

The launch crew, who have finished all the pre-flight checks, now leave the launch area and allow the 'close out' team to help each member of the flight crew onto the shuttle. The door is then shut and the cabin is pressurised.

At about two minutes prior to lift off the large support arm is removed. At about 30 seconds before lift off, the shuttle's computer takes over the final steps of the launch. At 6.6 seconds before lift off, the shuttles main engines fire one after the other. If the engines reach 90% of their thrust power by 0 seconds, the explosive bolts fire releasing the shuttle, its crew and payload towards space.

The space shuttle is now fuelled with super cooled liquid oxygen and hydrogen. In all, some two million litres of fuel is pumped into the shuttles external fuel tanks.

The space shuttle is rolled out to the launch pad from the Kennedy Space Centre. Its external fuel tanks are empty, the cargo bay is waiting for its payload and electricity and onboard computers are not connected.

plenary three

Answer:

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