**SPACE AND THE COLD WAR**

**Read the following development of the Cold War carefully and answer the questions that follow.**

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| **DEVELOPMENT OF THE COLD WAR** |  |
| 1939-45: The SecondWorld War. America andthe Soviet Union are alliesin the fight againstGermany. The ‘commoncause’ disguises theirIdeological differences. | Rocket design, vital to any subsequent venture intospace, is pioneered under the supervision of the GermanArmy at Peenemunde on the Baltic coast. The project’s technical director is Werber von Braun. By the end of1943, his full scale ballistic missiles enter mass production as the V2, Hitler’s revenge weapon. Armedwith one-ton warheads, 1200 of them are fired atLondon, killing more than 2500 people. Had these weapons been available sooner, they would most probably have won Germany the war. |
|  | **AMERICAN SPACE****PROGRAMME****SOVIET SPACE****PROGRAMME** | **SOVIET SPACE PROGRAMME**  |
| 1945: The War ends.Nazi-occupied Europe isliberated. The alliedpowers – America, theSoviet Union, France andBritain – preside over theruins. In Eastern Europethe Soviets create puppetstates closely monitored byMoscow. Americaexplodes atomic bombs atHiroshima and Nagasaki,to end the war with Japanbut also to impress theSoviets. | Werner Von Braun and120 of the best Germanrocket scientists surrenderto the Americans. UnderOperation ‘Paperclip’, theNazi party affiliation andSS membership of many ofthese scientists wereerased from theirbiographies to avoid futurePR problems. | The Soviets capture V2missiles, equipment and6000 German scientistsand rocket engineers.They set to workimmediately launchingcaptured V2 rockets andrefining robot technology. |
| 1946: Winston Churchillwarns that an ‘iron curtain’has divided Europebetween the Soviet andAmerican spheres ofinfluence. | The Americans develop atesting ground at WhiteSands in New Mexico, tobuild missiles for the USArmy. |  |
| 1948: barbed wireseparates the two halvesof Europe. In the West,America helpsreconstruction with aninjection of cash – theMarshall Plan. In the East,the Communist dominatedzone, American aid isrejected. The Sovietsblockade Berlin. |  |  |
| 1949: The Soviets explodetheir first atomic bomb. InAmerica, Senator JoeMcCarthy starts hiscampaign to root outanything ‘un-American’;anti-Communist witchhuntssweep the country. |  | Stalin, the Soviet leader,calls for the developmentof a rocket large enough toattack America armed witha nuclear warhead. SergeiKorolyev and his team ofrocket scientists set towork. |
| The 1950s. The arms raceintensifies. The Americansdetonate the first H-bombin 1952. The Soviets follow suit in 1953. | Werner Von Braun testssecond generation V2rockets at Cape Canaveralin Florida, believing thatthese ‘Redstone’ rocketswill eventually be capableof launching a satellite intoorbit. |  |
| 1955: The creation of theWarsaw Pact, the militaryalliance of East Europeannations under Sovietguidance. | American PresidentEisenhower calls for a USsatellite to be launchedwithin two years. | The Soviets announceplans for the launch of asatellite. |
| 1956: The people ofCommunist-controlledHungary rise up againstthe Soviets, and call forAmerican help. Help neverarrives, because theAmericans have realizedthat the cost of conflict inthe nuclear age would betoo great to contemplate.Soviet tanks roll intoHungary and crush theuprising. |  |  |
| 1957: The launch ofSputnik 1 proves toAmerica the superiority ofSoviet scientists. And theimplications of Inter-Continental BallisticMissiles are worryinglyclear: from now on, nucleardevastation can belaunched from greatdistances – bombs nolonger need to be droppedfrom a plane, as happenedat Hiroshima. | America fails in attempts tofire Inter-ContinentalBallistic Missiles, and tolaunch satellites. AnAmerican general glumlyconcludes: “we got thewrong Germans…” | The Soviets amaze theworld. On the 21st ofAugust, they launch theworld’s first Inter-Continental BallisticMissile, the SS6. Then, onOctober 4th, they launchSputnik 1, the world’s firstartificial satellite. Onemonth later, Sputnik 2 islaunched carrying a dog,Laika. Laika survives 10days in orbit before dyingof a lack of oxygen. |
| 1958/8: The Cold Warthaws slightly. USPresident Eisenhowerwelcomes Soviet PremierNikita Khrushchev on atour of America. But thetruce does not last long | Werner Von Braunsuccessfully launchesExplorer 1, the firstAmerican satellite. In June1958, NASA (the NationalAeronautics and SpaceAdministration) announcesProject Mercury, theprogramme for a mannedflight into space. | ‘Luna 2’, a Sovietunmanned spaceprobe,becomes the first manmadeobject to hit themoon. ‘Luna 3’ takes thefirst photographs of theMoon’s ‘dark side’. |
| May 1960: A Soviet missileshoots down an Americanspy plane in Sovietairspace. |  |  |
| 1961: Kennedy takes officedetermined to toughen uppolicy against the Soviets.The stand-off in Berlinreaches a head with thebuilding of the Berlin Wall. | Soviet success in spaceleads Werner Von Braun toremark that if theAmericans ever get to themoon, they’ll have to checkin through Soviet customsfirst. Yet just six weekslater Kennedy makes hishistoric speech promising areturn trip to the moon‘before the decade is out.’ | Cosmonaut Yuri Gagarinbecomes the first man inspace, completing a fullorbit of the Earth on 12thApril 1961. Sovietsuperiority in space seemsunbeatable, and Sovietscientists are scornful ofKennedy’s ambitions. |
| 1962: The Cuban MissileCrisis; the Cold War’sclimax. A US spy planespots Soviet ships movingmissiles to CommunistCuba, just 100 miles off theUS coast. Kennedy blockades Cuba. Nuclearwar seems imminent. TheSoviets back off. | John Glenn becomes thefirst American to orbit theEarth. | In Vostok 6, ValentinaTereshkova becomes thefirst woman in space (June1963). |
| 1965: Kennedy’ssuccessor, Lyndon B.Johnson, sends Americantroops to fight theCommunist forces of NorthVietnam. The war endswith a Communist victoryeight years later. | From 1965 to 1968 NASAslowly overtakes theSoviets in the race for theMoon. Project Mercury isfollowed by Project Gemini,which develops spacecraftlarge enough for two orthree astronauts, andpractices docking procedures. By 1966 thegigantic Saturn V rocketsused in the Apollolaunches are ready fortests. | The Soviets meanwhiledevelop the VoskhodProgramme – its aim moreambitious than simply aflight to the moon. Theywere investigating thepossibility of mannedspace stations orbiting theearth, from which Moontrips could be made on afrequent basis. FromVoshod 2, CosmanautAlexei Leonov performsthe first space walk. |
| 1968: Students protestagainst the war in Vietnam.America is clearly nolonger a nation unitedagainst the ‘Communistthreat.’ | The three Americanastronauts of Apollo 8 pilota spacecraft into orbit around the Moon and return to Earth. ProjectApollo celebrates its first outstanding success. |  |
| 1969: The first StrategicArms Limitation talks areheld between Moscow andWashington, to limit thecolossal spending bothAmericans and Sovietshad been pushing intodefence. Although theCold War would continueuntil the fall of the BerlinWall in 1989, thesuperpowers were at lastfinding ways to preserve the fragile peace. | 21st July 1969: Apollo 11.Neil Armstrong and “Buzz”Aldrin walk on the Moon |  |

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**Questions**

1. To what extent did Project Apollo - the American Moon landing programme - depend on the Cold War? Why?
2. Do you suppose Project Apollo would ever have left the ground had the Cold War never taken place?
3. From the information given in the table, at what points between /945 and /969 was the Cold War at its most intense? And at what points did tensions seem to relax?
4. Do these fluctuations seem to affect either space programme in any way?
5. Does it surprise you that the Apollo missions, founded at a time of such hostility between America and the Soviet Union, reached their peak at a time of détente?
6. Think about relations between the super-powers today Do you think we are likely to see many developments in space technology in the near future? Why?