**Thesis**: In 2065, major space exploration will likely be headed by countries in Asia, such as Japan and China, because of their competitive drive and new and upcoming technological advances. Although the U.S. has been a major driving force in space exploration, countries in the East are coming up with more innovative plans to lead space exploration in the coming decades.

**Introduction: (Griffin)**

I.  Attention getter - Introducing our team of presenters as well as introducing the topic that we will be going over in our presentation

II. Transition to the topic and explain relevance - I will go on to explain how this presentation relates to our UF100 class and how it relates to “Competition”.

III. State thesis and preview main points - I will briefly go over the topics that will be presented within our project. I will touch on who did which topic as well as what each topic consists of.

(Transition: Don’t jump to the first point, flow to it.)

**BODY:**

1. **(Angela)** Reasons why U.S. will no longer be leaders: budget cuts, education, no consensus/ national vision of space exploration

A. Funding NASA is expensive/not large enough fund to follow through with plans

1. Most of funding goes to national defense (20% of the budget; space exploration .5%)
2. Shuttle retirement in 2011 - no means to send astronauts to space until at least 2021
3. Russia’s capsule = $70 mil per seat

B. Bachelor degrees in engineering decreasing steadily in U.S.

1. Engineer graduates peaked in the 1960’s around lunar space landing
   1. Countries in the East have increased rates of science, tech, engineering and math grads
2. Need to inspire next generation of STEM students who hold the future of exploration

C. Can’t reach a national consensus future exploration

1. Asteroid mission (Obama) vs Mars mission (Bush)
   1. No comprehensive plan or direction of what asteroid first mission should be/plans for Mars exploration by 2030

Transition: U.S. needs to be more proactive with plans/better designate funding. Possibly collaborate with other countries in the East (China & Japan) in exploration

**II.**     **(Clay)** China is a likely candidate for a leading power in space exploration.

A. Stable and increasing economic stance, “The Sleeping Dragon Wakes Up”.

1. Highest potential growth in government budget
2. Space exploration is high on the political agenda
3. Low national debt
4. Gaining momentum in space budget growth
5. May be Chinese astronauts on the moon by 2025-2030

B. Competition.

1. Competing for leadership and “soft power” against Japan.
2. Acts as a leader towards underdeveloped countries
3. Becoming more self-sufficient, establishing own GPS system, training their own astronauts, APSCO.
4. Now matches US in number of launches per year. Launched a test module for 2020 satellite.

C. Some issues with China/Asia as superpower.

1. Don’t want to be seen as “falling behind”, start rivaling one another.
2. Start hiding information from others (“Going at it alone”), scientific duplication, arms race.
3. Specific lunar-mapping that is nearly identical to others programs, but won’t combine knowledge.
4. Can be seen as a leader for developing countries, but fails to cooperate with the rest of the modern world.

    D. Good aspects of China as a space leader

1. Don’t want to “weaponize” space.
2. More geared towards helping civilians with common day tasks.
3. Build on national space security, but in a non-militarized/competitional way

Transition: China is in a great economic stance to become the next space superpower, but needs to understand key collaborating concepts in order to succeed.

**III. (Abbey)** Japan, though hesitant to focus any of its assets in space, is slowly but surely becoming a force to be reckoned with.

A. Over the last few decades, Japan’s view of space has changed and caused a change in policy.

1. Original “Space Development for Exclusively Peaceful Purposes” protoco
   1. “Non-military” and “Non-aggressive”
2. Information Gathering Satellite
   1. This program was started because of North Korea’s Taepodong satellite launcher/ballistic missile that flew over Japan
3. Basic Space Law
   1. Changed part of the original space protocol that was “non-military” and made it so the Japanese military could be ever so slightly more involved in the space programs

B. “Space Diplomacy”- Using Japanese space capability to support Japanese diplomatic activities.

1. Sentinel-Asia Program
   1. Provides regional imagery data (received from Japanese satellites) for environment and disaster management.
2. Space Application for Environment (SAFE) Program
   1. Analyzes climate change going on in the region by monitoring the water resources, sea levels, forest degradation, and agricultural data.
3. Space Diplomacy in the Basic Space Law
   1. In Article 6 of the Law it says, “Space development and utilization shall contribute to improve our role in the international society and to increase our national interest by promoting international cooperation and diplomacy on space development and utilization.”

C. Japan’s budget for space

1. One of the highest space budgets in Asia
   1. As of 2011 they had $3.8 billion per year, and it's only grown since then. For all the different programs they have they have the cash to fund them.
2. Providing ODA money to Vietnam
   1. Japan is hoping to penetrate the Asian space market, so they’re providing money to other countries in hopes of ensuring the setup of some of their own satellites.

Transition into conclusion: While there is a “space race” going on in Asia, what Asian countries don’t realize is that they all want the same things. Neither China nor Japan want to militarize space, so they need to work together to keep that from happening. A relationship like the one between the US and Russia is needed between the two to help relieve tensions. Because if they get any higher, it could be disastrous.

**Conclusion: (Hubble)**

I. Signal you are drawing the presentation to a conclusion. - It is probably a bit frightening to hear these facts. Well I am sorry we had to bring this point across. We all see the US of A as this global super power that leads in every subject or race but when in reality we are really falling behind. The country that once created electricity, the telephone and even the light bulb is now weining.

II. Restate central idea and summarize main points. - The US does not have the man-power nor do we have the needed funds. China is creating engineers by the truck load and the chinese economy has double every 8 years since “The Great Depression” and our economy has only double once. Sad to see that even Japan is now starting to catch up to us. We nearly blew their country away. They have gone through even more troubling times than us; although forced upon our hand, the Japanese have done a great job of rebuilding their country ever since August 6, 1945. All we care about now is who has the biggest gun, we give one fortieth of our budget to space exploration. I mean we all need to wake up, The United States of America used to be this beacon of hope, or light if you will. We were created by these courageous but insanely intelligent people. Our country was built on the principles of our founding fathers. The US would draw people from all over the world because of our great opportunities. Intellectuals would immigrate to our country and that is what made it so great. We had this sense of pride back then, but not now. We are first to just flip ya the bird and try to fight you.

III. End on a strong point related to the general argument of the presentation, something memorable. -IF we continue on this constant lack of motivation path with other countries then when push comes to shove, the United States of America will fall as the leader in space exploration.

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