WATCH:
Go to http://www.engineeringchallenges.org/cms/challenges.aspx and watch the 6 minute video on NAE’s Grand Challenges.

RESEARCH with your project team:
Look at the list of challenges and pick two that most intrigue you. Follow the links and read the supporting information.

WRITE short answers on this page – each team member with name:

Which challenges did you pick and why do these challenges interest you?

Philip Mancuso-
Advanced Personal learning- as an auditory learner myself, I’m interested in how schools could change learning styles to suit me. Engineers are working on experimental tests to determine what type of learning works best for every individual. In the future, students could be broken up into groups based on learning style and taught differently.
Making Solar Energy Economical- Solar energy is a growing type of alternative energy in the United States and other developed countries, but the cost of making the cells is huge, and the cells aren’t very efficient. Technology will come to make it more efficient as cell research continues.

Xue Xiao-
Provide access to clean water- Because this challenge is related to chemical engineering and because the lack of clean water is responsible for more deaths in the world than war.
Manage the Nitrogen Cycle- Nitrogen is one of the most essential elements in the world, Nitrogen is a component of living things and reflects the intimate side of energy needs to manage the natural nitrogen cycle because human production of nitrogen is important.

Al Venus-
Enhance Virtual Reality- Virtual Reality has always been something that fascinated me in video games, movies and books.
Reverse Engineering of the Brain- This technology should be used to create a moralistic Alternate Intelligence, and is in my opinion, the best Grand Challenge for the future of technology.

Abdulla Alshehhi-
Provide Access to Clean Water- Because 1 in 6 people in the world to not have access to clean water. This does not mean the world is lacking water, but the places of where the water are found are not where the water is needed.
Prevent Nuclear Terror- The meaning of nuclear explosions is that many lives will be taken and many lands will be not good to live in. Terrorists are capable to build a bomb if they have the materials,

Do you think the challenges determined by the NAE qualify as “Grand” Challenges? Why or Why not?

Philip Mancuso-
Yes, both deal with major problems in the world today. Solar energy is crucial for making a greener planet and reducing our total carbon footprint. Personalized learning is something that is important for future education.

Xue Xiao- Yes the challenges determined by the NAE definitely are important “Grand” Challenges because each challenge can influence the world a lot and makes the world better.

Al Venus-
Yes, I believe that both are grand challenges due to their applications, but also the difficulty of achieving success with both. For the virtual reality, it could serve as a great tool and rehabilitate, but will take greater tech to give it a more realistic feel. The idea of creating AI from reverse engineering our brain means we can create intelligent machines that can perform skills we might not be able to.

Abdulla Alshehhi- Yes, I think they’ve chosen them as grand challenges because it would put many lives in danger. For example, the ability to access clean water would save the lives of millions of human lives.

If you were going to nominate a 15th “Grand Challenge” to this list, what would it be? Explain your reasoning.

Philip Mancuso- Creating superconducting metals that could function under normal daily temperatures of the world would drastically reduce the cost of electricity. As of now the science can’t create such metals with these capabilities.

Global Warming-
Because global warming causes a lot of serious problems such as a sea level rise, then the land may be immersed by the sea water or acidic rain.

Al Venus- It would be creating a more effective waste disposal method to both take care of radioactive waste safer and normal waste in a more effective and destructive way. This would make the earth cleaner and world would avoid using dangerous sites.

Abdulla Alshehhi- Provide Food, and crops to everyone. Food is the basic need of every human. Around the world there are millions who are starving which means there lives are in danger.