**Group 1**

**The ecosystem of North and South America is imperiled with a deadly virus. Scientists believe conditions on Ceres would best facilitate  experiments for a cure. These experiments are risky and might cause great harm to a team of twelve members that will seek a cure. The vaccine they develop might cause even greater harm if used on earth. Would you be willing to live on Ceres for six months to work on a cure?**

1. **Where and what is Ceres?**
2. **How long will it take to arrive at Ceres?**
3. **Who discovered Ceres?**
4. **Why do you think this person was motivated to discover Ceres?**
5. **Do you think this discoverer ever envisioned the possibility that Ceres could be helpful to mankind? Why**
6. **Would you include a combination of scientists and theologians on this team?**
7. **What criteria would you establish for the members of this team?**

**Group 2**

**Two students walk out of Cardinal Hayes ( local school name )after a rain shower and see a bright rainbow over the Grand Concourse (change to local street). One student from Mrs. Obensco's Theology class says the rainbow is most significant because it is a symbol of the covenant God made with humankind.  He cites Genesis 9:13 and Sirach 43:12 to defend her position. Another student from Father Chuilog's Astronomy class says rainbows have nothing to do with God and cites some paragraphs from a principle that dates back to the early 1600s.  As they argue a third student offers some more questions to consider.**

1. **What process causes the rainbow to occur?**
2. **How does this process occur?**
3. **Who was the first person to describe this process?**
4. **What do we mean by literal and spiritual interpretations of the Bible?**
5. **How did ancient pagans understand rainbows?**
6. **What do we mean when we speak of primary and secondary causality?**
7. **Can the answers to questions 2, 4 and 6 allow the theology student and the astronomy student to find common ground?**

**Group 3:**

**A mission to end starvation in Domerland is threatened by sunspots and solar storms. These storms are interfering with the GPS needed to guide the ships with food, water and medicine to this remote harbor in the Arctic Circle. Without proper guidance, the ships may crash, and lives may be lost. The chances of rescuing Domerland are very slim, yet there is one Christian organization willing to risk all to save lives. The only group of scientists who can lend immediate technical assistance believe the rescue mission is impossible. As professed social Darwinists they initially refuse to help, but when promised grant money for their other research projects they agree to collaborate.**

1. **What are sunspots ?**
2. **How do sunspots and solar storms disrupt cell phone and GPS use?**
3. **Who was the first person to discover sunspots?**
4. **Why would someone study the sun and its surface?**
5. **Do you think this discoverer ever imagined his research might be used to save lives? Why?**
6. **What dilemmas do scientists face when they prioritize their research projects?**

**Group 4:**

**Matt is passionate about basketball, and wants to have a son who is very tall.  He thinks that if he marries a tall woman, his son will certainly be tall also. What might you tell Matt about genetics and the inheritance of physical traits ?**

1. **What are “genes”?**
2. **Who is considered the father of genetics ?**
3. **What motivated this person to study how different traits are inherited from one generation to another?**
4. **Is Matt using “genetic engineering”?**

**Group 5:**

**In 1925, Clarence Darrow defended a high school biology teacher in Tennessee for teaching something that was considered controversial.  The teacher was eventually found guilty, and for his penalty he had to pay a one dollar fine. About 300 years earlier, an Italian scientist defended himself for something he was teaching. However the Church found him guilty of “vehement suspicion of heresy”.   His penalty was that he was no longer to teach on this subject, and was placed under house arrest.**

1. **Name the biology teacher from Tennessee, and identify the topic that caused the controversy.**
2. **Name the Italian scientist, and identify the topic that caused the controversy.**
3. **Define what heresy is.**
4. **In what ways are these two incidents similar ?**

**Group 6:**

**The day after an exam students are discussing the question that appears below. Some feel the question shows a bias toward atheism or agnosticism. Other students do not feel the same way. How could a dialogue between these two sides bring more clarity?**

**The August 14, 2014 Earth Science New York State Regents Exam begins with the question**

**Which evidence best supports the theory that the universe was created by an explosion called the Big Bang?**

1. **Impact craters found on earth**
2. **Cosmic background radiation**
3. **The different compositions of terrestrial  and Jovian planets**
4. **The blue shift of light from distant galaxies**

**Use the following questions to consider all the implications of the exam question:**

1. **What does the Big Bang theory say about the universe?**
2. **When did the Big Bang occur?**
3. **Who created the Big Bang Theory?**
4. **Why was the theory created?**
5. **What is another theory of how the universe was created?**
6. **Does one of these theories deny the truth of the other? Explain.**

**Group 7**

**Jackson is very interested in computer science, and wants to learn how to code.  He finds a group of students who are also interested in coding, and they are planning to ask the principal to start a club after school where students can learn to code.  They are even thinking of asking girls from local Catholic high schools to join the club. Since there is already a Robotics Club in the school, Mr. Kitson, the principal, does not wish to give permission for a coding class and asks Jackson to lead a Christian service club to assist struggling students at the local daycare center.   After a week passes Jackson requests to meet with Principal Kitson to further discuss his proposal.**

1. **What is “coding” and why is important for computers?**
2. **What are the ways "coding" improves the quality of daily life?**
3. **What are two coding languages used today?**
4. **One of the earliest computer languages was BASIC. What woman, the first to earn a Ph.D. in computer science, helped develop this language?**
5. **How did this woman's project fit into the overall goal of the organization to which she belonged?**
6. **To what extent does Principal Kitson's suggestion for a Christian service club have merit? Are there any shortcomings to Principal Kitson's suggestion**

**The students should identify the following persons:**

1. **Fr. Giuseppe Piazzi, C.R.**
2. **Fr. Francesco Maria Grimaldi, S.J.**
3. **Fr. Christopher Scheiner, S.J.**
4. **Fr. Gregor Mendel. O.S.A**
5. **John Thomas Scopes, Galileo Galilei**
6. **Fr. Georges LeMaitre, S.J.**
7. **Sr. Mary Keller, B.V.M.**