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Overview. When NASA invited Ray Bradbury, *The Martian Chronicles* (1985) author, to the Jet Propulsion Laboratory to view photos from the first landing on Mars as they first arrived, the famed writer said his own excitement about space and the inspiration of many scientists had been the fantastic technology envisioned in pre-Space Age science fiction. NASA and the NASA-sponsored Classroom of the Future seek to inspire tomorrow's scientists in a similar way, but this time not with the written word, but through a medium today's kids relate to—an online game, albeit an educational one. The concept is simple—kids play the game, then go look up at the moon. Selene (the Greek lunar goddess) is a multilevel, single-player lunar game. Selene will study how concrete, game-based experiences can prepare learners to learn.

Purpose of the research study. NASA believes games can prepare people with just the right knowledge to be successful at learning. The Selene game introduces players ages 13-18 to concepts about the moon's geology. Classroom of the Future™ researchers will track players' gameplay to study how the Selene environment helps them to learn about the moon's geology.

Expected duration. The entire game session of video and gameplay should take each player about one hour. However, the length of time a learner spends on the study session depends on how long the learner plays the game. After completing the study, players can choose to return to the Selene play web site (http://selene.cet.edu) to play the game as often as they wish.

Procedures to be followed.
- All players must be sponsored by a Selene project recruiter.
- Recruiters will distribute this informed consent form to parents/legal guardians.
- Recruiters must obtain verbal permission from parents for each player.
- Recruiters will distribute an access code to each eligible player.
- Selene players must be able to see, hear, and physically control the computer mouse and keyboard. Parents must verify their child/ward has these three abilities.
- Players will log on to http://selene.cet.edu/play.
- Players will register with a unique, made-up user name. The game will assign a password to each player.
- Players must record their user name and password in a safe place. The game will not collect any personally identifiable information, so a player who forgets user name and password will not be able to access the game.
- Selene will ask each player to provide:
  - Mother's/Female guardian's highest levels of education (no high school degree, high school degree, college degree, master's degree, Ph.D., or M.D. degree).
  - Father's/Male guardian's highest levels of education (no high school degree, high school degree, college degree, master's degree, Ph.D., or M.D. degree).
  - Player's gender (male/female).
  - Player's ethnicity/race (African, African-American, Asian, Caribbean, Hispanic, Mixed, Native American, White, Other).
  - Player's school grade level.
  - Player's academic grade point average (A-F: Please translate numeric GPAs as 4.0=A, 3.0-3.9=B, 2.0-2.9=C, 1.0-1.9=D, 0-0.9=F).
 - City, state, and ZIP code.

Please prepare your child/ward with this information.
- Players will not provide any personal contact information or their names.
- Players will complete an introductory module, level one of the game, and level two of the game.
- The game will track all player actions in a database.
- All player data is anonymous. All player activity will be logged to the player's made-up username and password.
- Throughout the game, the Selene game will ask each player to report his/her level of skill and challenge.

The prompt will ask two questions:

	Low								High
How **challenged** was the activity?	1	2	3	4	5	6	7	8	9
How **skilled** were you at the activity?	1	2	3	4	5	6	7	8	9

- After a player finishes the experiment's game session, the player will have access to:
  - Replay the game.
  - Complete short activities about the moon either alone or with friends and family.
  - Investigate moon-related resources.
- Players may return to the Selene site at any time and as often as they wish.
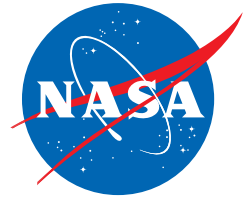
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Any foreseeable risks or discomforts. There should be no risks associated with this study beyond those normally experienced in everyday life. Participation by players is voluntary. They may withdraw from the study at any time. Players may withdraw from the study by closing their web browser. There is no penalty or loss of status to players who withdraw; however, they will not be able to access the postgame resources or replay the game.

Benefits to subject or to others that may result from this research. Study participants will have fun while learning how NASA scientists explain the origin of the planets, Earth, and our moon. The results of this important research will enhance the effectiveness of instruction.

Alternative procedures or courses of treatment. There are many ways to deliver instruction—Selene is one way. Selene is a game to prepare players for future learning. The project does not provide alternative instructional delivery systems for teaching about lunar geology.

Confidentiality. All data collection is anonymous. No player names, contact information, or personal identifiers will be collected by Selene. Please note that for each player the game system will track all gameplay and all usage of the site.

Participant rights. The participant has the right to ask pertinent questions about the research, subjects' rights, and research-related injury to the subject. Subjects can contact the Selene research team through e-mail at selene@cet.edu or by telephone (304-243-2479) between 9:15 a.m. and 2 p.m. Eastern time Monday through Thursday.

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Participant responsibilities.
- Keep the details of the Selene game a secret from other potential players.
- Keep the registration access code a secret from other potential players.
- Keep user name and password secret.

- Never share user name and password.
- Never let anyone else use his/her user name and password to access the game or site.
- Make sure the computer station is ready to play the game. The game is a Java- and Flash-based Internet application. It can be played on either a Windows or Macintosh platform. Windows users need at least the Internet Explorer 6 or Firefox web browser. Mac users access the game through Safari or Firefox. Each computer used to play the game will need:
    o Java 1.4.
    o Flash 7 player.
    o Sound (headset or speakers).

Selene expectations.
- Selene expects each player to try hard to accomplish game goals.
- Selene expects each player to complete the entire study session.
- Selene will track all player interaction with the Selene web site during and after the Selene study session.
- Selene owns all data collected through the Selene site.

Institutional Review Board. The Institutional Review Board at Wheeling Jesuit University has approved this study. Participants with questions about their rights as human subjects may contact the board chair, Dr. Beverly Carter, (304) 243-2340, carter@wju.edu.

By giving my oral consent to a Selene recruiter, I am agreeing that my child/ward may participate in the Selene study, as summarized above. My child/ward is 13 to 18 years old. My child has the physical and mental ability to see and react to the computer screen images, hear the computer's audio signal, and physically manipulate the mouse and computer keyboard. I realize that the Selene password and access code must remain confidential, and my child/ward may not share it with any other person. I realize that my child/ward must give an honest effort to play the Selene game from the beginning of the study session to the end, although my child may withdraw from the study by closing the computer browser at any time. I realize that my child may access Selene any time, 24/7. Selene will continue to provide activities and resources to players after they complete the study. I realize that Selene will track all player activity while logged onto the Selene site.