

|               |   |  |   |  |  |  |   |  |
|---------------|---|--|---|--|--|--|---|--|
| STEM          |   |  |   |  |  |  |   |  |
| Location      | 5:30 - 5:45   | 5:50 - 6:05  | 6:10-6:25   | 6:30-6:45                              | 6:50-7:05  | 7:10-7:25  | 7:30-7:45   | 7:50-8:05                              |
| Room 22       | DE Calculus/ Advanced Calculus  |  |   |  |  |  |   |  |
|               | Students demonstrate their favorite calculus labs.  |  |   |  |  |  |   |  |
| Haven         | GIS / APES  |  |   |  |  |  |   |  |
|               | Students present posters on various environmental disasters that have occurred throughout history including Chernobyl, Donora smog, and rovers so polluted they caught on fire! GIS students quiz visitors' knowledge about locations from pictures on Google maps and show visitors how to use ArcMap to create a GIS map. |  |   |  |  |  |   |  |
| Corner        |   | Capstone Presentation  | Capstone Presentation   | Capstone Presentation                  | Capstone Presentation  | Capstone Presentation  | Capstone Presentation   |  |
|               |   | Seniors describe their capstone projects, long-term endeavors that allow them to apply and develop knowledge and skills learned in SVGS courses.   |   |  |  |  |   |  |
| Chamber       | Modern physics  | Solar panel  | Modern physics  | Precalculus                            | Precalculus  | Solar panel  | Precalculus   | Precalculus                            |
|               | Students present Exploravision Project on rockets that use an electromagnetic engine.   | Presentation on SVGS's new solar panel   | Students present Exploravision Project on rockets that use an electromagnetic engine.   | Students demonstrate lab applications. | Students demonstrate lab applications.   | Presentation on SVGS's new solar panel                                       | Students demonstrate lab applications.  | Students demonstrate lab applications. |
| Biology Lab   |   | MolBio demo  |   |  |  |  |   |  |
|               |   | Students demonstrate gel electrophoresis using dyes. A longer demonstration shows the process applied to DNA analysis. Visitors may view completed gels of separated DNA fragments, as students explain how the technique produces DNA fingerprints. Visitors may also practice pipetting samples into gels. |   |  |  |  |   |  |
| Chemistry Lab | Environmental Chemistry   |  | AP Chemistry  |  | Environmental Chemistry  |  | AP Chemistry  |  |
|               | Demonstrations of various labs done throughout the year   |  | Demonstrations of various labs done throughout the year   |  | Demonstrations of various labs done throughout the year  |  | Demonstrations of various labs done throughout the year   |  |
| Physics Lab   | Physics   |  | Robotics  |  | Physics  |  | Robotics  |  |
|               | Demonstrations including "Bicycle Wheel and Rotating Stool" (angular momentum), "Van de Graff Generator" (electrostatics), "Ring Launcher" (electromagnetic induction" and various air pressure demonstrations  |  | Students demonstrate the completed robot produced by SVGS students. This robot was recently taken to compete in the Virginia Regional FIRST Robotics Competition. |  | Demonstrations including "Bicycle Wheel and Rotating Stool" (angular momentum), "Van de Graff Generator" (electrostatics), "Ring Launcher" (electromagnetic induction" and various air pressure demonstrations |  | Students demonstrate the completed robot produced by SVGS students. This robot was recently taken to compete in the Virginia Regional FIRST Robotics Competition. |  |
| Think Tank    | Environmental Chemistry   |  | Engineering II  |  | Environmental Chemistry  |  | Engineering II  |  |
|               | Presentations of projects on air pollution and water quality  |  | Presentations of team projects completed for UVA course   |  | Presentations of projects on air pollution and water quality   |  | Presentations of team projects completed for UVA course   |  |
| Grid          | Engineering   |  |   |  |  |  |   |  |
|               | Engineering demonstrations including CAD software/3D printing and Mechatronics  |  |   |  |  |  |   |  |
| Off-grid      | AP Calculus   |  |   |  |  |  |   |  |
|               | Students demonstrate the application of calculus to finding volumes of some very tasty solids.  |  |   |  |  |  |   |  |
| Loft          | AP Computer Science/Advanced Tech   |  |   |  |  |  |   |  |
|               | APCS students demonstrate work on coding projects. Advanced Tech students demonstrate their skills in making Flash animations as they create Flash cards for elementary students.   |  |   |  |  |  |   |  |
| Area 51       |   | Networking   |   |  |  | Networking   |   |  |
|               |   | Students demonstrate networking skills learned in Radford University course.   |   |  |  | Students demonstrate networking skills learned in Radford University course. |   |  |
| Outside       | Electric Vehicle  |  |   |  |  |  |   |  |
|               | Students demonstrate their work for EV competition.   |  |   |  |  |  |   |  |
| Hallway       | AP Statistics   |  |   |  |  |  |   |  |
|               | Students share with visitors their statistics projects on different topics including "Measuring Bias", "Homefield Advantage", and "Factors of Charitability".   |  |   |  |  |  |   |  |
|               | Research posters  |  |   |  |  |  |   |  |
|               | Students are available for informal poster sessions on their year-long research projects.   |  |   |  |  |  |   |  |