

AIMS Mini-Grant Application

Tri-Valley Middle School
8th Grade Team
505 E. Washington St.
Downs, IL 61736

Lead Teacher: Nate Meyer

History through Mini-Golf

Our eighth grade students will be building a full-sized and completely playable 24-hole mini-golf course, which will be open for the public to play on certain days, as part of a cross-curricular unit. Our eighty-eight student eighth grade class will be broken up into 24 teams that will each design and build a hole on the course. Each hole will visually represent a decade of American history beginning with the decade of 1770-1780 and ending with the 6 years spanning from 2000 to present. As part of this project and its assessment, students will create and turn in both a project budget and a written report that explains their hole and decade. Student teams will also create a downloadable podcast for their hole that includes music from their decade as well as an oral explanation of their decade and of the key features of their hole. Players can download these podcasts and listen to them on a personal MP3 player while playing each hole.

To create their hole, each team will research the decade to which they have been assigned. Once each team has become experts on their decade they will design their hole. Each hole must contain the following four items; student-created artwork that decorates the hole and represents the decade, one, unmarked, mathematically-proven hole-in-one shot path, at least one moving obstacle that represents a real obstacle or issue faced by Americans in that decade that also utilizes the laws of physics and/or motion, and at least two static obstacles that represent real obstacles or issues Americans from the decade faced. Thus, a team creating a hole representing the 1960's might choose a group of American soldiers going to the Vietnam war and a group of people boycotting a bus as their static obstacles and a moving rocket representing the space race as their moving obstacle.

Because this is a cross-curricular unit, each hole will incorporate parts from each of the core disciplines. The moving obstacle portion of the hole will illustrate students' science knowledge because the moving obstacles will be designed using the principles they have learned about in eighth grade physical science. The mathematically proven hole in one shot will test students' knowledge of angles and geometry, while final budget will require them to use basic math and algebra skills. Researching their decade will encompass Reading, as they read various texts to learn about their time period, and Social Studies, because their subject of research is American history. The final written report, and script for the podcast requires students to use writing skills, and the oral podcast requires them to be able to effectively communicate information in an oral presentation.

This project not only incorporates the core disciplines, but also four areas that are often considered encores: art, music, industrial technology, and computer technology. Working together with our Art teacher, student teams will learn and utilize various art skills in order to build and decorate their holes. To include the required music portion of their podcasts, student teams must work with the music teacher and learn about the different types of music in each decade. The mini-golf course will also require students to utilize industrial technology skills as they work with tools and materials to build their holes. Lastly, creating and uploading their podcasts will require student teams to work closely with the computer technology teacher.

Through completion of this project, students will accomplish many of the Illinois learning standards. English Language Arts standards met are 1.A.3b, 1.B.3a, 1.B.3c, 1.B.3d, 1.C.3c, 1.c.3d, 1.C.3f, 3.A.3, 3.B.3a, 3.B.3b, 3.C.3a, 3.C.3b, 4.B.3a, 4.B.3b, 5.A.3a, 5.A.3b, 5.B.3a, 5.B.3b, 5.C.3a, 5.C.3b, and 5.C.3c. Mathematics standards met are 6.B.3a, 6.C.3a, 6.C.3b, 6.D.3, 7.a.3a, 7.B.3, 7.C.3a, 7.C.3b, 8.C.3, 8.D.3a, 8.D.3b, and 9.C.3. Science standards met are 11.B.3a, 11.B.3b, 11.B.3c, 12.C.3a, and 12.D.3a. Social Sciences standards met are 14.C.3, 14.D.3, 14.F.3a, 16.A.3a, 16.A.3b, 16.A.3c, 16.B.3a, 16.B.3b, 16.B.3d, 16.C.3b, 16.C.3c, 16.D.3a, 16.E.3a, 16.E.3b, 16.E.3c, 18.A.3, 18.B.3a, 18.A.3b, and 18.C.3b. Physical Development standards met are 19.A.3, 21.A.3a, 21.A.3b, and 21.A.3c. Fine Arts standards met are 25.A.3e, 26.B.3d, 27.A.3b, and 27.B.3.

Duration of the Project: 6 weeks

Intended Benefit and Needs:

The intended benefit of this project is to show students that not only is learning fun, but also that there are real connections between things that they learn in each of their classes. Another important benefit of this project is that it gives students a chance to apply the learning and skills that they have acquired in their classes to complete a project with exciting and tangible results. Because the culmination of this project is a playable mini-golf course that will be open to the public, this project also benefits the school and students by allowing our community to see and to interact with the learning our students are involved in. Through this project we show our community that we value the standards, that we value multidisciplinary education, that multidisciplinary learning and standards are not mutually exclusive, and that high stakes testing is not the only way to ensure that students are learning what the state deems important.

This project addresses our school's desire to incorporate more cross-curricular learning in accordance with our school's mission to become a true middle school. It also addresses several of curricular needs as set out by the state learning standards, as evidences in the section above.

Budget Explanation:

The budget for this project centers on construction materials needed to construct the individual holes for the course. Grant money will be used for 2x4s and hardware. 16-18' 2x4s are \$3.50 each. For this project we will provide 48 (two for each team) of these 2x4s, which will cost at total of \$168. 6-8' 2x4s are \$2.50 each. For this project we will provide 48 (two for each team) of these 2x4s which will cost a total of \$120. The cost of 2x4s combined comes to a total cost of \$288. Because we will also need hardware to construct the holes, we will need an additional \$12 to cover the cost of screws and nails. The total cost of materials including all 2x4s and hardware is \$300.

Project Monitoring and Evaluation:

For this project, there will be no final test. This project relies instead on authentic assessment to assess student achievement, as students are using knowledge and skills across the disciplines to solve problems and create tangible products. Assessment of this unit will be done through rubrics created by students and teacher together that are explicitly connected to the standards and will evaluate all parts of the project. By involving students democratically in the creation of rubrics, teachers are at once modeling important democratic skills and sending the important implicit message that they value the thoughts, opinions and ideas of each student.