

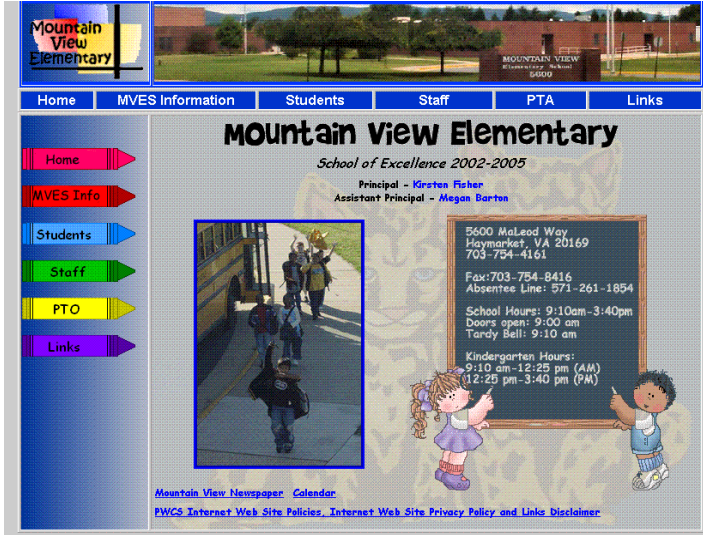
Mrs. Drake's Information Technology Courses

Battlefield High School
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Web Technologies

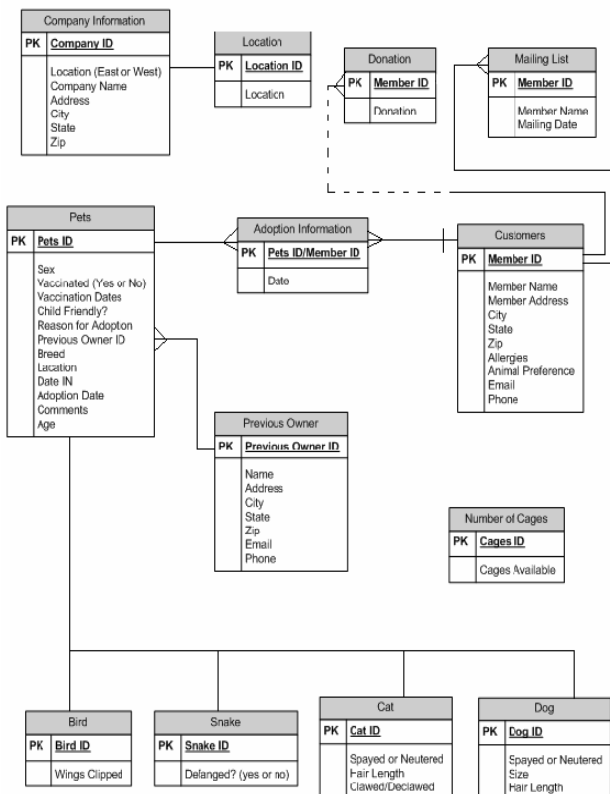


Battlefield High School's new Web Technologies course has already paid off for the Information Technology students. All students enrolled in this course are also enrolled in Northern Virginia Community College. The focus to date in the course has been on the history of the Internet, MIME file types, protocols, the technical side of Email, Project Management, and relational database technology. Last week, they sat for the Certified Internet Webmaster Internet Business Foundations professional examination. Upon passing this exam, each student will have earned 3 college credits.

During the time that the students worked hard on their studies, exam preparation and acceptance as a college student, they have also played hard. The students have analyzed, design and programmed a brand new website for Mountain View Elementary School. Featured on the left is a picture of the homepage that was created. Every student was in charge of building at least one page of the website. Project Management skills were a requirement for a successful project. The students experienced a real professional project, with real success. Many administrators and educators across the county are very proud of the work completed by our students.

Please join us in congratulating the students on their successes!! Additionally, all of the successes experiences by our students would not be possible without the support of our sponsors and families that so graciously have helped us to build an exceptional program. Please keep in mind the following businesses; ReMax Olympic, Comcast, J&S Networking Solutions in Haymarket and TKC Communications.

Database Management (Oracle)



Battlefield High School's new Database Management course in Oracle has also been a success. We now have county approval that students enrolled in Oracle will receive advanced credit for completing the course. This means that the course is weighted an extra point. Instead of being out of a 4.0 scale, it is out of a 5.0 scale, just like an Advanced Placement (AP) course.

In a business environment, one can not design a solid database management system without understanding the business environment and modeling the environment. To date, the Oracle students have been learning how to analyze business requirements and turn those requirements into technical specifications. They have learned to create an Entity Relationship diagram, define business rules, find constraints and develop assumptions. On the left is an example of an Entity Relationship diagram to an animal shelter.

The students are excited to get to programming (of course); next they will learn to convert the models to table, and create Oracle tables using SQL.

```

Private Sub CalculateTakeHomePay()
    Dim dblSocial, dblFed, dblState, dblMedicare,
    Dim dblRetirement, dblInsurance, dblTakeHomePay As Double

    ' Calculate gross paycheck amount
    dblWeeklyPay = Convert.ToDouble(nudSalary.Value)

    ' Calculate individual deductions from gross
    dblSocial = dblWeeklyPay * 0.062
    dblFed = dblWeeklyPay * 0.18
    dblState = dblWeeklyPay * 0.025
    dblMedicare = dblWeeklyPay * 0.0145

    ' Calculate retirement contribution from user input
    dblRetirement = dblWeeklyPay * (tblRetirementRate)

    ' Determine insurance cost based on user input
    If rbInsuranceNone.Checked = True Then
        dblInsurance = 0
    Else
        If rbInsuranceIndividual.Checked = True Then
            dblInsurance = 20.0
        End If
    End If
End Sub

```

Visual Studio

Visual Studio.NET programming students have progressed from “Mrs. Drake do you really think you can teach me how to program” to students that have build a loan application calculator, a print shop calculator, and a Candy shop order system. Students are reading business specifications, and from the specifications creating a flowchart and pseudo code. From the pseudo code they are developing the Visual Basic code.

My answer to this wonderful group of students is “YES”, I will teach you to program. Each of the students in this class is welcome to apply to the Information Technology program. Please see Mrs. Drake for your application, and return the application as soon as possible. Once enrolled in the program, you are eligible to enroll in the other courses on this newsletter as well as many other technical courses offered in the Information Technology Program at Battlefield High School.

Robotics

Robotics, robotics, robotics..... the most exciting new team at Battlefield High School. No, they are not nerds, geeks or gurus. They are the most dynamite group of students coming together to compete with their minds. On January 7th, the rules of the 2006 world wide US FIRST Robotics competition will be announced. On February 21st by 2pm all robots will be shipped to the competitions. Then, the games will begin. Our students are currently building small robots to understand the concept of analysis, design and build. Ideas have been formed and students have been engineering models and looking into what kind of robot they want to build.

At this time, Lockheed Martin, NASA, BAE Systems and Aurora Flight Sciences are committed to assisting with engineering and financial support of the Robotics team. In order to be successful, we are still seeking approximately \$10,000 in corporate support; smaller amounts are welcome! Additional donations for the Robotics team have come from: Lowe’s, Home Depot, Atlantic Skyline and Haymarket Motors.

The FIRST Robotics program, is a multinational competition of professionals and young people that gather together to solve an engineering design problem in an intense and competitive way. For further information see www.usfirst.org.

Corporate and Personal Support

The Information Technology program of Battlefield High School would like to thank all of the businesses and sponsors that have aided in the development and processes that have made the IT program all the more successful and efficient as a learning tool for students interested in the business and technology fields.

In addition to the businesses thanked above, we extend a sincere “Thank you” to Raytheon Corporation, TKC Management Services, DeVry University and NVCC. I would also like extend a sincere “Thank you” to the following families for their contributions to the IT Program: Rooney, Davis, Vasilas, Passarge, Dryden, Barker, Kubal, Ferguson, Lahar, Quayle, Rezadoost, Mannix, Nguyen, Harrison, and Ficerai.

