

## ROBOTS AND INVENTION

*Your desk is littered with reports. All of the papers, folders, statistics, and data seem never-ending. You're trying to make sense of it all. The efficiency expert your company has hired has charged you with the task of identifying and designing a new safety system for automobiles using robotics. As a robotics intern, you understand the importance. Ideas, creativity, and ingenuity are the keys to getting the job done. You know the answers, but they're not coming. Standing up from your desk, you roam the halls waiting for inspiration to strike. The task is paramount – then it hits you. The light bulb turns on.*



Imagine – for a moment – your students achieving the next generation of robots. Through invention they will grasp the concept that knowledge is power, but imagination encircles the world.

### **Why Teach Robotics**

Robotics is an incredibly engaging activity for students. Robots are inherently great teachers because they give immediate feedback to the student's actions. Robotics is also a unique and inexpensive experience that can easily be integrated into a Technology Education program. In addition, learning about robotics can prove to be a lucrative process for students of all ages; robotics is becoming a real career opportunity.

### **How We Teach**

To make the curriculum easy to implement, all the necessary knowledge and skills are delivered through totally interactive software. Through text, pictures, animations, and digital video, students are led through the exciting world of robotics. Due to the highly interactive and self-directed nature of our curriculum, each student is allowed to find their own pace. Regardless of the learner's motivation or learning style, students will find a new level of success with our innovative and engaging approach.

This curriculum was designed to support state assessments by addressing national math, language, science, and technology standards.

### **Skills for Life**

Good life skills are made relevant through situations that have students examine their actions. Through interactions with their boss, co-workers, and customers, students learn what it takes to be successful in the real world. They discover the long-term benefits of making the choice to take pride in what they do.

### **Critical Thinking and Problem Solving**

Employers want people who solve problems. Our projects lead students through analyzing, brainstorming, and creating solutions using the design process.

## TEACHER'S RESOURCE CD INCLUDES:

- Videos that give the educator a “behind the scenes” look at each project
- Answers to student worksheets (and where those answers are found in the curriculum!)
- Rubric for project assessment
- Detailed list of addressed standards for math, language, science, and ITEA
- Educator's personal set of digital tutorial videos on programming robots

## SOME KEY CONCEPTS AND OUTCOMES

- Apply the systems approach to real world problems
- Understand and demonstrate the functions of inputs and outputs
- Explain how robots and control systems are used in industry
- Understand and demonstrate how a robot control language works
- Prepare an informational or persuasive oral presentation
- Explain the basic elements of a control system

## CURRICULUM LENGTH

The curriculum has been designed for flexibility with two separate projects. The length of the curriculum is controlled by the educator and can run from 20 to 45 hours.

## COMPUTER REQUIREMENTS

Windows® 98SE or higher; 128 MB of RAM; 1 GB of hard disk space; CD-ROM; sound card; minimum 1024x768 screen resolution; headphones

To avoid confusion and to get an accurate quote for your unique class and school, just give us a call – 877.828.1216 – or click on the “Get a Quote” icon found at the bottom of each curriculum page on our website.

Remember you're going to be talking to a developer and not a salesperson...that means no sales pitch, no commissions on the line – just the information that you need.



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