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# Introduction



If every student, teacher, administrator and staff member in every school had his or her own easily carried computer to be used throughout the school day, integration of technology into the curriculum would probably be accomplished with ease. “Anytime/anywhere” computing, along with Internet access from any spot in the classroom or library, could then be set as a realistic goal. Until recently, an affordable computer for everyone has been a difficult goal to reach within the confines of today’s school budgets. Handheld computers, or Personal Digital Assistants (PDAs), are the new, affordable computers for education. Many manufacturers make devices that fall into this category. Characteristics that tie them together are their ability to run the Palm™ OS operating system, an operating system capable of running applications written for the Palm™ OS operating system, or those which run Microsoft®CE®. This book will cover activities for the classroom using handhelds running the Palm™ OS operating system, the built-in utilities, and the abundant software written for this popular operating system. However, the concepts in the use of these handheld devices can be easily transferred over to Windows®CE® or the Linux-run handhelds.

The activities in this book are aimed at teachers and students of the middle school grades (4 through 6) but many of the ideas can be adapted to students in the earlier or later grades. Students in the middle school years describe technology as “awesome” and “way-cool” and are very amenable to learning the use of technology to meet the goals of standards-based education. Reluctant learners are often inspired by the use of technology while other methods of instruction fail to motivate them. In the same way, students who are academically talented will use technology to exceed our expectations and discover successful learning experiences on their own.

Teachers of students in these grades will range from new users of technology to teachers who are comfortable with technology. All of these teachers will benefit from the high level of student enthusiasm over using Palm™ handhelds in the learning process. All teachers will find that the supportive activities at the beginning of the book will help them adapt and plan before the entry of the students into the classroom for the start of the school year.

Those teachers who are comfortable with technology will find this book a welcome addition and asset for their professional development needs. These teachers are often called upon to be the mentor teachers for special projects and will find appropriate resources here to help guide others with the successful practices of blending technology into the curriculum.

To receive the most benefit from this book, teachers should have a Palm™ OS handheld available for their own use to learn the basics before using these activities within their curriculum. There are many excellent books available to help you become comfortable with your Palm™ OS handheld.

Much of the material referenced here is Web-based with print resources suggested to round out the use of this technology in education. To keep up with the ever changing face of today’s classroom, the author has created a Web page to assist teachers in finding the right materials, advice and new technologies. This resource can be found on the Web at

**<http://www.midgefrazel.net/pda.html>**

This book uses the NCTE standards in reading, writing and communication as a basis for the activities as students show growth in these areas during the middle school years.



## How to Use a Palm™ OS Device

The popularity of the compact and portable handheld devices that use the Palm™ OS can be attributed to their portability and accessibility. Gone are the days where handhelds were used just to store names, addresses, and phone numbers. Today's devices are integrated with cellular phones; wireless modems, radios, GPS devices, and are also capable of playing back music and videos. The possibilities for these computers are limitless and bring to mind the "Dick Tracy" wrist radio

Some handhelds use regular alkaline batteries and no user leaves home without spare batteries in tow. More current devices make use of the longer lasting, built-in rechargeable lithium ion battery to meet the demand of more frequent all-day use. Today's Palm™ OS devices can operate for weeks (instead of days) before needing to be charged. The recharging adapter is easily carried in a briefcase or bag.

Communication with a desktop computer is accomplished by an application that controls the movement of information from computer to handheld and back. Through an operation known as the HotSync® procedure, the handheld uses a cradle or a special cable connected to the computer's USB (or serial) port and plugs into the bottom of the handheld to synchronize information between the devices. The application that resides on the desktop computer is easy and intuitive, while it doubles as a way to input information and install new applications. It also provides a conduit for importing and exporting to other applications on the user's computer.

A pen-shaped device called a stylus is included with every handheld and is used to write a quickly mastered handwriting recognition alphabet called Graffiti®. A special area of the screen is used to enter the single stroke alphabetic-resembling characters. Users who might worry about scratching the screen of the handheld can purchase a thin, clear, protective plastic screen covering to provide inexpensive screen protection. Users who choose not to use Graffiti® can use a miniature on-screen keyboard to tap on letters, numbers, and special characters.

For those who prefer the feel and speed of a real keyboard, an external, portable, keyboard can also be purchased. These unfold, attach to the handheld for use on a table, and then collapse back into a pocket-sized case for portability. There are also thumb-type keyboards (thumb boards) that clip to the front of the device and don't require a flat surface to be used.

Beaming from one handheld to another is one of the "coolest" features of using a handheld computer. Just like the television remote control, infrared technology makes this wireless communication between two Palm™ handheld users effortless. Many applications and the data created by those applications can be beamed from handheld to handheld in the blink of an eye, without using the desktop computer as an intermediary.

Just released is the exciting new Palm™ OS powered *Dana* made by AlphaSmart™. Sporting a larger screen and a full-size keyboard, these PDAs are sure to be a hit with both students and teachers. Sleek, light, and classroom-ready, these Palm™ OS devices store easily in backpack or desk for quick, daily, anywhere computing.



# Getting Started

## Subject: Teacher Productivity



### Activity for Teacher

Welcome to the exciting world of using Palm™ handheld computers in your classroom! The first few activities that follow will focus on preparing you to set up and use the Palm™ handheld computer. This will be a successful project if you feel comfortable using the Palm™ handheld yourself, so these activities contain resources to get you acquainted with handheld basics. Some of the activities will also guide you to resources that may help you obtain funding for your handhelds, whether you want to purchase a Palm™ handheld for every student in a classroom, or five or six to be used in project-based instruction. In order to accomplish this, it will be worth your time to find information using the Web to get you started. The Palm™ Education Pioneer Grant program has been around for a while and there is good information at its Web site. Although this round of grants is over, learning about how these types of grants work will be useful for your own proposal.



### What teachers will know:

By using this activity and the others that follow, teachers of both self-contained classrooms and teamed environments will examine their own state and local curriculum to see how students can benefit from having a computer at their disposal every day.



### What teachers will be able to do:

Teachers will purchase, set up, and learn the basics of using a Palm™ handheld.

NETS\*T II B

NETS\*T II C



### Application(s):

Web Access

Grant Applications



### Procedure:

1. Visit the Web sites suggested in this activity. Jot down ideas for what you want to do with the Palm™ handhelds in your classroom.
2. Obtain a Palm™ OS handheld of your own and begin using it.



### Resources:

#### Palm™ Education Pioneer Grants (PEP)

<http://palmgrants.sri.com/background.html>

#### Palm™ in Education Success Stories

<http://www.palm.com/education/studies/>

#### Trotter, Andrew. "Handheld Computing: New Best Tech Tool or Just a Fad?"

Education Week, September 26, 2001 (Search archive using the keyword "palm.")

[http://www.edweek.org/ew/ew\\_printstory.cfm?slug=04palm.h21](http://www.edweek.org/ew/ew_printstory.cfm?slug=04palm.h21)

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