

Master Teacher Appendix

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MT Appendix D

Course Delivery Guidelines

The Intel® Teach Getting Started Course is organized in a modular format to allow for a flexible delivery schedule. However, to maintain high quality, the following delivery guidelines have been established:

- Start implementing your first course for Participant Teachers within 30 days of completing your Master Teacher training.
- Finish implementing your first course for Participant Teachers within 90 days of completing your Master Teacher training.
- Complete modules in order.
- Choose a course agenda to fit your Participant Teachers' needs. The course can be implemented in two ways:

24-Hour Course

Module	Hours
Course Introduction and Module 1: Developing 21st Century Skills	2
Module 2: Learning Computer Basics and the Internet	2
Module 3: Fostering Critical Thinking and Collaboration	2
Module 4: Discovering Word Processing	2
Module 5: Applying Word Processing	2
Module 6: Discovering Multimedia	2
Module 7: Applying Multimedia	2
Module 8: Discovering Spreadsheets	2
Module 9: Applying Spreadsheets	2
Module 10: Developing 21st Century Approaches	2
Module 11: Planning and Doing Your Action Plan	2
Module 12: Reviewing and Sharing Your Action Plan	2
Total Hours	24

(continued)

Course Delivery Guidelines

32-Hour Course

Module	Hours
Course Introduction and Module 1: Developing 21st Century Skills	2
Module 2: Learning Computer Basics and the Internet	2
Module 3: Fostering Critical Thinking and Collaboration	2
Module 4: Discovering Word Processing	2
Module 5: Applying Word Processing	4
Module 6: Discovering Multimedia	2
Module 7: Applying Multimedia	4
Module 8: Discovering Spreadsheets	2
Module 9: Applying Spreadsheets	4
Module 10: Developing 21st Century Approaches	2
Module 11: Planning and Doing Your Action Plan	2
Module 12: Reviewing and Sharing Your Action Plan	4
Total Hours	32

Note: The 32-hour course affords Participant Teachers more time for applying word processing, multimedia, and spreadsheets, and for reviewing and sharing their action plans.

- The course must be implemented for a minimum of four hours per week. Accordingly, the 24-hour course must be completed within 6 weeks, and the 32-hour course must be completed within 8 weeks of the start date.

MT Appendix E

Training Preparation Checklist

The following checklist identifies both required and suggested items for making your training run smoothly.

Required Items

- Be sure you have ordered all training materials well in advance of the start of training.
- Visit the computer lab several days prior to the start of training. Talk to the technology contact and find out information on the lab rules, passwords, firewalls, downloading/saving restrictions or procedures, and so on. Ensure that the following minimum requirements for system configurations and software applications are met on each computer:

Hardware

- Intel® Pentium® processor 200 MHz (performance level or better) or compatible processor
- Microsoft Windows 2000* (including Service Pack 2 and Microsoft Paint*) operating system or above
- Minimum of 128 MB of RAM (256 MB preferred)
- Minimum of 500 MB of hard disk drive space (1 GB preferred)
- 800 x 600 screen resolution or higher
- Internet connection
- CD-ROM drive

Internet Browser

- Microsoft Internet Explorer 6.0* or above, set as the default browser, or
- Mozilla Firefox 1.5* or above, set as the default browser

Software

- Adobe Acrobat Reader 7.0* or above
- Spreadsheet software (Microsoft Excel 2000* or above, or OpenOffice.org Calc 2.0* or above)
- Multimedia software (Microsoft PowerPoint 2000* or above, or OpenOffice.org Impress 2.0* or above)
- Word processing software (Microsoft Word 2000* or above, or OpenOffice.org Write 2.0* or above)

Training Preparation Checklist

- Prepare and test the Intel® Education *Help Guide* application.
- Have all your contact numbers with you, such as those of your LEA, technology contact, and so forth.
- Ensure a working phone (with an outside line) is in the computer lab and find out if any access numbers are necessary, or bring a cell phone.
- Ensure that Pair and Share strategies and materials are ready. See MT Appendix F.01 for more information on Pair and Share exercises.
- Print class attendance sheets, if needed.
- Prior to the start of Module 2: Exercise 2, ensure that the shortcut for the Internet browser exists on all desktops.

Suggested Items

- Prior to each required activity, follow the steps to make a sample to share with the participants. Consider sharing real-world samples when applicable.
- Check on the use of a copy machine and bring a ream of paper.
- Use red cups, a flag system, or some other method to know when participants need help.
- Create name tags and name tents.
- Distribute comment and question cards to elicit feedback from participants. Collect the cards at the end of each module, and address comments and answer questions at the beginning of the next module.
- Create a food sign-up sheet. On the first day, have participants sign up to bring snacks for one of the modules, and have drinks available.
- Distribute a map and/or list with local places to eat if you will be breaking for meals.
- Have extra pens, pencils, highlighters, and sticky notes available.
- Ensure supplies are available, such as markers for white boards, printer paper, chalk, and so on.
- Have contingency plans prepared that address potential technical problems or power outages.
- If you are training at a location other than your own, talk to the custodian and secretary, introduce yourself, confirm dates, and confirm start and end times.
- Contact participants to ensure they know course details.

MT Appendix F: Facilitating Exercises and Activities

Pair and Share

Beginning in Module 2 and continuing through Module 11, participants are asked to Pair and Share their reflections from the previous module. As you facilitate each Pair and Share, consider the following implementation and pairing strategies.

Suggested Implementation Strategies

- Explain that Pair and Share reflections are part of almost every module and are considered to be an important part of the learning process, helping individuals process information, develop communication skills, and refine their thinking.
- Tell participants that a Pair and Share should be more of a discussion and exchange of ideas, rather than a situation in which two or more partners are taking turns telling their answers.
- Consider having the participants use the 3-2-1 model: Ask three questions about the other person's answers, comment on two things you liked, and then offer one suggestion.
- If Pair and Share is a new concept for many participants, consider having a pair model what should be done in front of their colleagues.
- During a Pair and Share, monitor, walk around to see and hear what is being discussed, reinforce desired behaviors, and intervene as needed.
- Upon conclusion, summarize both common and interesting ideas.

Sample Pairing Strategies

- **Buttons:** Gather pairs of identical buttons. Each pair should be unique, each with its own special size, shape, texture, color, and so on. Place the pairs of buttons in a bag, and ask each participant to select one button. Participants with matching buttons become partners for Pair and Share.
- **Name Tags:** Collect the name tags from half the participants, and place them in a bag. Ask the remaining participants wearing name tags to select a name tag to determine partners for Pair and Share.
- **Playing Cards:** Using a deck of playing cards, have participants each draw a card, then look for the matching card. For example, a participant who draws a jack of spades looks for another participant holding a jack of any other suit.
- **Stickers:** Collect pairs of stickers. Each pair should have a unique image, size, shape, texture, color, and so on. Place the stickers in a bag, and ask each participant to select one sticker. Participants with matching stickers become partners for Pair and Share.

Required Activities

Master Teachers must facilitate required technology activities with the whole group in three instances during the Intel® Teach Getting Started Course:

- **Module 4:** Discovering Word Processing (Assessment Handout)
- **Module 6:** Discovering Multimedia (Curriculum Preview)
- **Module 8:** Discovering Spreadsheets (Grade Book)

The following shows a generic description of the sequence of learning events that should occur. Approximate times for each learning event appear in parentheses. Specific details relating to each activity can be found within the corresponding margin notes of the curriculum manual.

Introductory Paragraph (5 minutes)

1. Ask participants to read along as you read aloud the paragraph; as questions appear, allow time for participants to respond before continuing.
2. Show participants an appropriate and locally relevant example of the product (such as an assessment handout, a curriculum preview, a grade book, and so on) that they are to make on the computer.

Plan It (10 minutes)

1. Show participants the example appearing within the Plan It section, as well as an appropriate and locally relevant example of the product that you created on the computer.
2. Facilitate discussion regarding the planning questions, telling participants that they must plan on paper and get their plans approved before they can begin doing and using the computer.
3. Remind participants to use the identified *Help Guide* resources as they plan, do, review, and share.

Do It (30 minutes)

1. After the plans of most participants are approved, briefly highlight a few key steps from the Do It section and stress the importance of reading and following the directions in the order in which they appear.
2. Remind participants that the Challenges and corresponding Challenge Examples may either be required or optional for those who are interested.

Facilitating Exercises and Activities

Review It (5 minutes)

1. After most participants have completed all the steps in the Do It section, introduce the list of required elements, and ask participants to make any required or desired changes.
2. Direct participants to save their work to the corresponding folder (such as Word Processing, Multimedia, Spreadsheets, and so on) in a predetermined location.

Share It (10 minutes)

1. Ask participants to display on screen the product they want to share.
2. Divide the class in half, and ask one half to walk around and view products created by their colleagues while the other half remains seated at their computers to introduce their products and to answer questions. After a few minutes, the two halves switch roles.
3. After a few minutes, ask all participants to return to their seats.
4. Have participants share their answers for each question.
5. Ask participants to close and exit any software applications.

Word Processing

Some adult computer users have never created a digital picture, completed a spreadsheet table, or designed a multimedia presentation. However, practically all adult computer users have used word processing technology to write a letter, prepare a report, or create a greeting card. Among adults, word processing is perhaps the most common use of computer technology.

Despite the many common uses of word processing applications, adults often consider word processing to be their least favorite technology area. One reason is that many adults' keyboarding skills are limited. As a result, typing lots of information into a document is often difficult and time-consuming for adults.

The word processing activities have been developed in a way that allows teachers to learn basic word processing skills without having to type lots of information. Unlike other traditional word processing classes in which teachers are provided with multi-page templated documents that they use to edit and format text, the word processing activities consist of single-page documents that teachers create from scratch. In fact, many of the word processing projects resemble documents that teachers would normally complete in a desktop publishing application. The limited amount of text and heavy use of images increases teacher interest in the technology. It also lets them learn basic text formatting and editing skills while simultaneously providing opportunities to move beyond the commonly perceived limitations of word processing technology.

General Strategies

The featured word processing activities provide opportunities for teachers to practice their mouse and keyboarding skills while they complete a range of projects related to their profession. Teachers begin by applying basic text and paragraph formatting skills to complete the required Assessment Handout activity. Afterwards, teachers who want to explore some of the graphics and desktop publishing features in the word processing software may decide to complete either the Certificate or Diagram activity. Meanwhile, teachers who are interested in more advanced word processing skills may choose to complete the Weekly Lesson Planner activity, which introduces word processing tables, or the Newsletter activity, which involves complex page layout and automated text formatting skills.

Facilitating Exercises and Activities

When teachers complete the word processing activities, consider the following general strategies:

- The provided samples in the manual may include more text than teachers will be able to type. Instruct teachers to do what they can. In most instances, they can complete all of the word processing skills by typing only a few sentences.
- Unless teachers are specifically instructed to create a text box before typing their text, teachers are expected to type the information in the body of the document. By providing opportunities to learn different ways of typing and formatting text, teachers develop more complete understandings of word processing technology.
- Some teachers will spend too much time experimenting with various text fonts, sizes, and styles. When completing these word processing activities, consider encouraging teachers to write first and then format their text later.
- To complete certain projects, teachers need to identify and include appropriate clip art. Because many of the options they will find in the clip art gallery/organizer or online may not be ideal for teachers, consider locating clip art in advance. Then, save the files in an easy-to-locate folder on each computer's hard disk drive or on a shared network server.
- Scanners, digital cameras, and other devices are not required to complete the word processing activities. However, teachers should feel free to use these devices if they are available.

Multimedia

Despite multimedia's technical complexity, it is the technology area that teachers are most excited to work with. The movement, sound, animation, and video featured in multimedia software and other multimedia programs are fun to explore. Additionally, some teachers may have some familiarity with multimedia technology, having had some experience using multimedia CDs.

Multimedia involves the use of many methods of communication (such as words, pictures, sound, animation, and video) to effectively convey information. By definition, many of the projects that teachers have already completed could be considered "multimedia" because they contain both words and pictures. However, most computer users think that other elements, such as music, sound, animation, and video, are needed to create a true multimedia project. Regardless of how many types of media are included in a presentation, multimedia technology helps teachers become active learners. It also increases interest and motivation.

The featured multimedia activities provide good opportunities for teachers to learn important multimedia skills, as well as practice many of the graphics and word processing skills that they have learned in the previous technology area. Conceptually, these activities are deceptively difficult because teachers must consider ways to organize and present their information on multiple slides, not on a single-page document. Additionally, teachers need to consider the most effective way to communicate different types of information. Sometimes, text alone is more effective than text, sound, pictures, and animation. Other times, animation and special effects are appropriate. By making multimedia design decisions, teachers develop critical thinking and evaluation skills.

General Strategies

The featured multimedia activities enable teachers to develop higher-order thinking skills while they learn important ways to use technology in their classrooms. Teachers begin by applying a variety of fundamental multimedia skills in the creation of the required Curriculum Preview activity. Teachers may then decide to complete the Student of the Week or Instructional Lesson activities, which provide opportunities to expand on basic multimedia skills by adding transitions and preset animation. However, teachers with more advanced multimedia skills may choose to complete the Classroom Rules and Expectations or Yearbook activities, in which action buttons are used to create branching presentations. Teachers who are ready for additional challenges also have opportunities to insert sound and music files, record their voices, adjust the timing of special effects, and create custom animation effects.

Facilitating Exercises and Activities

When teachers complete multimedia activities, consider the following general strategies:

- Teachers will enjoy adding transitions, animation, sound effects, and other multimedia features to their presentations. In fact, the challenge with multimedia technology is less technical than aesthetic. Teachers may be inclined to add so many effects to their slides that their information may be hard to read and understand. For the purposes of learning and exploring, teachers should be allowed to include whatever features and effects they have the time and ability to add.
- In all preceding activities, teachers have completed products that consist of a document. In the multimedia activities, teachers must complete presentations with multiple slides. This might be difficult for some teachers because they are used to putting all of their information on a single page. During the planning stage, teachers must begin to think about how they might organize their information on multiple slides. As a result, the planning process should focus more on informational organization and structure (sometimes called storyboarding) and not on the actual appearance or design of each slide.
- To complete certain projects, teachers need to identify and include appropriate clip art, sound and music files, and perhaps animation and video clips. Because much of the artwork they will find in the clip art gallery/organizer or online may not be ideal for teachers, consider locating suitable multimedia files in advance. Then, save the files in an easy-to-locate folder on each computer's hard disk drive or on a shared network server. If using the Microsoft Windows* platform, many usable sound files can be found in the Media folder located in the Windows folder on a computer's hard disk drive.
- Be certain to adjust the volume on the computers' speakers so teachers will be able to hear the sound and music in their presentations. Even if the computers do not have external speakers, most have built-in speakers in the CPU or on the monitors that will play sound.
- In some activities, teachers have the opportunity to record their voices. If available, handheld microphones should be used because they produce the best recorded sound. Many computers also contain a built-in microphone (often on the monitor). These may be used, but the quality of any voice recordings may be poor. If no microphones are available, teachers should skip these steps.
- To help teachers add text and pictures to their slides, they are usually instructed to insert a specific type of slide. However, teachers may insert another type of slide instead. If needed, they can follow the same procedures they used during the previous word processing activities to create a text box or insert a picture. They can also delete any text or picture boxes that they do not need.
- When you transfer a presentation to a disk, CD, another computer, or an external storage device, all of the sound and video files must be saved with the presentation. Be certain to use the Pack and Go wizard (**File** ⇒ **Pack and Go**), or equivalent, to conveniently save all required media files with a presentation file.

Spreadsheets

Some computer technologies come naturally to teachers. Word processing poses few challenges because most teachers have already completed equivalent handwritten projects, such as writing a letter or a report. Despite multimedia's complexity, many teachers manage to complete multimedia projects because they have already experienced interactive design through multimedia CDs or even informational kiosks at museums or train stations.

Unfortunately, the same cannot be said about spreadsheet technology, which can pose unique challenges to teachers. The challenges do not lie with the actual spreadsheet programs or the inherent difficulty of the technology. Rather, complications arise because few teachers have experience gathering, organizing, manipulating, and interpreting large amounts of numeric data. Additionally, few teachers possess an understanding of why a particular type of chart is the most suitable visual representation for a specific set of data.

Given these potential challenges, some trainers may wonder why they should teach spreadsheets to teachers. The answer lies in the fact that certain computer technologies, including spreadsheets, are more likely to develop higher-order thinking skills than other technologies, including word processing and multimedia. While "show-and-tell" applications such as word processing and multimedia provide teachers with unique and effective ways to communicate ideas, spreadsheet applications offer greater opportunities for analysis, synthesis, and evaluation.

By using spreadsheet technology, teachers use abstract and concrete reasoning as they gather and manipulate numeric information that reflects real-world phenomena. Critical-thinking skills are required to organize, arrange, and classify data; to perform calculations; to analyze and interpret data and results; and to make predictions and form conclusions. Despite all of these advantages, spreadsheet technology is rarely used in classrooms, and in instances when teachers have the opportunity to complete spreadsheet activities, they are typically limited to inputting and charting information. This limited use is little more than another example of a "show-and-tell" application. To maximize the educational value of spreadsheet technology, teachers should be expected to use the numeric information and charts to answer questions or solve problems. This critical element to spreadsheet activities both requires higher-order thinking and approximates real-life application of the technology.

General Strategies

The featured spreadsheet activities provide instruction in the various ways that teachers may use spreadsheet technology in their daily lives. First, all teachers complete the required Grade Book activity, which features critical spreadsheet skills, such as entering and formatting data, sorting information, and performing calculations. Teachers looking to develop more advanced knowledge of traditional spreadsheet skills, including entering their own mathematical equations and generating charts based on numeric data, may then choose to complete the Classroom Inventory or Pictograph activity. Other teachers may be more interested in learning some of the less traditional and less difficult applications of spreadsheet technology by completing the Seating Chart or Roll Book activity.

When teachers complete spreadsheet activities, consider the following general strategies:

- The system of lettered columns (labeled along the top edge of the worksheet) and numbered rows (labeled down the left side of the worksheet) may initially confuse some teachers. During the spreadsheet exploration, point out that the letter and number of the cells that teachers click is shown in the name box above the worksheet window. Also, mention that the column letter and the row number changes whenever teachers click a cell. Either (or both) of these strategies can be used to help teachers become familiar with cell references and the system of rows and columns.
- Whenever teachers enter numeric information into a worksheet, they need to type the actual numerals and not the words for those numeric quantities. (For example, teachers need to type the numeral 5 instead of the word *five*.) If they do not type numerals, their formulas, functions, and charts will not work properly.
- Sometimes, a spreadsheet task can be completed in more than one way. (For example, teachers can sort alphabetically by clicking a toolbar button or by choosing the desired commands from a menu.) Encourage teachers to use whichever methods they are most comfortable with.
- Some teachers may decide that performing mathematical calculations on their own and typing the answers is easier than inserting functions and formulas. However, teachers should be instructed to insert functions and formulas as directed. Then, teachers will be able to use the **Fill** command to perform the same calculations in neighboring cells. In the process, teachers will also develop better understandings of the benefits of spreadsheet technology.
- Many teachers feel that spreadsheet activities are like mathematics problems, and as such, teachers might be concerned about “getting the correct answer.” Let teachers know that they should focus on learning how to use spreadsheets, not on getting the correct answer. They can learn a lot about spreadsheets even when they make mistakes, and mistakes can be fixed. Over time, teachers will become more familiar with the technology and develop confidence in their abilities to try new things.

Facilitating Exercises and Activities

- Spreadsheet applications enable teachers to quickly perform calculations, organize information, and generate charts. Skilled spreadsheet users consider the automated features invaluable. On the other hand, the same features can create a sense of discomfort and anxiety in novice users. When teachers use the automated spreadsheet features, they will notice that something has happened. However, they may not understand what has happened or know if they have achieved the desired results. You can increase teacher understanding in a number of ways:
 - Whenever teachers perform calculations (such as using the **Sum** function), encourage them to check their answers. Because the mathematics in the activities is easy for most teachers, they can often determine if they have correctly selected the cells and performed the calculation if they add the numbers themselves. If they find that they have made a mistake, they can use the **Undo** function (or delete the formula) and try again.
 - Although teachers may initially find the process of sorting information to be difficult, encourage them to explore until they achieve the desired results or until they find a sequence that makes sense to them. Remind them that they do not have to get it right the first time. They can always use the **Undo** function to put the rows back into the previous order and try again.
 - Some teachers are unfamiliar with the unique purpose of the various charts they create. However, by generating the charts and discussing the visual display of worksheet data, their understanding will develop gradually. Teachers may also experience difficulty selecting the required information to correctly create the chart. They may also be unable to determine if their generated charts are correct. Encourage teachers to compare their charts to the sample charts in their books. If they think that they may have made a mistake, instruct them to try again until their charts look correct. Later, they can delete any worksheets containing incorrect charts. (They can also select and delete any incorrect charts mistakenly placed in the worksheet itself.)
- Most teachers enjoy changing the look of the information in their worksheets and applying borders and shading to cells, rows, and columns. As a result, they often invest too much time in this task and avoid the steps that they perceive to be more difficult. You might need to encourage teachers to move on to the remaining steps so they can complete the activity and review their work in the allotted time. They can always make additional changes later if time permits.
- In the activities that involve creating charts, teachers are instructed to save them in a separate sheet. However, teachers can also save their charts in the worksheet.