Developing and assessing integrated technology curriculum

Kelly Baier
University of Northern Iowa

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Developing and assessing integrated technology curriculum

Abstract
This project is a technology curriculum development plan for 2nd graders for the Johnston Community School District. It involves the development of district standards and benchmarks, lesson plans integrating technology into other curricular areas, and assessments. This curriculum plan was developed at each grade level and used to improve teacher accountability, enhance students' problem-solving skills, keep consistency across the grade levels, and to have a district-wide technology plan for our students. The paper, which accompanies the project, includes an introduction to the project, its methodology, a description of the project in full detail, and conclusions and recommendations for future work.
Developing and Assessing Integrated Technology Curriculum

A Graduate Project
Submitted to the
Division of Educational Technology
Department of Curriculum and Instruction
In Partial Fulfillment
Of the Requirements for the Degree
Master of Arts

University of Northern Iowa

By
Kelly Baier
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This project by:
Kelly Baier

Titled:
Developing and Assessing Integrated Technology Curriculum

Has been approved as meeting the research requirement for the Degree of Master of Arts.

August 9, 2000
Date Approved

August 9, 2000
Date Approved

August 14, 2000
Date Approved

Sharon E. Smaldino
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Leigh E. Zeitz
Graduate Faculty Reader

Rick C. Traw
Head, Department of Curriculum and Instruction
Abstract

This project is a technology curriculum development plan for 2\textsuperscript{nd} graders for the Johnston Community School District. It involves the development of district standards and benchmarks, lesson plans integrating technology into other curricular areas, and assessments. This curriculum plan was developed at each grade level and used to improve teacher accountability, enhance students’ problem-solving skills, keep consistency across the grade levels, and to have a district-wide technology plan for our students. The paper, which accompanies the project, includes an introduction to the project, methodology, describes the project in full detail, and gives conclusions and recommendations for future work.
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Introduction

I have developed a technology curriculum for 2nd grade. This curriculum includes developed standards and benchmarks in technology, integrated technology activities, and assessments. The activities are broken down into curricular areas and do not focus only on technology standards and benchmarks but also on specific curricular area standards and benchmarks. This project started in the fall of 1999 while I was working on our technology committee at school. A small group of teachers, including myself, had just spent time over the summer developing a set of standards in benchmarks in technology for K-12.

While presenting the new standards to our staff I realized we had two major problems. One was that we had no assessment for these standards. The other was that many of the teachers were confused about how they would go about teaching the students these standards. The committee decided that we would have to have a teacher from each grade level commit to working on developing a curriculum for technology. This curriculum would be driven by the standards and benchmarks and would be integrated into other curricular areas. Assessments would also be included in the curriculum and it was decided that these assessments would be turned into administration by May so the technology committee could evaluate the process. The assessments would prove that teachers were teaching the curriculum, which would ensure teacher accountability. The purpose of this project was to give every grade level teacher in our school district a curriculum to guide them in the teaching of technology. This guide would give them ideas for activities, websites, resources, and assessments. The activities in the curriculum are also in continuous working
progress. We encourage teachers to come up with new ideas and to make copies to hand out to other grade level teachers. This is why we have the curriculum in a three ring binder. We hope to continually add to it to improve.

Being a 2nd grade teacher, I developed the curriculum for 2nd grade. Therefore, all of the activities you will find are for that age group. Our district technology coordinator, myself, and several other teachers plan on presenting this process at the Iowa Technology & Education Connection conference October, 2000. It continues to be a work in progress.

Methodology

Many different resources were used in the development of this project. While developing the standards and benchmarks, I looked at the National Standards and Benchmarks, and at neighboring school districts around the Des Moines area. Our technology committee was surprised to find that many other districts did not have a set of technology standards. Our committee chose four standards:

- Use technology to communicate effectively and creatively.
- Use appropriate technologies for critical thinking, creative expression, and problem-solving skills.
- Use technology and applications to increase productivity.
- Applies ethical and legal standards in using and implementing technology.

After these standards were developed, I did research on the impact of technology in the classroom and assessing technology to prove to the School Board that having a technology curriculum was worthwhile. Here is a review of some of the more pertinent literature.
Eisenberg and Johnson (1996) focused on the impact of technology in the curriculum. There seems to be clear and widespread agreement among the public and educators that students need to be proficient computer users—students need to be "computer literate." However, while districts are spending a great deal of money on technology, there seems to be only a vague notion of what computer literacy really means. "In too many schools, most teachers and students still use computers only as the equivalent of expensive flash cards or electronic worksheets. The productivity side of computer use in the general content area curriculum is neglected or grossly underdeveloped" (Eisenberg & Johnson 1996, p.1). Eisenberg and Johnson point out that moving from isolated skills instruction to an integrated approach is an important step that takes a great deal of planning and effort. The skills must directly relate to the content area curriculum and to classroom assignments. The skills themselves need to be tied together in a logical and systematic information process model.

Eisenberg and Johnson’s (1996) study helped to show that teachers need to do more with their computers, specifically, curriculum integration. The question of impact of technology on our students' lives can be answered by Schacter. Schacter (1998) reviewed 219 research studies from 1990 to 1997 to assess the effect of technology on learning and achievement across all learning domains and all ages of learners. From his analysis of these studies he reported the following consistent patterns:

- Students in technology-rich environments experienced positive effects on achievement in all major subject areas.
• Students in technology-rich environments showed increased achievement in preschool through higher education for both regular and special needs children.

• Student attitudes toward learning and their own self-concept improved consistently when computers were used for instruction. (p. 3)

Painter (2000) says that now that research is showing how integrated technology can be a positive impact on students’ academic lives, the question of assessing how the students are performing with technology can be brought up. I did a lot of research on how students are being assessed in the area of technology. Assessment gauges the degree of success students have achieved in meeting the standards defined in the project. “Assessment can be used to increase student motivation, improve instruction, provide different learning environments, increase learning efficiency, and increase academic achievement”(Painter 2000, p.8). A group of educators worked on implementing and assessing technology planning in Iowa schools. For assessment the consortium turned to Math Exemplars, a performance assessment problems for grades K-8 that meet NCTM, state, and local standards (Thompson 2000, p. 3). They suggested that assessments of technology should include:

• The performance task and the context for the assignment

• An assignment specific rubric

• Annotated benchmark papers at Novice, Apprentice, Practitioner, and Expert levels
• Concepts to be assessed and skills to be developed
• Interdisciplinary links and teaching tips
• Possible solutions
• Suggestions on how students might carry out the task
• Estimated time required

These were all items taken into consideration while developing assessments for our technology curriculum. When considering technology evaluation, we are predominantly concerned with formative versus summative methods. The evaluations we review are of the "how are we doing?" versus the "how have we done?" variety. Sun (2000) feels that

the general public usually expects 'tests' that summarize the success or failure of a particular event or occurrence. As most teachers know, technology implementation-and certainly the larger educational enterprise of which technology is just as small part-cannot be treated as a "been there, done that" event. Meaningful assessments take a variety of factors into consideration and transpire over time. Exemplary technology evaluation work incorporates this philosophy by developing broad-based indicators that are measured using quantitative and qualitative data (Sun, 2000, p. 34).

He suggests that creating indicators into assessment rubrics and collecting data from those scoring rubrics is an excellent way to gather data for the technology process. In addition, students said they liked to use rubrics because they helped them better understand what was expected in terms of stack design and content.
Barnett (2000) shows how useful a rubric may be in assessing technology. Barnett finds that rubrics are one of the multiple measures you can use to assess student work. "Rubrics also help students know, while they are planning their work, what components are required in a superior project. Rubrics have even greater power when teachers lead students to develop them as a class" (Barnett, 2000, p. 30). Barnett also suggests that student products, Web pages, multi-media projects, computer-generated art, desktop published items, or video projects provide powerful examples of the impact of technology on student learning. Collect them and show them off at every opportunity. They will provide parents, administrators, and policy makers with evidence that the dollars they are spending on technology are giving a good return on investment.

The Project

The accompanying project is technology curriculum for 2nd graders in the Johnston School District. It is divided into three main parts: Standards and Benchmarks, Integrated Technology Activities, and Assessment. The activity section is made up of lesson plans and is also divided into curricular areas. Each lesson plan has the grade, unit, activity, curricular standards and benchmarks, and technology standards and benchmarks listed at the top of the page. Language Arts, Math, Science, Social Studies, Technology and Resources. The reason why I felt that technology needed to have its own section is because there are some things you just need to teach the students about how to use a computer that did not fall into other
curricular areas. Also, in 2nd grade students are assessed on computer parts so it is important to spend some time going over these areas.

Each activity or lesson plan has an assessment or evaluation component. However, the assessment section at the end is a total assessment of the students' knowledge of computer use. These assessments are to be conducted toward the end of the year. Second grade has two different assessments that must be completed and submitted. One is a checklist on parts of the computer. These can be totaled up and students are given a score. The scoring is:

17-19-Advanced
15-16-Proficient
14-Basic
0-13- In Progress

This terminology is key wording that our district uses in all areas of assessment. Advanced, Proficient, Basic, and In Progress are words that the students are familiar with because it is a part of their report cards and used on rubrics at every grade level.

The other assessment is a rubric geared toward a research project. The teacher can integrate this project into any area of study he/she chooses. This grading scale also uses Advanced, Proficient, Basic, and In Progress. When the teacher and students have completed these assessments, scores are transferred onto the technology assessment tally sheet. All scores are turned into the school media specialists or technology coordinator. This tally sheet also contains a teacher comment section, which was very helpful as this is the first year this curriculum was required to be taught. I will touch more on those comments in my recommendations section.
Conclusions and Recommendations

In conclusion, I would like to say that this remains a work in progress. I strongly encourage teachers to come up with activities or lesson plan ideas, and submit them to the rest of the grade level. Our district has four elementary schools and about 20 second grade teachers so it is important that we stay as consistent as possible with our teaching. Also, the greatest way teachers learn is from other teachers. There are some things I really like about this project and some things I would like to change and do differently. One of the things that I really like is having teacher accountability. With so many teachers in our district, I was noticing that when I would get new students each year, some students had been exposed to technology in 1st grade, and some had never had it. It depended on the teacher from the previous year. It is still true that some teachers are just more technology literate than others and will continue to go above and beyond the call of duty. However, now there is a “minimum” requirement of technology that each teacher must teach so I know all of my students have been exposed to certain things on the computer. This is helpful for me when doing lesson planning. I also really like the idea of the work in progress. I came up with these activities on my own, but since I have handed it out to teachers in February, I have had some new activities come in from others. That’s what teaching is all about: sharing! For future recommendation, I would like to send out a “format” in which the activities are typed. This will help to keep consistency throughout the book. It has helped teachers who do not know what to do with technology. Now, all they have to do is open up this book and there are a lot of different ideas.
After reading some of the teacher comments on the assessment tally sheet, it was really helpful in changing some things. I noticed in some cases the same benchmark was being assessed twice and it was a waste of time. Our technology group met after the school year was over and made some revisions due to some of those comments. Also, I think it would be helpful to have a scope and sequence of skills in this book from kindergarten up to 12th grade. This is something our technology committee is also currently working on. There is also more I would like to do with assessment. After doing the research on assessing technology skills, I think our district is off to a great start, but we need more. I would like to see more projects and more integration.

There has been a lot of talk in our district about why we should have a set of technology standards when technology should be integrated into the curriculum. When looking at what other districts do, I did notice that in districts where they did not have technology standards, they incorporated some technology standards into the other curricular areas. I truly feel that technology needs its own standards. It can still be integrated but it is helpful for students, parents, teachers, and administrators to be able to look at standards in technology and know that this is what a particular student will be learning at that grade level. It helps to keep students and teachers consistent at each grade level.

This has truly been and continues to be a learning process for me. I am very excited at the opportunity to present this at the Integrated Technology & Education Connection conference fall 2000. I continue to make revisions and changes, which is also an important part of the learning process.
Bibliography


Painter, D (2000). Teacher as researcher-A means to assess the effectiveness of technology in the classroom. Learning and Leading with Technology, 27, 10-14

Schacter, J (2000) The impact of education technology on student achievement-What the most current research has to say. Milken Exchange on Educational Technology, 3-11


Appendix A
Second Grade Technology

1.0 Use technology to communicate effectively and creatively.

1.1 Demonstrate ability to create an original product

1.1.1 Type information using the space bar, shift key and return key.

1.1.2 Create a picture using a draw program adding text and sound.

1.1.3 Insert a graphic into a word processing document.

1.2 Use various types of communication.

1.2.1 Record their voice using a tape recorder or computer.

1.2.2 Type and send a message using an electronic mail program.

2.0 Use appropriate technologies for critical thinking, creative expression and problem-solving skills.

2.1 Use specific programs to observe, analyze and draw conclusions

2.1.1 Explore concepts using a variety of programs

2.1.2 Select appropriate resources: CD's, programs, and/or the electronic dictionary.

2.2 Use technology to solve problems

2.2.1 Draw a picture to solve a problem.

2.2.2 Collaborate with a partner to solve a problem.

2.3 Access and retrieve electronic information

2.3.1 Utilize available resources to select relevant information.

3.0 Use technology and applications to increase productivity.

http://www.johnston.k12.ia.us/Curriculum/Technology/2nd%20Grade%20Technology 6/19/2000
3.1 Demonstrates an understanding of basic computer terminology

3.1.1 Identifies basic computer parts: monitor, keyboard, printer, CD drive, disk drive, and mouse

3.2 Demonstrates basic computer functions.

3.2.1 Turn computer on.
3.2.2 "Shut Down" computer
3.2.3 Open an application from the hard drive.
3.2.4 Quit an application
3.2.5 Load CD's and disks
3.2.6 Demonstrate the use of clicking to move the cursor.
3.2.7 Print a document.
3.2.8 Change formats

3.3 Demonstrates basic keyboarding functions.

3.3.1 Demonstrate the use of the shift key, space bar, return key, delete key and letter/number keys.

4.0 Applies ethical and legal standards in using and implementing technology.

4.1 Acknowledges sources of information.

4.1.1 Acknowledges resources used in projects.
4.1.2 Aware of copyright guidelines.

4.2 Exhibits respect for security and property.

4.2.1 Demonstrates proper handling of equipment and software.
Appendix B
Technology Assessment Tally Sheet 2-5

Teacher: _________________________________

Grade Level: ______________

Number of students in class: __________

Number of students assessed: __________

<table>
<thead>
<tr>
<th>Number</th>
<th>Advanced</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>Number</th>
<th>Proficient</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Number</th>
<th>Basic</th>
<th>Percent</th>
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<tbody>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Number</th>
<th>In Progress</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Teacher Observations:

Assessment Suggestions:
<table>
<thead>
<tr>
<th>Indefites</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mouse</td>
<td>CPU</td>
</tr>
<tr>
<td>disk drive</td>
<td>Monitor</td>
</tr>
<tr>
<td>Printer</td>
<td>Keyboard</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Create a picture using a drawing program.
- Send a message using an electronic mail program (whole class).
- Turn on / wake up computer.
- Shut Down / sleep computer.
- Load CD-ROMs.
- Change text formats (font, size, style).
- Manipulate the mouse: clicking to move the pointer / I-beam.
- Open an application / program.
- Collaborate with a partner to solve a problem.
- Draw a picture to solve a problem.
- Quit an application / program.
- Indentifies Components

**Identifies Components**

- Monitor
- Keyboard
- Printer
- CD-ROM drive
- Disk drive
- CPU
- Mouse

**Assessment Technology Grade**

- Teacher: [Name]
- Second Grade
- Score: [Score]
- 0 = Student can demonstrate
- X = Student can demonstrate
- Placeholder
## 2nd Grade Technology Assessment

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Advanced 4 (0 prompts)</th>
<th>Proficient 3 (0-1 prompt)</th>
<th>Basic 2 (2-3 prompts)</th>
<th>In Progress 1 (&gt;3 prompts)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.0 Communication</strong></td>
<td>Created a word processing project, including: *Title, different font than body *body, plain text *use of bold *spacing and capital letters used accurately</td>
<td>Created a word processing project, including: *Title, different font than body *body, plain text *use of bold *spacing and capital letters</td>
<td>Created a word processing project, including: *Project included 2 text items listed in the Proficient column.</td>
<td>Needs reteaching of skills to create a word processing project including: *Project included less than 2 text items listed in the Proficient column.</td>
</tr>
<tr>
<td>*Text 3.3.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Graphics 1.1.2</strong></td>
<td>Student completed one of the following independently: *Inserted a graphic.</td>
<td>Student completed one of the following with verbal prompts: *Inserted a graphic.</td>
<td>Student completed one of the following with physical help: *Inserted a graphic.</td>
<td>Needs reteaching of skills to create a project including graphics. *Project contains no graphic.</td>
</tr>
<tr>
<td><strong>2.0 Critical Thinking/Creative Expression/Problem Solving 2.1.1 2.3.1</strong></td>
<td>Independently selects, accesses, and retrieves information from sources to be used as notes in the above project.</td>
<td>With verbal prompts, selects, accesses, and retrieves information from sources to be used as notes in the above project.</td>
<td>Teacher physically helps select, access, and retrieve information from sources to be used as notes in the above project.</td>
<td>Needs reteaching to select, access, and retrieve information from sources to be used as notes in the above project.</td>
</tr>
<tr>
<td><strong>4.0 Ethical Standards 4.1 4.2.1</strong></td>
<td>*Student could verbally tell the teacher the name of the program that created this project. *Student demonstrated proper handling of equipment and software.</td>
<td>*With verbal prompts, the student could name the program used in this project. *Student demonstrated proper handling of equipment and software.</td>
<td>*The student named a computer program, but not the one used to create this project. *Student demonstrated proper handling of equipment and software.</td>
<td>*The student was unable to name a program. *Student did not demonstrate proper handling of equipment and software.</td>
</tr>
<tr>
<td>Total 15-16 Advanced 13-14 Proficient 12 Basic 0-11 In Progress</td>
<td></td>
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</tr>
</tbody>
</table>

**Level**
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Advanced 4 (0 prompts)</th>
<th>Proficient 3 (0-1 prompt)</th>
<th>Basic 2 (2-3 prompts)</th>
<th>In Progress 1 (&gt;3 prompts)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.0 Communication</strong></td>
<td>Created a word processing project, including: *Title, different font than body *facts on an animal bold *spacing and capital letters used accurately</td>
<td>Created a word processing project, including: *Title, different font than body *facts on an animal bold *spacing and capital letters</td>
<td>Created a word processing project, including: *Project included 2 text items listed in the Proficient column.</td>
<td>Needs reteaching of skills to create a word processing project including: *Project included less than 2 text items listed in the Proficient column.</td>
</tr>
<tr>
<td>*Text 3.3.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Graphics 1.1.2</strong></td>
<td>Student completed one of the following independently: *Inserted a graphic of a Bird, Mammal, or Reptile</td>
<td>Student completed one of the following with verbal prompts: *Inserted a graphic of a Bird, Mammal, or Reptile</td>
<td>Student completed one of the following with physical help: *Inserted a graphic of a Bird, Mammal, or Reptile</td>
<td>Needs reteaching of skills to create a project including graphics. *Project contains no graphic.</td>
</tr>
<tr>
<td><strong>2.0 Critical Thinking/Creative Expression/Problem Solving 2.1.1 2.3.1</strong></td>
<td>Independently selects, accesses, and retrieves information from sources to be used as notes in the above project.</td>
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<td>*The student named a computer program, but not the one used to create this project. *Student demonstrated proper handling of equipment and software.</td>
<td>*The student was unable to name a program. *Student did not demonstrate proper handling of equipment and software.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

15-16 Advanced
13-14 Proficient
12 Basic
0-11 In Progress

**Level**
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Advanced (4 prompts)</th>
<th>Proficient (3 prompts)</th>
<th>Basic (2 prompts)</th>
<th>In Progress (1 prompt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Communication</td>
<td>*Text 3.3.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Graphics 1.1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0 Critical Thinking/Creative Expression/Problem Solving</td>
<td>2.1.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.3.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.0 Ethical Standards</td>
<td>4.1</td>
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<tr>
<td></td>
<td>4.2.1</td>
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</tbody>
</table>

**Total** /16

15-16 Advanced
13-14 Proficient
12 Basic
0-11 In Progress

**Level**
Parts of a Computer

Computers are made up of many parts, just like we have arms, feet, hands, a head, and more.

Activity: Follow the directions below to see all the different parts of a computer system.

1. Draw a face on the monitor.
2. Write “I love you” on the paper in the printer.
3. Color the CPU yellow.
4. Draw a pair of hands on the keyboard.
5. Color the disk drive red.
6. Draw whiskers on the mouse.
7. Color the CD drive blue.

Extension: Look at a computer system in your classroom and try to identify the parts.
Second Grade

Part I
* Staff may use the assessment sheet that is one per student or the “Class At A Glance” sheet.
* Staff may use the component identification sheet (then transfer the score back to the assessment sheet) OR ask the students individually to identify the components physically and record on the checklist.

Part II
* Students complete a word processing activity (animal or other research topic) and staff use the performance task rubric to score students individually.

Compiling:
• Each column of the “Class At A Glance” should be totalled at the bottom and turned in.
• Staff enters totals in each box for the whole class in the performance task rubric Tally Sheet; turn in sheet.
• Assessment Tally Sheet needs to be filled in and turned in.

Assessments are due to Media Specialist by May 15.
Appendix C
Grade: 2
Unit: ILA-The Biggest Bear or Science - Reptiles, Mammals, and Birds
ScS&B: 4.1 Knows that animals have features that help them live in different environments
Activity: Internet/Animal Research
TS&B: 2.1.1 Explore concepts using a variety of programs. 2.3.1 Utilize available resources to select relevant information.

Objectives: Students will be able to launch Internet and travel to a site by using an address. Students will be able to maneuver in an Internet site to obtain specific information.

Materials: Internet, The Cubden-All About Bears handout (attached), The Cubden web site bookmarked (www.nature-net.com/bears/cubden.html)

Procedures:
Whole Class Demonstration
1. Demonstrate/Review launching Internet/Netscape (whole-class instruction).
2. Discussion/Review of Internet as a highway and you are travelling on it. You need to know the destination (address) or ask for directions and follow a map (search engine). When street traffic is busy, we slow down; it is the same in using the Internet. When Internet is busy, we slow down.
3. Discussion/Review and demonstration of STOP and BACK buttons, ADDRESS bar, ‘WORKING ICON’ (Netscape icon with meteors going through it), I-beam vs. pointer hand icon, CLICKING on links.

Student Activity
1. Go to SeaWorld web site by using the bookmark OR enter the address:
   www.nature-net.com/bears/cubden.html
2. Discuss moving around in the site. Pass out activity sheet and have The Cubden-All About Bears students maneuver around the site looking for the question answers.
3. Quit Netscape (FILE - Quit) and leave at desktop.

*Students may need an additional lab time to complete the questions and explore the activities on The Cubden web site.

Assessment: worksheet (10 questions)
   Advanced: 9 questions correct
   Proficient: 8 questions correct
   Basic: 7 questions correct
   In Progress: 6 or less questions correct
1. Bears have big _________, little _________ and small _________.

2. Bears can ___________ and ___________ like us.

3. Brown bears are also called ___________.

4. Sun bears are the ___________ bears.

5. Polar bears have ___________ fur.

6. Bears eat ___________ and ___________.

7. Mother bears can have ___, ____, or _______ cubs.

8. Many bears live where the winters are very _________.

9. ___________ are a bear’s biggest enemy.

10. All kinds of bears need _________________.

Using Kid Pix for Presentation

Objective:
Students will use KidPix to present what they learned from research.

Standards:
1.0  Use technology to communicate effectively and creatively
2.0  Use appropriate technologies for critical thinking, creative expression and problem-solving skills

Benchmarks
1.1  Demonstrate ability to create an original product
1.2  Use various types of communication
2.2  Use technology to solve a problem

Materials:
KidPix software
Four facts found from research activity

Procedure:
1. Students will use their four facts from the research activity to present what they learned on a slide show. You can do an individual slide show or a class slide show. For beginners, a class slide show will be easiest and it is what I would use for this lesson.
2. The student needs to type their information on the KIDPIX page. Then, they need to draw a picture of their topic. Last, they need to record their voice reading what they wrote.
3. Every student in the room needs to do this. Then, the teacher can make one class slide show.

Assessment
The student's slides will be an authentic assessment of their work. However, while working in the lab it will be helpful to the teacher to use checklist to see how independent students are on the computer.
KID PIX TECHNOLOGY SKILLS

• Demonstrate the following Kid Pix tools and have your partner initial on the lines.

<table>
<thead>
<tr>
<th>TOOLS</th>
<th>File</th>
<th>Edit</th>
<th>Goodies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wacky Pencil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rectangle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oval</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wacky Brush</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electric Mixer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paint Can</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eraser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubber Stamps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moving Van</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Undo Guy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Color</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Show how to use the moving van and magnet tool
- Show how to import a graphic from K-12 Graphics
- Show how to import a graphic from Writing Center
<table>
<thead>
<tr>
<th>Skill</th>
<th>Partner Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draw a white rectangle that you can see through</td>
<td></td>
</tr>
<tr>
<td>Draw a white rectangle that you can't see through</td>
<td></td>
</tr>
<tr>
<td>Make all your whites turn black and all your blacks turn white</td>
<td></td>
</tr>
<tr>
<td>Fuzz your picture so that the edges aren't straight</td>
<td></td>
</tr>
<tr>
<td>Draw something that looks like a slinky</td>
<td></td>
</tr>
<tr>
<td>Draw a tree and then make it larger</td>
<td></td>
</tr>
<tr>
<td>Make part of your drawing bigger and then smaller</td>
<td></td>
</tr>
</tbody>
</table>

**Technology Consultant Ideas**

Camcorder film crew  
Team Leader  
Newsletter Proofreading Manager  
Script Manager  
Thethesaurus Support  
Kid Pix Consultant  
Vizcam Consultant  
Works 3.0 Draw Tech Support  
Producer  
Works 4.0 Tech Support  
Editor  
Newsletter Story Ideas Manager  
Team Materials Organizer  
Rehearsal Director  
Disk Manager  
Quick Cam Consultant  
Hyperstudio Consultant  
Writing Center Tech Support  
Newsletter Editor  
Spell Checker Tech Support
### ADVANCED KID PIX TECH SKILLS

<table>
<thead>
<tr>
<th>Skill</th>
<th>Partner Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make a perfect circle</td>
<td></td>
</tr>
<tr>
<td>Draw a line in rainbow colors</td>
<td></td>
</tr>
<tr>
<td>Splatter triangles across the screen</td>
<td></td>
</tr>
<tr>
<td>Make a dot to dot picture</td>
<td></td>
</tr>
<tr>
<td>Make something disappear without using the eraser</td>
<td></td>
</tr>
<tr>
<td>Make snowflakes appear</td>
<td></td>
</tr>
<tr>
<td>Make raindrops appear</td>
<td></td>
</tr>
<tr>
<td>Turn your drawing into an outline</td>
<td></td>
</tr>
<tr>
<td>Double the size of a stamp</td>
<td></td>
</tr>
<tr>
<td>Triple the size of a stamp</td>
<td></td>
</tr>
<tr>
<td>Use your own name to paint a line</td>
<td></td>
</tr>
<tr>
<td>Make a rainbow-colored rectangle</td>
<td></td>
</tr>
<tr>
<td>Change the colors on a stamp</td>
<td></td>
</tr>
<tr>
<td>Draw with a line that has round, not straight edges</td>
<td></td>
</tr>
</tbody>
</table>
Appendix D
Grade: 2
Unit: Technology
Activity: Introducing parts of the computer

TS&B: 3.0 Uses technology and applications to increase productivity
3.1 Demonstrates an understanding of basic computer terminology
3.1.1 Identifies basic computer parts

Objectives: Students will know proper care of computer
Students will identify basic computer parts:
- Monitor
- Keyboard
- Printer
- CD Drive
- Disk Drive
- Mouse
- CPU (Central Processing Unit)

Materials:
- Labels for computer parts
- Comb, calculator, fork, spoon, crayons, pencils
- A computer is a tool worksheet
- Parts of a computer worksheet

Optional Worksheets:
- What can a computer do?
- Proper Care of your computer
- A computer is a machine

Worksheets are attached

Procedures:
1. Invite students up to floor by your computer. Ask students to tell you what they think a computer is. List some of their ideas on board or chart.
2. Explain to students that a computer is a machine and a tool that we use to do work.
3. Tell students that you have many different tools in your bag that we use everyday to get work done. Pull objects out and have students tell you what you use that tool for. (Comb, calculator, fork, crayons, etc.)
4. What kinds of rules should we have for using the computer? (At this time, discuss proper care of your computer and classroom rules) List on chart.
5. Point to different parts of the computer. What is this part called? When the part is identified, tape the correct label on it and discuss what it does. Leave the labels up for awhile so students get used to the names.

Assessments:
Parts of a computer worksheet
Advanced: 7 questions correct
Proficient: 6 questions correct
Basic: 5 questions correct
In Progress: 4 or less
A computer is a tool that is used to do work. You use many tools each day. You can hold tools in your hands. For example, pencils, rulers, and books are tools you use in school. You use crayons, scissors, clay, and paint to make creative art projects. If you play baseball, you need a bat and a ball. At home you use a spoon to eat cereal and a toothbrush to brush your teeth.

Activity: Look at the pictures below and draw a line from the picture of the tool to the job it helps you do.

1. Draw a picture.
2. Eat your dinner.
3. Go to a friend's house.
4. Listen to music.
5. Add 3 + 5.
6. Comb your hair.

Extension: Ask your students to list all the tools they use every day. Can anyone list more than 25?
What Is a Computer?

What Can a Computer Do?

We have learned that computers are both machines and tools used to help us do work. A computer may seem to be smart, but it is not small at all. It cannot think for itself and does not have any feelings like you do. It cannot be happy or sad. A computer does not eat or sleep, or decide what to wear, each day. In order for a computer to do anything at all, you or someone like you must tell it what to do.

Activity: Pretend you have a computer that can do anything you would like it to do. Use your imagination and draw a picture of this computer and what it can do.

My computer can . . .

Extension: List similarities and differences between yourself and a computer.
Proper Care of Your Computer

You now know that a computer is both a tool and a machine. Think about all the things you own, such as your clothes, books, and toys. You must take good care of them so that they will last a long time and not tear or break. The same is true of your computer. You must take good care of it so that it will last a long time and remain in good working condition.

Activity: Look at the picture of the computer below. Then read the statements around it. Draw a line from the computer to the statements that tell you how you should take care of a computer.

- Keep it clean.
- Bang on the keyboard.
- It is OK to drop cookie crumbs on it.
- Drop it on the floor.
- Don't spill anything on it.
- Don't put anything but your disk into it.
- Never drop it.

Don't keep it anywhere too hot or too cold.

Extension: Demonstrate and allow your students to further discuss proper computer care.
A Computer Is a Machine

A computer is a machine. It is used to help you with your work. You may think that a computer is very smart, but it really is not. It is only a machine and, like any machine, can only do what you tell it to do.

Activity:
I am a computer.
Trace my name.
Connect the dots and draw a picture of a computer.

Extension: Allow your students to name other machines they use or see used every day. Stress that these machines (tools) all have special jobs. For example, a washing machine cleans their dirty clothes.
Grade: 2
UNIT: Technology /ILA
   Topic: Introduction to Computer Lab & CW-wp
   Subtopic: 3: ILA
   A B: 1.1.1 & 3.3.1-Type information using the space bar, shift key and return key.
   3.1.1- Identifies basic computer parts: monitor, keyboard, printer, CD drive and/ or disk drive, and mouse.
   3.2-Open an application.
   3.2-Demonstrate the use of clicking to move the cursor.

*This is typically a 40 minute lesson.*

Objectives: Students will learn the computer lab rules and expectations.
Students will open the ClarisWorks program and begin a word processing document.
Students will learn to type their first and last name.
Students will learn the spacebar, shift keys, and return key.
Students will learn to click and drag to highlight text.
Students will learn to change the font, size and color of their name.

Materials: ClarisWorks-word processing

Activity:
Part I  1. Introduce the computer lab to the students; rules and expectations.
   2. Introduce the parts of a computer; CPU (brain), mouse, keyboard, printer.
   3. Demonstrate turning on the computers. The computers are most likely already ON, so just demonstrate this operation.
   4. Launch ClarisWorks; double-clicking vs. single-clicking.
   5. Begin a word processing document.
   6. Introduce the home row keys and proper finger placement.
   7. Introduce the shift keys to capitalize.
   8. Enter first letter of first name.
   9. Finish typing first name.
  10. Press spacebar for spacing between names.
  11. Enter first letter of last name (shift key).
  12. Finish typing last name.
  13. Press the return key 2 times (to leave a blank line in between lines for easier highlighting).
  14. Enter name again.
  15. Continue entering names down the page and leaving a blank line in between.

Part II Demonstrate clicking and dragging to highlight (communicating with the computer) and changing the font and size. *Size up to 48 point.

   1. Click and drag the first line. *Placing the mouse to the left of the page frame changes the mouse shape to an arrow. Move the mouse just left of the first letter and it's shape is an I-beam.
   2. Change the font (Font menu).
   3. Change the size (Size menu).
   4. Highlight another name and change the font and size.

Part III Change the text color.
   1. Highlight text and choose Size menu - color.

Part IV Quitting ClarisWorks and closing down activity/ lab.
   1. Choose File - Quit.
   2. Leave computer at the desktop, clean up workstation, and push in chair.
   3. Demonstrate the steps to shutting down the computer. Just demonstrate the steps since most computers are left ON until the end of the day.

**See attached example.
Fred Flintstone

Fred Flintstone

Fred Flintstone

Fred Flintstone
Appendix E
Grade: 2  
Unit: ILA-Daily Oral Language  
Activity: DOL  
ILAS&B: 2.7 Forms and spaces letters correctly. 2.8 Writes with some evidence of spelling common or frequently used words (i.e., spelling words) correctly.  
TS&B: 3.3.1 Demonstrate the use of the shift key, spacebar, return key, delete key and letter/number keys.  
3.2.3 Open an application.  
3.2.6 Demonstrate the use of clicking to move the cursor.  

Objectives: Students will be able to launch a word processing program and open a file from the server. Students will be able to make grammatical, punctuation, and spelling corrections to DOL sentences by using word processing functions.  

Materials: Claris Works - word processing, DOL sentences off server  

Procedures:  
Whole Class Demonstration  
1. Demonstrate how to launch the program and retrieve the files off the server.  
2. Review editing functions within the program and by using the keyboard (DELETE, RETURN, ARROW keys, SHIFT, SPACEBAR)  

Student Activity  
1. Launch Claris Works.  
2. Open file off server. Follow oral directions from teacher.  
3. Make corrections on sentences.  
4. Raise hand when finished and wait patiently while teacher moves around the room to check.  

Assessment: Teacher visually assesses work on the monitors (figure total number of errors in all sentences and calculate the percentages).  
Advanced: 90-100 % questions correct  
Proficient: 80-89 % questions correct  
Basic: 70-79 % questions correct  
In Progress: 60 % or less questions correct
Objectives: Students will open the ClarisWorks program and begin a drawing document. Students will use the tool box to create rectangles. Students will use the text button to label the rectangles with numbers.

Materials: ClarisWorks-drawing

Procedures:

Drawing Boxes
1. Click twice on rectangle box.
2. Place mouse in upper left corner of where you want box to start.
3. Drag mouse to the right and down 2 boxes.

Independent Drawing
1. Students draw 3 more identical boxes to make 4 corners (see figure 1)

Number the Boxes
1. Click twice on the text tool.
2. Click twice on the box and type a #1.
3. Continue for each box until they’re all numbered. (see figure 1)

Assessment: Visually check if students drawing document contains all parts of the activity.
Grade: 2
Unit: ILA - Ira Says Goodbye
Activity: Drawing Reggie's Suitcase (Day 2)

ILAS&B: 2.1 Explain that writing is a way of expressing ideas, conveying a variety of information and for enjoyment.

TS & B: 1.1.1 Type information using the space bar, shift, return, and letter keys., 1.1.2 Create a picture using a draw program adding text and sound., 1.1.3 Insert a graphic into a document.

Objectives:

Students will open the ClarisWorks program and begin a drawing document.
Students will use the tool box to create rectangles.
Students will use graphics to place four items in their suitcase.
Students will use the text button to label the assignment.

Materials:
ClarisWorks-drawing

Procedures:

Introduce lesson: Discuss the book Ira Says Goodbye

Show sample: Show a sample of a completed suitcase. (see figure 2)

Draw a box
1. Click twice on rectangle box.
2. Click where you want the top left corner to start.
3. Drag mouse down and to the right four squares (or whatever size)

Draw a handle
1. Click twice on the free hand tool.
2. Draw a handle on top of the suitcase by dragging the mouse and releasing when done.

Choosing graphics
1. Go to library under file.
2. Select Business Images.
3. Click on graphic once.
4. Click on use.
5. Choose 2nd graphic the same way.

Arranging graphics
1. Click once on graphic #1 and drag it to upper left corner
2. Click once on graphic #2 and drag it to upper right corner.

Independent work
1. Students are to do the same procedure for graphics #3 and #4.

Draw a text block
1. Click twice on text tool.
2. Put text box in center of screen at the top.
3. Type “Reggie's Suitcase”
4. Save to disk or print.

Assessment: Ira Says Goodbye Assessment (student & teacher)
4 - advanced
3 - proficient
2 - basic
1 - in progress
Day 1

- and Text
- Draw boxes
  - Click twice on rectangle box
  - Place mouse in upper left corner of where you want box to start
  - Drag to the right and down 2 boxes

  Students independently draw 3 more boxes
  - Direct students to draw 3 more identical boxes to make 4 corners (see Figure 1)

- Number the boxes
  - Click twice on text tool
  - Click once inside the box and type a #1
  - Continue for each box until they're all numbered. (see Figure 1)

Day 2 (or 2nd half of day 1)

- Introduce lesson by discussing the book *Ira Says Goodbye*

- Show Reggies suitcase (completed prior to class) (see Figure 2)

- Take students through the following steps to make their own suitcases.

1. Draw a box
   - Click twice on rectangle box
   - Click where you want the top left corner
   - Drag your mouse down and to the right \( \rightarrow \) four squares (or whatever size)

2. Draw a handle
   - Click twice on the free hand tool
   - Draw handle on top of suitcase by dragging mouse and releasing when finished.

- Choose graphics
  - Go to library under file
  - Select Business Images
  - Choose 4 items Reggie might take with him when he moves (items from school)

- Put graphics in suitcase
  - Click on graphic once
  - Click on use
  - Choose second graphic the same way

- Arrange graphics in suitcase
  - Click once on graphic #1 and move to upper left corner
  - Click once on graphic #2 and move to upper right corner
  - (See Figure 2)

- Direct students to complete graphics #3 & #4
  - Give general directions again (walk them through it)

- Draw a text block
  - Click twice on text tool
  - Put text box in center of screen at the top
  - Type "Reggies Suitcase"

- Save to disk.
## Ira Says Goodbye

Circle how you did. 4 points is the best!

<table>
<thead>
<tr>
<th></th>
<th>Student</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did my box look like this?</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>![Box Image]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Did my title say &quot;Reggie’s Suitcase&quot; above the suitcase.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>![Reggie's Suitcase Image]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Did I have 4 items in my suitcase.</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>![Packed Suitcase Image]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Grade: 2
Unit: Integrated Language Arts
Activity: Acrostic Poem
ILAS&B: 2.1 Explain that writing is a way of expressing ideas, conveying a variety of information and for enjoyment.
TS & B: 1.1.1 Type information using the space bar, shift, return, and letter keys., 3.2.1 Turn on the computer., 3.2.3 Open an application., 3.2.4 Quit an application., 3.2.6 Demonstrate the use of clicking to move the cursor., 3.2.7 Print a document, 3.2.8 Change text formats, 4.2.1 Demonstrates proper handling of equipment and software.

Objectives: The student will be able to type an Acrostic poem using a handwritten poem created during Integrated Language Arts.

Materials: Clarisworks Word Processing. The student will need to bring to the computer lab an Acrostic poem they have written during Integrated Language Arts.

Suggested Acrostic Poem topics: FRIENDS (for We Are Best Friends)
MONSTERS (for all “monster” theme books)
SNAKES (for The Day Jimmy's Boa Ate the Wash)
STUDENT FIRST NAME
HOLIDAYS
STATE NAME (Soc. St. & list things from that state to match letters)
ALLIGATORS or CROCODILES

Procedures:
1. Turn on computer.
2. Open the application “Clarisworks - Word Processing”
3. Use a 24 point Chicago font and type (all caps) the subject for the poem along the left side of the page.
   e.g. F
       R
       I
       E
       N
       D
       S
4. Change font size to 18 Chicago.
   Type all text from your handwritten poem onto the computer matching it to each letter.
5. Go up to File, “save as”, “to desktop”, type in student’s first name (to save to)
7. Go up to File and Quit (exit) Clarisworks. On your desktop, drag the first name file to the trash can to delete it off the desktop. Shut down computer.

Assessment: Completed project should have the subject in all caps, and text neatly typed across from it.
Grade: 2
Unit: Integrated Language Arts
Activity: Letter Writing
ILAS&B: 2.4 Writes stories or other written works that show attention to basic punctuation skills (period, question mark, exclamation point, apostrophe in contraction). 2.5 Writes stories or other written works that show attention to basic capitalization skills (i.e., words that begin sentences, pronoun I, proper nouns).
TS & B: 1.1.1 Type information using the space bar, shift, return, and letter keys., 3.2.3 Open an application., 3.2.4 Quit an application, 3.2.6 Demonstrate the use of clicking to move the cursor., 3.2.7 Print a document., 3.2.8 Change text formats., 4.2.1 Demonstrates proper handling of equipment and software.

Objectives: The student will be able to type a letter using a handwritten letter previously created during Integrated Language Arts.

Materials: Clarisworks Word Processing. The student will need to bring to the computer lab a letter they have written during Integrated Language Arts. ***They will need to know the format for writing/typing a letter on the computer.

Suggested letter writing topics:
1. letter to a friend who is/has moved away (Ira Says Goodbye)
2. letter to a fellow classmate/friend (We Are Best Friends)
3. letter to parent(s) at Parent/Teacher conf. (telling what they’re good at presently in 2nd grade, what they feel they need help in 2nd grade, what they like best/worst about 2nd grade)
4. end of year letter to next year’s 2nd grader (telling what you do in 2nd grade)
5. end of year letter to a 3rd grade teacher (telling about yourself (student) and academic strengths and weaknesses) ****Glue a picture (one of those small student pictures you receive when the student gets their school pictures) at the top

Procedures:
1. Turn on computer.
2. Open the application “Clarisworks - Word Processing”
3. Use a 18point Chicago font.
4. Type all text from your handwritten letter onto the computer using the tab key where necessary to indent.
5. Go up to File, “save as”, “to desktop”, type in student’s first name (to save to)
6. Go to File, “Print” your document. Take printed copy out of printer. Student signs their name with a pencil after the Closing.
7. Go up to File and Quit (exit) Clarisworks. On your desktop, drag the first name file to the trash can to delete it off the desktop. Shut down computer.

Assessment: Completed project should have the correct letter format. Correct indentation should be evident.
Objectives:
Students will be able to launch Internet and travel to a site by using an address.
Students will be able to maneuver in an Internet site to obtain specific information.

Materials:
Internet, Arthur On-line! handout (attached), Arthur web site bookmarked (www.pbs.org/wgbh/arthur), Arthur coloring books (optional; see Media Specialist)

Procedures:
Whole Class Demonstration
1. Demonstrate launching Internet/Netscape (whole-class instruction).
2. Discussion of Internet as a highway and you are travelling on it. You need to know the destination (address) or ask for directions and follow a map (search engine). When street traffic is busy, we slow down; it is the same in using the Internet. When Internet is busy, we slow down.
3. Discussion and demonstration of STOP and BACK buttons, ADDRESS bar, ‘WORKING ICON’ (Netscape icon with meteors going through it), I-beam vs. pointer hand icon, CLICKING on links.

Student Activity
1. go to Arthur web site by using the bookmark OR enter the address: www.pbs.org/wgbh/arthur.
2. Discuss moving around in the site. Pass out Arthur On-line! activity sheet and have students maneuver around the site looking for the question answers.
3. Quit Netscape (FILE - Quit) and leave at desktop.

*Students need an additional lab time to complete the questions and explore the activities on the Arthur web site.

Assessment: Arthur On-line! worksheet (6 questions)
Advanced: 6 questions correct
Proficient: 5 questions correct
Basic: 4 questions correct
In Progress: 3 or less questions correct
Explore the Arthur web site and see if you can find the answers to these questions.

1. What does Arthur want to be when he grows up?

2. What is Francine's great fear?

3. Name one of Mr. Ratburn's hobbies?

4. What is Buster's nickname?

5. What is the Brain's real name?

6. What is in Grandma Thora's Chicken Surprise recipe?

Try out these activities!
Francine's Un-matching Game
The Brain's Brain Game
Arthur
Buster
The Brain
Fern
Mom and Dad
Baby Kate
Grandma Thora
Binky
Prunella
Sue Ellen
Mr. Ratburn
Grade: 2
Unit: ILA - The Drinking Gourd
Activity: Graphic Star Constellation

ILAS&B: 2.1 Explain that writing is a way of expressing ideas, conveying a variety of information and for enjoyment.
TS&B: 1.1.1 Type information using the space bar, shift, return, and letter keys., 1.1.2 Create a picture using a draw program adding text and sound. 1.1.3 Insert a graphic into a document. 3.2.3 Open an application., 3.2.4 Quit an application., 3.2.6 Demonstrate the use of clicking to move the cursor., 3.2.7 Print a document, 4.2.1 Demonstrates proper handling of equipment and software.

Objectives:
Students will open the draw program and begin a graphic document.
Students will use the functions under the EDIT menu to copy and paste stars (stamps).
Students will use the text button to label the project.

Materials: Clarisworks Draw

Procedures:
*see attached sheet for detailed lesson steps

Assessment: see Constellation scoring guide, attached page
1. Review The Drinking Gourd
   • Discuss constellations

2. Have students draw a constellation on paper before going to computer lab.

3. Draw constellation on computer
   • Choose star #1 in graphics library under star
   • Click on star #1 once
   • Click once on Use

4. Draw constellation
   • Copy the star by going under Edit to Copy
   • Click on the screen where you want the next star to go.
   • Paste the star by going under Edit to Paste
   • Continue until constellation is finished (see Figure 1)

5. Draw a text block
   • Click twice on the text tool
   • Put text box in the center of screen at the top.
   • Type: name of constellation by student name (see Fig. 1)

6. Optional
   • Put a description of constellation at the bottom using a text block. (i.e. My constellation is an ice cream cone because I love ice cream. My favorite flavor is peanut butter fudge.)

7. Save to disk.
<table>
<thead>
<tr>
<th></th>
<th>Circle how you did. 4 points is the best!</th>
<th>Student</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Do I have a title for my constellation?</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>2.</td>
<td>Do I have my name on the page?</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>3.</td>
<td>Did I use at least 6 stars?</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
</tbody>
</table>
Grade: 2
Unit: ILA, Technology
Activity: Creating a Greeting Card
ILAS&B: 2.0 Students communicate effectively and correctly through authentic writing experiences using a variety of writing strategies and elements.
TS&B: 1.1.1 Type information using the space bar, shift, return, and letter keys. 1.1.3 insert a graphic into a document. 3.2 Demonstrates basic computer functions.

Objectives: Students will create a greeting card by using draw tools and inserting graphics.

Materials: Draw program; Greeting Card Assessment (attached)

Procedures: **Also see attached procedure step sheet.
1. Students are assigned a card (i.e. Birthday, Christmas, class invitation, thank you, etc.). You may use the blank card form to have students design their card before they get to the computer lab.
2. Open a new drawing document.
3. Draw 2 boxes
   - Double click on rectangle tool
   - Drag the mouse to desired box size in the upper left and lower right corners (see Figure 1)
   - You can change the patterns on the boxes by clicking on the box once (get black squares around it)
4. Click once on the pattern block above line width and select pattern. This works best if the line width is at least 4 pt.
5. Design front of card
   - Select graphic from library under file
   - Select an item
   - Click on graphic once
   - Click on use
   - Click once on graphic and drag to desired spot.
   Draw a text block
   - Click twice on text tool
   - Put text box in center of front box
   - Go to view-show rulers
   - Click once on the center box
   - Type in greeting
6. Design inside of card
   - Design inside just as you did the front
7. Flip text and graphic on inside
   - Click once on the graphic (get black squares around it)
   - Choose transform from the arrange menu
   - Choose flip horizontal and then flip vertical
8. Print document

Assessment:
Greeting Card Assessment: 4 points (see attached sheet)
Advanced: 4
Proficient: 3
Basic: 2
Progress: 1
Drawing
Graphic, Lines, Color
Any Grade

1. Students are assigned a card (i.e., Birthday, Christmas, class invitation, thank you, etc.). You may use the blank card form to have students design their card before they get to the computer lab.

2. Open a new drawing document.

3. Draw 2 boxes
   - Double click on rectangle tool
   - Drag the mouse to desired box size in the upper left and lower right corners (see Figure 1)
   - You can change the patterns on the boxes by clicking on the box once (get black squares around it)
   - Click once on the pattern block above line width and select pattern. This works best if the line width is at least 4 pt.

   ![Fig. 1](image)

4. Select Graphic from library under File
   - Select an item
   - Click on graphic once
   - Click on use
   - Click once on graphic and drag to desired spot

5. Draw a text block
   - Click twice on text tool
   - Put text box in center of front box
   - Go to view - show rulers
   - Click once on the center box
   - Type in greeting

6. Design inside of card
   - Design inside just as you did the front

7. Flip text & graphic on inside
   - Click once on the graphic (get black squares around it)
   - Choose transform from the Arrange menu
   - Choose Flip Horizontal & then Flip Vertical
   - Repeat for text

8. Print document
## Greeting Card

Circle how you did. 4 points is the best!

<table>
<thead>
<tr>
<th></th>
<th>Student</th>
<th>Teacher</th>
</tr>
</thead>
</table>

**1. Do I have 2 graphics?**
- One on the front
- One on the back

1 2 3 4 1 2 3 4

**2. Do I have a title on the front page?**

For example:
- Happy Birthday
- Merry Christmas
- Get Well

1 2 3 4 1 2 3 4

**3. Did I use at least 2 different colors?**

1 2 3 4 1 2 3 4
Grade: 2
Unit: Integrated language arts, technology
Activity: Comparing Characters
ILAS&B: 2.0 Students communicate effectively and correctly through authentic writing experiences using a variety of writing strategies and elements.

TS&B- 1.1.1 Type information using the space bar, shift, return, and letter keys. 1.1.2 Create a picture using a draw program. 2.2.1 Draw a picture to solve a problem.

Objectives: Students will compare characters using a Venn Diagram

Materials: 2nd grade literature books (your choice of characters); KidPix

Procedures:
1. Before the activity, make sure the students know how to use a Venn Diagram. For this activity, the diagram will have two overlapping circles. You can put the fictional character at the top of one circle, and the students name at the top of the other. (Or, you could compare to another fictional character) Compare the two characters in the middle
2. Students can pre-write this activity in the classroom with paper/pencil.
3. Use kid pix to make the overlapping circles on the computer. (This will take practice!)
4. The students can then use the typewriting keys to put in the similarities and differences.
5. Print document

Assessment:
The students can be assessed by how many items they have written in each area of the circle. For example:
Character: list 4 differences
Student: List 4 differences
list 4 similarities that the two share for a total of 12 points.

Advanced: 11-12
Proficient: 9, 10
Basic: 7, 8
In-Progress: 6 and below
Objectives: Students will use KidPix slideshow to present a research project of the teacher’s choice.

Materials: KidPix and KidPix guide to using slide show. (Media Specialists should have it.) Students written information on research topic

Procedures:
1. Students need to create their own KidPix picture that displays information on their topic. For example, their name and 4 facts about their famous American. They can add a picture of stamps or drawing of their choice.
2. Save and bring all students pictures when completed back to your classroom.
3. Open up slideshow on Kidpix.
4. Insert each child’s picture on slides by clicking on bottom left corner button on truck. Then, you can choose the picture you want.
5. When all pictures are into slide show, you may go back and add sounds by clicking on musical note in each truck. You can have the child record their own voice or add a sound of their choice.
6. The transition button is the bottom right hand button of the truck. This allows the student to choose how their screen will transition to the next screen.

Assessment:
See rubric
Appendix F
Objective: The student will be able to locate and type facts about their selected mammal, reptile, or bird, and draw a picture of this animal in its natural habitat.

Materials: Clarisworks OR Kid Pix software.
Students bring the following to the computer lab: Handwritten facts on a mammal, reptile, or bird retrieved from a resource book or appropriate software. (This could include habitat of the animal, what it eat, its size and weight, and any other interesting facts the student locates on that animal.)

Procedures:
1. Turn on computer.
2. Open the application “Clarisworks - Painting” OR “Kid Pix”.
3. Use the A (text tool), click in the upper left-hand corner and drag down to the right to form a rectangle.
4. Set font on Chicago; and set size on 24 pt.
5. Center the name (kind) of animal your report is on, and type your name under the title.
   e.g. BENGAL TIGER
       by Linda Kohlhaas
6. Touch Return Key three times to space down. Type your facts (with an 18 point font) using capitalization on the first word of each sentence, and ending each sentence with punctuation.
7. When finished typing facts, click on the pencil tool (draw tool) and draw a picture of your animal under the typed facts.
8. Go up to File, “to desktop” “Save as” your document under the name (kind) of animal your report is on. e.g. Bengaltiger
9. Go up to File, “Print” your document. Take printed copy out of printer.
10. Go up to File and Exit (quit) Clariswork (or Kid Pix). On your desktop, drag your animal file (e.g. Bengaltiger) to the trash can and delete off the desktop. Shut down computer.
11. Use a tape recorder to record your name, Title, and facts. OR on Kid Pix go to Goobies and Record a Sound to record your name, title, and facts.

Assessment: To succeed on this assessment students must have previous experience using Clarisworks Painting OR Kid Pix: use the A (text tool) to create a text box and type text within the box; use the pencil tool to draw; save and print a document; record voice. *See attached Rubric for assessment.
### 2nd Grade Technology Assessment

#### Animal Research Project

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Advanced 4</th>
<th>Proficient 3</th>
<th>Basic 2</th>
<th>In Progress 1</th>
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</thead>
<tbody>
<tr>
<td><strong>1.0 Communication</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Text</em> 1.1.1</td>
<td>Created a word processing project showing the following information: *Title *4 facts on a Bird, Mammal, or Reptile</td>
<td>Created a word processing project showing the following information: *Title *3 facts on a Bird, Mammal, or Reptile</td>
<td>Created a word processing project showing the following information: *Title *2 facts on a Bird, Mammal, or Reptile</td>
<td>Created a word processing project showing the following information: *Title *1 fact on a Bird, Mammal, or Reptile</td>
</tr>
<tr>
<td>3.3.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><em>Graphics</em> 1.1.2</td>
<td>Student completed one of the following independently: *Drew a picture of a Bird, Mammal, or Reptile *Inserted a graphic of a Bird, Mammal, or Reptile</td>
<td>Student completed one of the following with verbal prompts: *Drew a picture of a Bird, Mammal, or Reptile *Inserted a graphic of a Bird, Mammal, or Reptile</td>
<td>Student completed one of the following with physical help from the teacher: *Drew a picture of a Bird, Mammal, or Reptile *Inserted a graphic of a Bird, Mammal, or Reptile</td>
<td>Project contains no picture.</td>
</tr>
<tr>
<td>1.1.3</td>
<td></td>
<td></td>
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<table>
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<tr>
<th>2.0 Problem Solving</th>
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<table>
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<th>Productivity</th>
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<tbody>
<tr>
<td>See Checklist (p.2)</td>
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<tr>
<td>90% or above</td>
</tr>
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<td>70-89%</td>
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<tr>
<td>40-69%</td>
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<td>39% or below</td>
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<table>
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<th>4.0 Ethical Standards</th>
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<tr>
<td>4.1.1 4.1.2</td>
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<tr>
<td>4.2.1</td>
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<table>
<thead>
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<th>Student Name</th>
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<table>
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<th>Total 20/20</th>
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<table>
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<tr>
<th>Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Objectives: Students will be able to launch Internet and travel to a site by using an address. Students will be able to maneuver in an Internet site to obtain specific information.

Materials: Internet, SeaWorld Animal handout (attached), SeaWorld web site bookmarked (www.seaworld.org/animal_bytes/animal_bytes.html)

Procedures:
Whole Class Demonstration
1. Demonstrate/Review launching Internet/Netscape (whole-class instruction).
2. Discussion/Review of Internet as a highway and you are travelling on it. You need to know the destination (address) or ask for directions and follow a map (search engine). When street traffic is busy, we slow down; it is the same in using the Internet. When Internet is busy, we slow down.
3. Discussion/Review and demonstration of STOP and BACK buttons, ADDRESS bar, 'WORKING ICON' (Netscape icon with meteors going through it), I-beam vs. pointer hand icon, CLICKING on links.

Student Activity
1. Go to SeaWorld web site by using the bookmark OR enter the address: www.seaworld.org/animal_bytes/animal_bytes.html
2. Discuss moving around in the site. Pass out SeaWorld Animal Bytes activity sheet and have students maneuver around the site looking for the question answers.
3. Quit Netscape (FILE - Quit) and leave at desktop.

*Students may need an additional lab time to complete the questions and explore the activities on the SeaWorld web site.

Assessment: worksheet (5 questions)
   Advanced: 5 questions correct
   Proficient: 4 questions correct
   Basic: 3 questions correct
   In Progress: 2 or less questions correct
Name__________________

SeaWorld/Busch Gardens Animal Bytes

http://www.seaworld.org/animal_bytes/animal_bytes.html

1. What creature did you choose? ________________________________

2. What does it look like? ________________________________

3. What does it eat? ________________________________

4. How big is it? ________________________________

5. Where does it live? ________________________________

Draw a picture of your creature.
Objective: The student will be able to draw and label the parts of a volcano.

Materials: Any drawing program (e.g. Kid Pix).

Procedures:
1. Click the pencil tool to draw the shape of a volcano. You can use the pencil tool to draw horizontal lines to make the foreground and background of your picture.
2. Click the paint can tool and paint your volcano brown, gray, or black.
3. Use your paintbrush tool, a bubble tool, and the color red to make hot lava spilling out of the top of the volcano. (If you don't have a bubble tool, draw bubbles with a circle tool.)
4. Draw and label (with the typewriter tool) all parts of the volcano.
5. Use the circle tool and draw a yellow sun in the sky. Click the spray can tool with gray paint to make smoke and ash (over the sun also). Show a dark sky covered with ash.
6. Draw some plants near your volcano. (Since the sun is covered with ash and smoke, the plants should look somewhat unhealthy.)
7. Save & print. (Will print in black & white)

Assessment:
Printed drawing with correct labeling.
Objectives: The student will be able to draw and label the following landforms: mountains, plains, valley, lake, island, river.

Materials: Kid Pix

Procedures:
1. Open the application: Kid Pix
2. Set the color bar to blue (for the sky), use the paint bucket and click on the screen to set the background for a sky blue.
3. On the top half of the screen, use the pencil tool and draw mountains in brown (or black).
4. Change the color bar to white and use the pencil tool to draw the snow at the top of the mountains. (CAREFUL! The line of the snow MUST touch the edges of the mountainside. Use the paint bucket and "fill" the snow. If too much of the screen goes white, immediately go to EDIT and UNDO. This will undo only the last action.)
5. Change color bar to green and use the pencil tool to draw in the plains on the bottom half of screen (under the mountains). Use the paint bucket to "fill" with green.
6. Change color bar to a light blue (river), use the pencil tool to draw in a river coming down through the mountains.
7. Use the pencil bar to draw a light blue lake. Fill with the paint bucket.
8. Label the various landforms by using the "typewriter tool", choose font and size of print.
9. If students want, they may draw in other background items using the pencil tool OR stamps.

Assessment: To succeed on this assessment students must have previous experience using Kid Pix drawing. They need to be familiar with using the pencil tool, typewriter tool, paint bucket, and UNDO key. The printed copy will serve as the assessment with all landforms correctly labeled.
Objective: The student will be able to draw a map of their neighborhood labeling the street names, directions (N, S, E, W), and show houses. Or school hallway labeling the directions (N, S, E, W) and showing classrooms.

Materials: Any drawing program such as Kid Pix.

Procedures:
1. Click the straight line tool to make the sides of the street. Draw parallel lines. Parallel lines go next to one another in the same direction and never cross. OR click set the background color at light gray (for asphalt) and use the paint bucket to fill the entire screen.
2. What streets connect to your street? Draw some more straight lines that cross your street. OR use the square/rectangle tool and draw large squares to represent the neighborhood blocks. Fill the squares with green to represent grass. (HINT: Leave enough light gray (asphalt) showing to later label the street names.)
3. If a traffic light or stop sign, use the stamp tool and place them at corners of streets.
4. Type the names of the streets. For horizontal names use the typewriter tool, for vertical names use the “A” text tool.
5. Use the stamp tool to place houses along the street. If desired, paint the house using the paint tools.
6. Use the stamp tools to add scenery (cars, trees, landmarks).
7. Save and print (will print in black & white)

Assessment:
Printed map with correct labeling.
Objective: The student will be able to draw a family tree with two main branches (one for dad's side of the family, and one for mom's side of the family). Family members (student's name, brothers, sisters, grandparents, cousins, aunts, & uncles) should be labeled.

Materials: Students should bring to the lab a hand-drawn (and labeled) family tree. Use any drawing program (e.g. Kid Pix) to draw the family tree in the lab.

Procedures:
1. Draw a large brown trunk (fat brown pencil) and two main branches (thinner pencil), 1 for your dad's side of the family, and 1 for your mom's side of the family. Leave room at the bottom for roots.
2. Stamp (or draw) a man and a woman near the bottom of each main branch to designate their side of the family tree. Use the typewriter to type their names.
3. Draw roots for the tree. Stamp one (boy or girl) for each brother and sister in the student's family next to a root. Use the typewriter to type their name(s). Include a root with the student's name and stamped picture.
4. Stamp the grandparents near the center of each main branch with a branch going out for each aunt, uncle, cousin. Stamp the figures on each branch and use the typewriter to type their names. REPEAT FOR BOTH SIDES OF THE FAMILY TREE.
5. When finished stamping in family members and typing their names, click on the pencil tool to draw a green tree form around the branches. Color it green with the green paint can tool.
6. Save and print (will print in black & white).

Assessment:
Printed family tree with correct labeling.
50 States

Please follow the directions to gather the information for your assigned states.

• Go to the Bookmark: 50 states
• click on your assigned state
• Find name of the Capital city
• Find the state bird
• Find the state flag
• Find the state flower
• Read the Fast Facts

STATE: __________________________

Capital City: _______________________

State Bird: _______________________

State Flag: _______________________

State Flower: _______________________

On the back of this paper list at least 3 interesting facts about your assigned state.
Appendix G
The activities on the following pages were copied from the book *Reading and Writing Activities on the Computer* by Evan-Moor. The standards and benchmarks are listed below for each activity.

**Activity: Stamp Your Name**
*Materials:* KidPix
*ILAS&B:* 2.0 Students communicate effectively and correctly through authentic writing experiences using a variety of writing strategies and elements. 1.6 Demonstrates reading strategy skills (i.e. using context clues, picture clues)
*TS&B-1.1.1* Type information using the space bar, shift, return, and letter keys. 1.1.2 Create a picture using a draw program adding text and sound.
*Assessment:* Print

**Activity: Stamp a Rhyme**
*Materials:* KidPix
*ILAS&B:* 2.0 Students communicate effectively and correctly through authentic writing experiences using a variety of writing strategies and elements. 1.6 Demonstrates reading strategy skills (i.e. using context clues, picture clues)
*TS&B-1.1.1* Type information using the space bar, shift, return, and letter keys. 1.1.2 Create a picture using a draw program adding text and sound. 2.2.1 Draw a picture to solve a problem.
*Assessment:* Print

**Activity: Show more than one**
*Materials:* KidPix
*MS&B:* 6.1 Reads and writes three digit numerals. 6.2 Compares and orders whole numerals through three digits.
*TS&B-1.1.1* Type information using the space bar, shift, return, and letter keys. 1.1.2 Create a picture using a draw program adding text and sound. 2.2.1 Draw a picture to solve a problem.
*Assessment:* Print

**Activity: Character Map**
*Materials:* KidPix or ClarisWorks Draw
*ILAS&B:* 2.0 Students communicate effectively and correctly through authentic writing experiences using a variety of writing strategies and elements. 1.6 Demonstrates reading strategy skills (i.e. using context clues, picture clues)
*TS&B-1.1.1* Type information using the space bar, shift, return, and letter keys. 1.1.2 Create a picture using a draw program adding text and sound. 2.2.1 Draw a picture to solve a problem.
*Assessment:* Print
Stamp
Your
Name

Students use letter stamps to write their names and then select picture stamps that begin with each letter to create a beginning-sound chart.

Step by Step
1. Start with a clean screen.
2. Choose letter stamps and a color.
3. Student stamps his/her name across the top of the screen.
4. Choose picture stamps. Look at the stamps. Find a stamp that begins with one of the letters in the name. Stamp the picture under the letter. Repeat for each letter in the name until there are several pictures for each letter.
5. Print.

Extending the Activity
- Import a computer photo of students onto their name pages. After printing, bind the pages into a class album.
- Repeat the activity using spelling words instead of names.

Literature Connection
From Anne to Zach by Mary Jane Martin; Boyd Mills Press, 1996.
Start with a clean screen.

Choose the letter stamps and a color.

Stamp your name across the top of the screen.

(You can change the color with each letter.)

Choose the picture stamps. Look at the stamps. Find a stamp that begins with one of the letters in your name. Stamp that picture under the letter. Repeat for each letter in your name until you have several pictures for each letter.

Print.
Students use the stamps and the keyboard to create a rhyme chart.

**Step by Step**

**Before the activity:**
1. Scan the *Stamp a Rhyme* template on page 70. (See page 4 for directions.)
2. Save the template as *Stamp a Rhyme* on the computer(s) that students will be using.

**To do the activity:**
1. Open the *Stamp a Rhyme* template.
2. Choose the picture stamps.
3. Find two pictures that rhyme.
4. Stamp one picture in the little box on the top left side.
5. Stamp the rhyming picture in the little box on the top right side.
6. Choose the keyboard.
7. Keyboard the names of the pictures beside them.
8. Fill the chart with other rhyming pairs.

**Extending the Activity**

Use the rhyming words to write couplets.

```plaintext
cup  pup
I poured milk into the cup
For the frisky little pup.
```

**Literature Connection**

*A Nickel Buys a Rhyme* by Alan Benjamin; Morrow, 1993.
Or use your favorite rhyming book!
1. Open the template.
2. Choose the picture stamps.
3. Find two pictures that rhyme.
4. Stamp one picture in the little box on the top left side.
5. Stamp the rhyming picture in the box on the top right side.
6. Choose the keyboard.
7. Keyboard the names of the pictures beside them.
8. Fill the chart with other rhyming pairs.
Students practice writing singular and plural nouns using the stamps and the keyboard.

**Step by Step**

**Before the activity:**
1. Scan the *Show More Than One* template on page 71. (See directions on page 4.)
2. Save the template as *Show More Than One* on the computer(s) that students will be using.

**To do the activity:**
1. Open the template.
2. Choose picture stamps.
3. Stamp a picture in the top box on the left.
4. Stamp several of the same pictures in the top box on the right side.
5. Repeat with different stamps in each row.
6. Choose the keyboard.
7. Keyboard the names of the pictures in the boxes on the left.
8. Count the pictures on the right.
9. Keyboard the number. Then keyboard the plural noun.

**Extending the Activity**
- Designate the nouns to be used by adding them to the template before saving it or by giving students a list to use.
- Choose nouns from a science or social studies lesson to practice. Then use the noun list to write.

**Literature Connections**

*Merry-Go-Round* by Ruth Heller; Grosset & Dunlap, 1990.

*Plurals: Mouse...Mice* by Joan Hanson; Lerner Publications, 1979.

*Two’s Company* by Shirley Greenway; Charlesbridge, 1997.
Show More Than One

1. Open the template.
2. Choose picture stamps.
3. Stamp a picture in the top box on the left.
4. Stamp several of the same pictures in the top box on the right side.
5. Repeat with different stamps in each row.
6. Choose the keyboard.
7. Keyboard the names of the pictures in the boxes on the left.
8. Count the pictures on the right.
9. Keyboard the number. Then keyboard the plural noun.
Students record information about a story character on a scanned character map and draw the character using the drawing tools. After students are familiar with the character map format, use the map as an assessment of their reading comprehension.

**Step by Step**

**Before the activity:**
1. Scan the *Character Map* template on page 72. (See directions on page 4.)
2. Save the template as *Character Map* on the computer(s) that students will be using.

**To do the activity:**
1. Open the *Character Map* template.
2. Choose the keyboard.
3. Keyboard the information that belongs in each box.
   - Character’s name
   - How the character looks
   - How the character feels
   - What the character does
4. Choose the drawing tool and a color.
5. Draw a picture of the character.

**Extending the Activity**
Select several characters from different stories that have been analyzed using the character maps and write a new story about them. Use the information on the maps to suggest appropriate actions.

**Literature Connection**
Use your favorite book or begin with one of Russell Erickson’s stories about Warton and Morton. Primary students love his characters!
Open the template.

Choose the keyboard.

Keyboard the information that belongs in each box on the template.

Choose the drawing tool and a color.

Draw a picture of the character.

Anansi is a black spider.
The following are Internet sites that work with many units in 2nd grade. As with all Internet sites, these change frequently and/or might be deleted from the Internet without notice. It is advised the teacher access the site prior to showing it to the class to make sure it is still available and is what you want to use with your class. These are just suggestions...there are thousands of sites available and you might be using different sites.

**Alligators & Crocodiles** (see also Yahooligans!)
http://crocodile.com/

**Arthur**
http://www.pbs.org/wgbh/arthur/

**Arthur Coloring Book**
Use the site above to link off to the coloring books OR see the LMC 2nd grade notebook for a printed coloring book.

**Bears - The Bear Den**
http://www.nature-net.com/bears/

**Disney's Blast Online**
http://www.dailyblast.com/

**Governor Vilsack (virtual tour of office)**
http://www.state.ia.us/government/governor/

**KidPub Publishing**
http://www.kidpub.org/kidpub/

**KidLit Children's Literature Homepage**
http://mgfx.com/Kidlit/

**Little Explorers Picture Dictionary**

**M & M's Network**
http://www.m-ms.com/

**NASA**
http://www.nasa.gov/
http://www.nasa.gov/kids.html

**PBS Kids**
http://www.pbs.org/kids/
Reader's Theater
http://www.aaronshep.com/rt/RTE.html

Smithsonian Institute
http://www.si.edu/

State of Iowa
http://www.state.ia.us/
http://www.iowaaccess.org/

TV 5, WOI
http://www.woi-tv.com/

TV 8, KCCI
http://www.kcci.com/

TV 13, WHO
http://www.whooncall.com/

White House for Kids

Yahooligans!
http://www.yahooligans.com/

The Magic School Bus
http://www.scholastic.com/MagicSchoolBus

Seussville
www.randomhouse.com/seussville

Weekly Reader
http://www.weeklyreader.com/

Curious George
http://www.georgeworld.com/

Reading Rainbow
http://gpn.unl.edu/rainbow

50 States and Capitals
http://www.50states.com/

Iowa Children's Choice Awards
http://www.maquoketa.k12.ia.us/icca/html
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