

# Evaluation of Current *Cyberchase* Website

submitted to  
Thirteen/WNET

submitted by  
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## INTRODUCTION

The goal of this evaluation was to assess issues of user friendliness, appeal and comprehension related to the Cyberchase website's homepage, web adventures, weekly polls and games.

## METHOD

### Procedure

From a group of third graders who participated in earlier Cyberchase topic testing, three boys and three girls were recruited to attend individual 90 minute sessions on a weekend day. Parents and students were informed that WNET desired feedback on the Cyberchase website design. A parent or relative was present and could observe while students worked with the researcher in a home setting.

The student user sat in an adjustable office chair in front of a PC monitor with keyboard and mouse. The browser was Netscape 6.2, and Internet access was via high-speed cable. The researcher sat to the left and slightly behind the user. During the session, a video camera was focused on a repeater screen out of the way of the student and researcher. All student comments and activities are reflected in this report so that reading the report should be sufficient to understanding the strengths and weaknesses of the current website design; however, VHS tapes of the sessions are enclosed with this report.

The purpose of the sessions was explained to the student. Each respondent was asked a few background questions about Cyberchase TV watching and web use. The student user was introduced to the procedure of talking aloud while using the website. The use of the face scale to rate appeal was explained. The researcher then used a standard set of questions to elicit student reactions to the homepage, web adventures, weekly polls and games. Modifications were made to the procedure as seemed appropriate to the researcher to obtain useful feedback. Specific details of the procedure for each web page appear in the results sections.

### Sample

Three females (F1, F2, F3) and three males (M1, M2, M3) participated. All six children are currently third graders in a low wealth school district on Long Island, about 90 miles east of NYC. Their backgrounds and media habits are summarized in the table that follows

|                                | Female Third Graders                                      |  |   | Male Third Graders                          |  |   |
|--------------------------------|---|--|---|---|--|---|
|                                | F1  | F2   | F3  | M1  | M2 <sup>1</sup>  | M3  |
| Teacher rating of math ability | Average   | Average  | Above Average   | Above Average                               | Average  | Above Average                                       |
| Ethnicity                      | White   | Latina   | White   | White                                       | White  | White   |
| <i>Cyberchase</i> viewing      | Few days a week   | Few days a week; viewed day before session                       | None  | Infrequent, once every two weeks            | Once a week, saw "Golden Eggs" last week                                       | None  |
| <i>Cyberchase</i> website use  | None  | None   | None  | None  | None   | None  |
| Home computer use              | Games (e.g., Scrabble)<br>Book reports<br>No Internet use | Paint program<br>Games (Pinball, Minesweeper)<br>No Internet use | Games (e.g., mysteries)<br>Homework<br>Internet (games at Nick.com) | Internet (games + read @ shows at Nick.com) | Games (e.g., Heretic, Skis, Spy Fox, Freddy Fish, Sim Park)<br>No Internet use | Games (e.g., Lego racers)<br>Internet (Pokemon.com) |
| Weekend computer use           | < 1 hour  | 1-3 hours  | 1-3 hours   | < 1 hour                                    | 1-3 hours  | < 1 hour  |

<sup>1</sup> Just before the session, M2 had visited the eye doctor who gave him drops to dilate his pupils. The drops wore off over the session but possibly affected some early responses. Notes appear in the report where dilated eyes might have affected the student's response.

## HOMEPAGE

### First thoughts that come to mind when seeing homepage

At first sight, respondents liked the homepage because it looked fun, with color, detail and things to do.

| Fist Thoughts about Homepage |   |                                 |                            |   |                             |
|------------------------------|---|---------------------------------|----------------------------|---|-----------------------------|
| F1                           | F2  | F3                              | M1                         | M2  | M3                          |
| The TV show                  | Looks fun. Like illustrations and colors. | Fun stuff. Like colors. Bright. | I like it. Lots of detail. | Cool. Shows you characters on Today's Stuff and things to pick. | Good. I like Games Central. |

### Top three choices on homepage

Users were asked what they would click on first, second and third. Meet the Cybersquad was a top three choice for five of the six respondents. Students expected to learn about the Cyberchase characters. Four of six students were interested in Tomorrow's Show, which they anticipated would tell them about the show appearing the next day. Half of the sample chose Games Central to click on and correctly concluded they would be able to play games.

| Top three choices on Homepage |                     |                     |                     |                      |                     |
|-------------------------------|---------------------|---------------------|---------------------|----------------------|---------------------|
| F1                            | F2                  | F3                  | M1                  | M2                   | M3                  |
| Tomorrow's Show               | Games Central       | Meet the Cybersquad | Meet the Cybersquad | Meet the Cybersquad  | Games Central       |
| Free Stuff <sup>2</sup>       | Today's Stuff       | E-cards             | Web Adventures      | Weekly Poll          | Meet the Cybersquad |
| Games Central                 | Meet the Cybersquad | Tomorrow's Show     | Tomorrow's Show     | E-Cards <sup>3</sup> | Tomorrow's Show     |

### What users thought they would see, hear or do after they clicked on each choice

#### Today's Stuff!

Students guessed that this section included a description of the show of the day and a game. "For real" or a video from the show was not expected.

| What to see, hear or do in Today's Stuff  |                                 |                               |  |  |   |
|---|---------------------------------|-------------------------------|--|--|---|
| F1  | F2                              | F3                            | M1   | M2   | M3                                      |
| Mystery of going over tracks <sup>4</sup> | What they are doing in the show | Show stuff about today's show | Stuff you could do, like games, directions for stuff | What the show today was, something new they have | Talk about the show today. Today's game |

<sup>2</sup> F1 defined "Free Stuff" incorrectly as permitting her to do mysteries and other stuff.

<sup>3</sup> M2 defined "e-cards" incorrectly as answering questions or emails that the characters got.

## Games Central

All respondents thought that Games Central would have games for them to play.

| What to see, hear or do in Games Central |       |               |       |  |                        |
|--|-------|---------------|-------|--|------------------------|
| F1                                       | F2    | F3            | M1    | M2   | M3                     |
| Games                                    | Games | Lots of games | Games | You get to be one of the characters and figure out clues | Games about cyberspace |

## Web Adventures

This section was expected to include mysteries, games or adventures from the show.

| What to see, hear or do in Web Adventures |                                   |       |                           |                               |           |
|---|-----------------------------------|-------|---------------------------|-------------------------------|-----------|
| F1  | F2                                | F3    | M1                        | M2                            | M3        |
| Mysteries                                 | Talk to people that like the show | Games | Stuff you could do. Games | Adventures they've been doing | Adventure |

## Tomorrow's Show

Students clearly interpreted the title of this section to mean that they would learn something about the show for the next day.

| What to see, hear or do in Tomorrow's Show |                             |                               |                                      |                               |   |
|--|-----------------------------|-------------------------------|--------------------------------------|-------------------------------|---|
| F1   | F2                          | F3                            | M1                                   | M2                            | M3  |
| Description of show tomorrow               | Main idea and theme of show | Show video of tomorrow's show | What they're going to do on the show | About the next show that's on | What's going to happen in tomorrow's show |

## Weekly Poll

Five of the six third graders did not know what they might do in Weekly Poll, and these five were unable to explain what the word "poll" means.

| What to see, hear or do in Weekly Poll |            |            |            |   |            |
|--|------------|------------|------------|---|------------|
| F1                                     | F2         | F3         | M1         | M2  | M3         |
| Don't know                             | Don't know | Don't know | Don't know | What they do the most, least and some-times. A poll is a chart. | Don't know |

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<sup>4</sup> Railroad Repair was the game showing in Today's Stuff!

### Meet the Cybersquad

All respondents thought that they could learn about the animated characters.

| What to see, hear or do in Meet the Cybersquad |  |   |                               |  |                     |
|--|--|---|-------------------------------|--|---------------------|
| F1   | F2   | F3  | M1                            | M2   | M3                  |
| Meet the characters and get to know them       | Who Matt and Jackie are and what they do and what they like, their favorite things | Meet the characters, their age, what they do and like | Show people, talks about them | See what they like to do, favorite color, journeys they've been on | Show the characters |

### Free Stuff

In this section, half of the sample expected to obtain stuff like t-shirts for free.

| What to see, hear or do in Free Stuff |   |                               |                        |   |            |
|---------------------------------------|---|-------------------------------|------------------------|---|------------|
| F1                                    | F2  | F3                            | M1                     | M2  | M3         |
| Do stuff, solve a mystery             | Sell stuff like yo-yos, bracelets with Cyberchase one them, backpacks | Free stuff, for free t-shirts | Free stuff you can get | Stuff that's free like knapsack, T-shirt, pants | Don't know |

### E-Cards

Four of the six students interpreted e-cards to mean making cards and perhaps mailing them. Only one student had actually e-mailed cards at another Internet site and was familiar with the process of Internet cards.

| What to see, hear or do in E-Cards |                         |                       |               |   |            |
|------------------------------------|-------------------------|-----------------------|---------------|---|------------|
| F1                                 | F2                      | F3                    | M1            | M2  | M3         |
| Make cards                         | Make cards, email cards | Send cards to friends | Cards to mail | Answer questions or emails that the characters got. | Don't know |

### What was liked about the homepage

After discussing each of the choices available, all students liked the homepage because of the colorful and animated presentation and the offering of many things for them to do.

| What was Liked about Homepage |  |                                 |                  |                                 |                          |
|-------------------------------|--|---------------------------------|------------------|---------------------------------|--------------------------|
| F1                            | F2   | F3                              | M1               | M2                              | M3                       |
| All the different stuff       | Illustrations, Jackie and Matt are moving, the changing pictures | Bright. Lots of games and stuff | You can do stuff | Gives you a lot of things to do | Colors. Clear what to do |

## What was not liked about the homepage and recommendations for change

The students liked the homepage, but two had recommendations for changes: F2 suggested putting Motherboard somewhere on the homepage. M2 suggested that Inez should appear of equal size to Matt and Jackie.

## TODAY'S STUFF

### First and second choices on Today's Stuff page

Playing Today's Game and Watch "For Real" were the two top choices for four of the six students. Today's Show was of interest to one user.

| Choices on Today's Stuff Page |                |                          |                |                   |                   |
|-------------------------------|----------------|--------------------------|----------------|-------------------|-------------------|
| F1                            | F2             | F3                       | M1             | M2                | M3                |
| Play Today's Game             | Watch For Real | Play Today's game        | Free Stuff     | Play Today's Game | Play Today's Game |
| Free Stuff                    | Today's Show   | Check your local station | Watch For Real | Watch For Real    | Watch For Real    |

### What users thought they would see, hear or do after they clicked on each choice

#### Play Today's Game

All users thought that this section was about playing a game but only F2, a frequent viewer, noted that the game would appear in today's show.

| What to see, hear or do in Play Today's Game |                                      |                                 |                        |   |                        |
|--|--------------------------------------|---------------------------------|------------------------|---|------------------------|
| F1   | F2                                   | F3                              | M1                     | M2  | M3                     |
| Play game                                    | Play the game that's in today's show | Once a day they change the game | Play the railroad game | I don't know. It says "game" here but why would it be in today's stuff. | Special game for today |

#### Find Out What Happened on Today's Show

Five of the six viewers thought that this icon would refer them to a description of today's show. M2 was not able to read the text of the icon. He felt the text changed too quickly; however, M2 had just come from the eye doctor with his eyes dilated so that may have played a part in this difficulty.

| What to see, hear or do in Find Out What Happened on Today's Show |                                  |                              |                          |               |                                 |
|---|----------------------------------|------------------------------|--------------------------|---------------|---------------------------------|
| F1  | F2                               | F3                           | M1                       | M2            | M3                              |
| A description of today's show                                     | What's happening on today's show | What happens in today's show | Tells you about the show | I don't know. | Better example of what happened |

## Watch “For Real” in Streaming Video

Although four of the six students were familiar with the series, none of them connected the term “For Real” with the live action closing segment of the show. M1 and M2 were permitted to view the “For Real” segment during the evaluation session. Both recognized the actress and liked the piece.

| What to see, hear or do in Watch ‘For Real’ |                     |   |                           |  |                                |
|---|---------------------|---|---------------------------|--|--------------------------------|
| F1  | F2                  | F3  | M1                        | M2   | M3                             |
| Don’t know                                  | What Jackie’s doing | Real people in it. People act out characters in the video | Stuff you could do. Games | Shows what characters look like in real life. Not a cartoon. | See the show itself, the video |

### WEEKLY POLL

#### What users thought they would do at Weekly Poll page

All but M2, with his dilated eyes, noticed the question at the top of the page. All users understood that they had to click on an answer choice, enter their age in the pull-down menu and then click Vote. They were not surprised to see the next page with the table and chart.

All the third graders understood that the chart listed their vote along with others of their age, that the answer table and pie chart showed who got the most votes and the least votes and that the characters were color coded in the table and pie chart.

As an example, here’s F2:

Researcher: Tell me what you would do here?

F3: I’d pick someone and tell them how old I am. I would pick Inez because she’s smart.

[F3 clicks Inez, 9, and Vote. Table and pie chart page appears]

Researcher: Is that what you expected to see?

F3: No.

Researcher: What did you expect to see?

F3: Less for voting. [Researcher’s note: I believe she meant that she expected fewer votes in the table]

Researcher: What do you see here? Tell me something about the votes for the question of the day?

F3: There’s five people, no four. There’s a pie chart and each color represents them. Digit got 282.

Matt got 437. Jackie got 985 and Inez got 1586, so Inez won.



What was liked about table and chart page

The boys appeared to like the table and chart page more than the girls.

| What was Liked about table and chart page |               |            |   |  |   |
|---|---------------|------------|---|--|---|
| F1  | F2            | F3         | M1  | M2   | M3  |
| I don't know                              | Illustrations | Don't know | It shows all votes and tells you the total. It has my favorite color. | The table and colors. The pie chart. If people can't read the table, they can look at the pie chart. | I like to vote on stuff. It's a good question but a little obvious. |

What was not liked about table and chart page

Respondents were unable to describe something that they did not like about the page.

Interest in seeing how other age groups voted

Respondents were asked to choose a face on the face scale below that tells how interested they are in seeing how another age group voted. Half of the sample picked the happiest face, two picked the somewhat happy face and one chose the neutral face. If we score the face scale as 5, 4, 3, 2, 1, the mean appeal response was 4.3 out of 5.



F1                  F2                  F3  
M1                  M3  
M2

Interest in doing another poll

Respondents chose a face indicating their interest in doing another poll. The boys were more interested than the girls. The mean appeal response was 4.3 out of a possible 5.



M1                  F1  
M3                  F2  
                        F3  
                        M2

When permitted to choose an age group, for example, F3 chose age 10-12 and noted that they voted more for Inez than her age group (7-9). She then chose the 4-6 year old group and noticed that Jackie and Inez were tied for that age range. These third graders clearly understood the voting process, the voting data and the connection between the vote table and the pie chart.

Free choice of other polls

The students had no trouble choosing a new poll, with two choosing Hacker and Witch.

| Other Polls Chosen |                |                  |                |                 |                  |
|--------------------|----------------|------------------|----------------|-----------------|------------------|
| F1                 | F2             | F3               | M1             | M2              | M3               |
| Stuff to play      | Hacker & Witch | Favorite Subject | Hacker & Witch | Grown up Delete | Favorite Bad Guy |
|                    |                | Rock Star        | Homework       |                 |                  |

When F3, who was not familiar with the show, chose Rock Star, she said that she did not want to answer the question. The question required knowledge of the show's characters. She knew to use the back browser button to return to the page that would allow her to make another choice. When queried, she agreed that a SKIP button on the poll page would be helpful if one chose not to answer a question.

Activity appeal

Respondents were asked to choose a face on the face scale that tells how much they like or dislike the activity of polling. More experience with the poll activity increased appeal of the activity. The mean appeal response after doing two polls was 4.8 out of a possible 5.



- F2
  - F3
  - M1
  - M2
  - M3
- F1

### What was liked about the activity

Students liked being able to cast a vote and see how others reacted to the same question.

| What was Liked about Weekly Poll  |   |  |                                       |   |                |
|---|---|--|---------------------------------------|---|----------------|
| F1  | F2  | F3   | M1                                    | M2  | M3             |
| You can see which one got the most votes and which one other age groups chose | You can vote for things and other people can see what you voted for | Got to see what other people like and how other age groups react | You could say what you think about it | You get to estimate, think about it, what you've watched. It makes your brain work. | I like to vote |

### What was not liked about the activity

Students did not find anything they disliked about the activity, although M3 was concerned that the chart and table might be "unfair" if they didn't look like they matched up in distribution.

### Alternative title

Since the students were unfamiliar with the term "poll," they were asked to rename the activity after they completed it. **Weekly Vote** was suggested independently by the five students who were asked.

## WEB ADVENTURES

### What users thought they would do at Web Adventures

Students read the top left paragraph of the introductory screen and then described what they would do on this page. F1 wanted to choose Free Stuff while the others were ready to choose Webisode 1. Users expected the following from Webisode 1:

| What to see, hear or do in Web Adventures |                                     |                                 |                           |  |                                  |
|---|-------------------------------------|---------------------------------|---------------------------|--|----------------------------------|
| F1  | F2                                  | F3                              | M1                        | M2   | M3                               |
| See mystery                               | Hacker got there and he made a plan | It would show you what happened | It tells you what happens | A game. You be a character and stop Hacker | They're like chapters in a book. |

Once users saw the opening screen to Webisode 1 and read the first page, they were asked if this was what they expected:

| Expectations for Webisode 1 |     |     |   |   |   |
|-----------------------------|-----|-----|---|---|---|
| F1                          | F2  | F3  | M1  | M2  | M3  |
| Sort of                     | Yes | Yes | No. I expected a game and a way to defeat Hacker. | No. I expected a game... Oh, I know, it tells you about Cyberspace. | No. I expected a different picture for each sentence. |

### Webisode 1

#### Readability for Webisode 1

Students were asked to spend a few minutes doing this webisode reading aloud so that the researcher could assess the readability of the text. The researcher read the text aloud for M2 whose eyes were still somewhat dilated. A few words were difficult to read by most of the students, as listed below. Otherwise, the text appears to be on grade level for average older third graders/younger fourth graders.

| Difficult words in Webisode 1       |   |   |  |                                   |       |
|-------------------------------------|---|---|--|-----------------------------------|-------|
| F1                                  | F2  | F3  | M1   | M2                                | M3    |
| assembles<br>encryptor<br>tolerated | encryptor<br>chaos<br>efficiently<br>Mistakes "if" for "is," possibly because of font similarity. | Poddleville<br>encryptor<br>chaos<br>efficiently<br>banished<br>circuitry<br>plunging | encryptor<br>chaos<br>efficiently<br>cyborg<br>hostile | Researcher<br>read text for<br>M2 | chaos |

#### Story Appeal for Webisode 1

After reading the setup story and but before playing the game, users chose a face to indicate how much they liked the story so far. The boys liked the story more than the girls. The story elicited an overall appeal mean of 4.2 out of 5.



M1                      F2                      F1  
M2    F3  
M3

Students liked the presentation of the story and the storyline itself, although boys were more interested in the history of Digit and Hacker than the girls were. This might be expected since we have found in other projects that males are more interested in robotics than females.

| What was Liked about Webisode 1 Story |   |                               |   |   |       |
|---------------------------------------|---|-------------------------------|---|---|-------|
| F1                                    | F2  | F3                            | M1  | M2  | M3    |
| Exciting.                             | I like the illustrations, colors, the pictures in motion. | Pictures and words and colors | Tells you a story about stuff you need to figure out how they make Digit. | Interesting. Cool. Tells you about what happens before Hacker was on his own. | Digit |

When asked what they did not like, two girls disliked Hacker for stealing and one girl noted the difficulty of reading green letters on a black background.

| What was Not Liked about Webisode 1 Story |                                   |  |         |         |           |
|---|-----------------------------------|--|---------|---------|-----------|
| F1  | F2                                | F3   | M1      | M2      | M3        |
| I don't like Hacker.                      | I don't like Hacker for stealing. | The letters and bright colors. Green on black is hard to read. | Nothing | Nothing | It's okay |

When asked if they were home and doing this would they have stopped already and quit or gone to another part of the website, all but F2 would continue with the Webisode.

### User Friendliness for Webisode 1



Only F1 was unaware of the need to click on the lower right arrow in order to get to the next page of text. F2 did not know to click on <Start> to get to the game. F1 did not know to click on <Go> to check her answer within the game. Other students appeared to use these icons naturally as page turners. F1 has less game play and Internet experience compared to the other participants. Rethinking the icons and icon text might help reach less experienced players.

Within the game, the girls had little difficulty making the correct choices, whereas the boys were much more impulsive and less analytical in their approach, as seen below. Rethinking the feedback message might improve performance and decrease frustration. Round 2 pattern appears to be easier than round 1.

| M1  | M2  | M3  |
|---|---|---|
| <p><b>Round 1:</b><br/> Reads paragraph aloud.<br/> Tests 5 combinations with &lt;Go&gt;<br/> All wrong.<br/> Researcher (R) asks if there's anything M1 can do to help himself out. M1 clicks &lt;help&gt; and reads the addition equations and closes &lt;help&gt;.<br/> M1 thinks, then clicks &lt;help&gt;, reads again but appears uncertain about next step.<br/> R: What it is we're trying to do here?<br/> M1: Have to choose shape, number and color and see if you get the right combination.<br/> R: Why did you choose the triangle down shape?<br/> M1: I don't know.<br/> M1 thinks he possibly needs a shape that is different from the pattern shapes, like the center triangles facing each other.<br/> M1 tries correct shape, correct number, wrong color. Go.<br/> M1 can explain the shape pattern but guessed at number and color.<br/> M1 changes color. Go. Wrong.<br/> M1 changes color. Go. Correct.<br/> After 8 combinations, M1 is correct but had guessed at the number.<br/> Does <b>Round #2</b> easily.<br/> Needs three tries for <b>Round #3</b>.</p> | <p>Does <b>Round 1</b> easily.<br/> Does <b>Round 2</b> easily.<br/> <b>Round 3:</b><br/> Picks correct color<br/> M2: I have no clue (about shape)<br/> Top, bottom, top, bottom<br/> Chooses correct number, wrong shape. &lt;Go&gt; Wrong.<br/> Changes shape. Go. Wrong<br/> Changes shape. Go. Wrong.<br/> With a bit of coaching from mom on the sidelines as to which shape he did not choose yet, M2 picks the correct shape.<br/> Go. Correct answer.<br/> He's surprised.<br/> M2: I ? I didn't get that. The last one's too hard. You should have one for young kids, 9 and 8, and one for 13 and above.</p> | <p><b>Round 1:</b><br/> R: Talk me through what you have to do here.<br/> M3 reads "choose a shape."<br/> M3: You have to choose a shape. Wait, first I have to press &lt;Go&gt; .<br/> M3 reads directions from Go.<br/> Chooses 3. Go. Wrong.<br/> Changes all 3. Go. Wrong.<br/> Starts changing each row systematically. After 11 incorrect tries, R intervenes asking if the &lt;oops&gt; message is helpful.<br/> M3: Usually in games like these, you get a hint after 5 wrong.<br/> R: Where would you go for a hint?<br/> M3: They wouldn't do it here.<br/> R: Why don't you try help?<br/> M3 clicks &lt;help&gt;. He's surprised and reads it.<br/> R: Would you have chosen that if it had said "Hint" instead of "Help."<br/> M3: Yes.<br/> M3 continues to try answers.<br/> R: What are we trying to do?<br/> M3: I'm trying to get a pattern to unlock the safe.<br/> R: Where's the pattern?<br/> M3: You have to click these.<br/> R: What's it mean up here?<br/> R points to A and the line of shapes at the top of screen.<br/> M3: OH! There's the hint.<br/> M3 did not realize that he is supposed to complete the pattern at the top of the page.<br/> M3 eventually solves it by accident.<br/> <b>Round 2:</b> Looks at line B at top of page, which he refers to as Hint. Has trouble seeing number pattern. Wants calculator. Given pencil + paper.<br/> R: You're making it more complicated than it is. Read the numbers to yourself left to right.<br/> M2: Oh, I get it. It's a pattern. Minus 2.<br/> Chooses all correctly.<br/> <b>Round 3:</b> Does easily.</p> |

## Webisode 1 Payoff

After game completion, the researcher asked:

The game says "congratulations, you did it" and then you finish reading the story. Is that a satisfactory ending or would you like something different to happen?

All but one student accepted the current webisode payoff. M2 suggested an animation of clapping hands and a "you got it."

## Webisode 1 Appeal

The users concluded that Webisode 1 was highly appealing, with a mean appeal rating of 4.8 out of 5.



F2            F1  
F3  
M1  
M2  
M3

In Webisode 1, the users liked the game most. Two respondents (F2, M2) felt there was too much reading, when asked what they did not like.

| What was Liked about Webisode 1                            |  |                |   |                           |                                |
|--|--|----------------|---|---------------------------|--------------------------------|
| F1   | F2   | F3             | M1  | M2                        | M3                             |
| Really exciting, fun choosing the number, color and shape. | It had a game. Halfway done, it had a game and then you keep on reading. | Game and story | Gave you a game to get encryptor. Reading was okay. | You had to crack the code | Game. I like doing math games. |

When asked how much they wanted to do another Webisode, the boys were very interested and the girls less so. The mean appeal rating was 4.0 out of 5. F2 felt there was too much reading.



M1            F1            F3            F2  
M2  
M3

## Webisode 2

Two students (F2, M3) whom the researcher felt could complete the pattern puzzle in Webisode 2 were asked to continue to Webisode 2, instead of Webisode 3 as planned in the procedure.

### Readability for Webisode 2

Neither student had difficulty reading the text in this webisode.

### User Friendliness for Webisode 2

After a few minutes of exploring with the mouse, F3 discovered that the box outlines related to a position in the answer matrix. She explained that she has books at home with similar games in them. F3 noted that the x y box has a v at the bottom even though there are no letters in that position. F3 also suggested making the outside lines bolder so that the relationship between the code and the answer matrix is more noticeable. F3 chose the happiest face for an appeal rating and liked figuring out the message in the game.

M3 chooses <help> early and types in <a> <c> then stops, confused. The researcher suggests to try help again. M3 reads help and notes that the <m> appears in the puzzle. M3 thinks perhaps they are trying to spell "motherboard." Researcher points out that they are each different words and suggests looking at help again. M3 doesn't understand the third clue. Researcher says, "see how this square is around the outside? that's the important part of this clue." M3 says that helps him. He looks for the "full box" and concludes correctly an <o> is needed as the second letter. Researcher asks M3 what the third hint should say so that it is clear to kids his age: M3 recommends, "look closely at the black lines dividing the letters into boxes". M3 goes on to solve the puzzle with few problems. M3 chose the happiest face for an appeal rating and liked the game. He noted that he finally figured out that the helps on the website are actually hints and suggested renaming them "hints."

## Webisode 3

Four students were asked to complete Webisode 3.

### Readability for Webisode 3

The following are words that students stumbled over in Webisode 3:

| Difficult Words in Webisode 3 |                                   |                     |                                |
|-------------------------------|-----------------------------------|---------------------|--------------------------------|
| F1                            | F2                                | M1                  | M2                             |
| Cerberus<br>routine           | traitorous<br>errands<br>Cerberus | circuits<br>routine | Researcher read<br>text for M2 |



### User Friendliness for Webisode 3

The two girls (F1 and F2) had no idea how to move Inez on her bike until the researcher suggested using <help>. F1 felt that the player should be able to drag Inez, that there needed to be something that said how you would get her to move, like “click on the dots” to move Inez. M1 moved the mouse over help accidentally revealing the balloons that told him how to move Inez. M2 needed no help to move Inez.

### Webisode 3 Game Appeal

The users concluded that the game in Webisode 3 was appealing, with a mean appeal rating of 4.5 out of 5.



F1  
M1  
M2

F2

Everyone liked the game but F1 wanted more transparency about how to move Inez and F2 wanted less reading in the webisode itself before getting to the game.

| What was Liked in Webisode 3   |  |   |  |
|--|--|---|--|
| F1   | F2   | M1  | M2   |
| I liked that you had to think about it, figure out how Inez should get there in the shortest path. | It tells about the characters. The pictures are in motion.       | You figure out the route to get to the library to go through every place. | I liked the game, the shortest route. It helps you read maps. You get to read a lot. Ooh, what happens next! |
| What was Not Liked in Webisode 3   |  |   |  |
| There should be something that said how you would get Inez to move like “click on the dots.”       | Too many pages, one balloon after another, you keep on clicking. | Nothing   | Nothing  |

### Webisode Appeal Generally

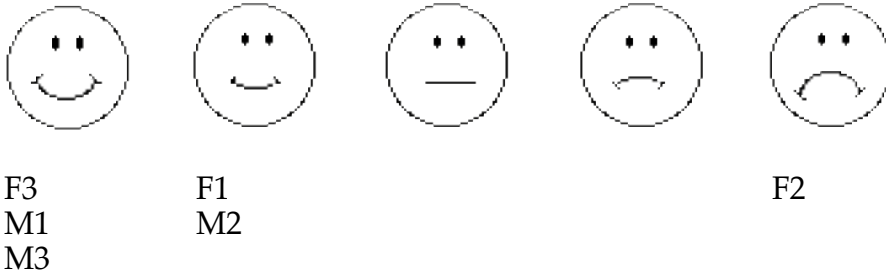
When asked how much they liked or disliked the Webisodes they played, the boys found them very appealing and the girls less so. The mean appeal rating was 4.7.



F2  
M1  
M2  
M3

F1  
F3

When asked how much they wanted to do another Webisode, the ratings were mixed. The games were of interest but the amount of reading was an obstacle for some. The mean appeal rating was 4.0 out of 5.



**GAMES CENTRAL**

Students had about 30 minutes of free play time in Games Central. They could choose any game and did not have to complete the game. Game playing was observed for problems. After each game, users rated how much they liked the game, told what they liked or did not like about the game, rated the difficulty, noted whether they would play the game again sometime and whether they learned anything from the game. After completing three games, students were told that scrolling would reveal other games.

Games Freely Chosen

The table presents games chosen in their order of choice. An asterisk marks games that were visible only by scrolling. Jigsaw Puzzle and Eye of Rom were chosen by four of the six students. Three students chose Double the Donuts and Railroad Repair. Two chose Make a Match. In this part of the session, a total of 20 different games were played out of 30 available.

| Games Chosen from Games Central |                        |                    |                   |  |                     |
|---------------------------------|------------------------|--------------------|-------------------|--|---------------------|
| F1                              | F2                     | F3                 | M1 <sup>5</sup>   | M2                                     | M3                  |
| Jigsaw Puzzle                   | Double the Donuts      | Cyberchase Squares | Jigsaw Puzzle     | *Bike route (had played in Webisode 3) | Jigsaw Puzzle       |
| Make a Match                    | Estimation Contraption | Jigsaw Puzzle      | Double the Donuts | Railroad Repair                        | *Tangrams           |
| Double the Donuts               | Send in the Trolls     | Pattern Player     | Eye of Rom        | Eye of Rom                             | Spaceship Builder   |
| Poddle Weigh-in                 | *Can you fill it?      | Make a Match       | *Logic Zoo        |  | Eye of Rom          |
| *Maze & Marbles                 | *Virus Hunt            | Eye of Rom         |                   |  | *Crossing the River |
|                                 | *Symmetrizer           | Star Gazing        |                   |  | Railroad Repair     |
|                                 |                        | Railroad Repair    |                   |  |                     |

<sup>5</sup> M1 had played Railroad Repair as part of his Today's Stuff experience.

## How Games were Chosen

After playing three games, the students were asked how they chose the games – from pictures, game titles, or game descriptions. Four of the six said they used the descriptions to choose a game. Three used the title – so if the title said Jigsaw Puzzle and they like jigsaw puzzles, they chose that game. Two students said they used the picture to help them choose a game.

| How Games were Chosen |             |             |             |                   |                       |
|-----------------------|-------------|-------------|-------------|-------------------|-----------------------|
| F1                    | F2          | F3          | M1          | M2                | M3                    |
| Picture and title     | Description | Description | Description | Picture and title | Title and description |

## Game organization

After playing three games, it was pointed out that there are 30 games on the page and that the web designers want to know how to organize the games so kids can find what they want to play. Four of the six respondents spontaneously suggested alphabetical order; one recommended order by difficulty and one did not know what to suggest.

| How Games should be Organized |                           |                    |              |                    |                  |
|-------------------------------|---------------------------|--------------------|--------------|--------------------|------------------|
| F1                            | F2                        | F3                 | M1           | M2                 | M3               |
| Alphabetical order            | Alphabetical order; Color | Alphabetical order | I don't know | Alphabetical order | Difficulty level |

- All six students felt that organization by level of difficulty as described by the researcher was an acceptable approach.
- Five of six students felt that organization by content (e.g., number games, logic games) was okay to do.
- Three students agreed that organization by characters (e.g., games with Digit, with Jackie) was acceptable. M2 noted that not all games may use characters.

Students were asked their preferred organizational choice, given their own suggestion as well as our suggestions of order by difficulty, by content and by character. Three chose character, two chose alphabetical and one, difficulty level.

| Preferred Organization of Games |           |              |           |              |            |
|---------------------------------|-----------|--------------|-----------|--------------|------------|
| F1                              | F2        | F3           | M1        | M2           | M3         |
| Character                       | Character | Alphabetical | Character | Alphabetical | Difficulty |





## Connection to Cyberchase

Four of the six students felt that connecting the games to Cyberchase characters of Cyberchase scenes was not necessary. F2 and M3 felt that the connection was necessary because otherwise “it wouldn't be a cyberchase network” (M3).

Observations of game play and students' responses to post game questions are summarized in tables below for each game played. Only for their first game were students asked why they chose the game. Some questions were not asked as students played beyond their third game; that is indicated in the tables with NA. "R" refers to the researcher.





### Jigsaw Puzzle

All four students completed puzzles one and two and quit in puzzle three without much effort. They felt the game was easy up until the third puzzle.

| Player                      | F1  | F3   | M1   | M3   |
|-----------------------------|---|--|--|--|
| <b>Why chosen</b>           | I like jigsaw puzzles   |  | I like jigsaw puzzles  | I like puzzles   |
| <b>Observations of play</b> | Clicks on words "smaller" and "larger" but then sees active buttons. Doesn't mind that game changes puzzle piece when time runs out. Not sure what to do in 3 <sup>rd</sup> freeform puzzle but starts and then soon quits. | Quickly moves through puzzles one and two, quits on three, the freeform puzzle     | Has trouble getting correct size but understands what to do. Doesn't mind that game changes puzzle piece when time runs out. Did not start puzzle three. | Does not recognize that pieces need to be adjusted by size. R. tells him. Does not want timer. Would like timer optional. Quits in puzzle three. |
| <b>Appeal</b><br>Mean = 4.3 |   |  |   |    |
| <b>What was liked</b>       | I like to put puzzles together  | I like puzzles but it was too easy   | I like that you have to make them big and small.   | I like jigsaw puzzles.   |
| <b>Difficulty</b>           | Easy except for 3 <sup>rd</sup> puzzle  | Easy   | Just right   | Easy and got hard.   |
| <b>Play again sometime</b>  | Yes   | No   | Maybe  | Yes  |
| <b>Learned from game</b>    | Not to get upset  | No   | No   | No   |





## Railroad Repair

Two students who put pieces on incorrectly tried to drag pieces off the screen. They used <start over> and did not readily see <clear all pieces> as a possible solution to their difficulty. Two boys asked when the game would end as they neared completion; they did not examine the <map.>

| Player                      | F3  | M1  | M2  | M3   |
|-----------------------------|---|---|---|--|
| <b>Why chosen</b>           |   | Played as part of his Today's Stuff experience  |   |  |
| <b>Observations of play</b> | <p>Puts in pieces but doesn't see break in track; asks "why isn't the train moving?" Then figures out there is a break and completes the track.</p> <p>Puts pieces on incorrectly. Tries to drag a piece off. Doesn't see &lt;clear all pieces&gt; as a possibility. Tries &lt;help&gt;. Uses &lt;Start over&gt;. R. points out &lt;clear all pieces.&gt;</p> <p>Very systematic and persistent.</p> <p>Completes game.</p> | <p>No problems working with track. R. did not permit game completion because M1 was playing it out of procedural order.</p> | <p>Puts pieces on incorrectly, tries to drag a piece off. Thinks he has to start all over. R. suggests looking at screen most closely. See &lt;clear all pieces&gt;.</p> <p>Bounces to the music as the train moves along the track.</p> <p>Asks how much longer as he neared end.</p> <p>Completes game.</p> | <p>Uses &lt;clear pieces&gt; without prompt.</p> <p>Asks how much longer the game goes as he neared end but still interested in completing game.</p> <p>It's okay that it gets harder as it goes along "That's how all games work."</p> <p>"I don't go by numbers, I just put them in and see which fits the best."</p> <p>Completes game.</p> |
| <b>Appeal</b><br>Mean = 4.5 |    |    |   |   |
| <b>What was liked</b>       | I had to build the tracks.  | You could pick as many pieces of track as you want, you can pick high ones and low ones.                                    | You add stuff up to get the number that it says. Like a 20, you put a 10, a 9 and a 1. Sound effect of train. Matt's eyes move every now and then.  | I don't know. I just like it.  |
| <b>Difficulty</b>           | NA  | NA  | Just right  | Just right   |
| <b>Play again sometime</b>  | NA  | Yes   | Yes   | Likes best of six games played.  |
| <b>Learned from game</b>    | NA  | Learned about decimals. You put .9 and .2 in a space that was 1.1   | Just have to add up to the number.  | NA   |




## Eye of Rom

Two students figured out the game without coaching. The student who read the instructions had the most difficulty. The students did not understand that they needed to go back to the entrance once they obtained the first piece; once they understood that goal, they could reverse the directions and return to the starting point.

| Player                      | F3  | M1  | M2   | M3  |
|-----------------------------|---|---|--|---|
| <b>Observations of play</b> | <p>#1: Uses directions correctly but gets caught in the green dead end. Lost. Uses &lt;start over.&gt;<br/>Sees compass. Gets first piece but doesn't understand that she has to go back out of maze. Tries &lt;reset&gt; to go out. Goes for first piece again and finds her way back. Doesn't know what inverse operations are. Suggests game should say "go back to the start."<br/>#2: Follows directions but going back is harder<br/>#3: Follows directions successfully. Does not complete game. Did not realize there was another maze and piece.</p> | <p>Chooses &lt;Instructions&gt;. Reads directions aloud and sighs heavily as he reads the last text page.<br/>#1: Reads west on green and turns west while at start. Clicks &lt;help&gt; and reads.<br/>R. suggests &lt;start over&gt;<br/>M1: "They say follow the directions backwards."<br/>R. tells him that he needs to find the piece first.<br/>M1: "North on red. You click" top arrow. He clicks top arrow once.<br/>M1: "west on green"<br/>M1 clicks left arrow once.<br/>M1: "But how do you get the color? Do you need the color?"<br/>Quits game.</p> | <p>M2: "It's a maze!"<br/>#1: Immediately starts playing with the arrows.<br/>M2: "North red"<br/>R. suggests &lt;start over&gt;<br/>M2: "north red"<br/>Follows directions. Hits green dead end.<br/>M2: "It ended."<br/>"I think I should keep going on purple"<br/>Gets piece.<br/>M2: "North red?"<br/>R. tells him they want him to get out.<br/>M2 backtracks, stops in green dead end. "I have no clue."<br/>R. asks how he could get a clue.<br/>M2: "Help?" He reads help screens.<br/>R. asks how you figure out how to go back the way you came.<br/>M2: East is the opposite of west. I really have no clue what I'm doing but I never quit games.<br/>Completes #1-runs out of time..</p> | <p>Reads page top down – "how to ...North on red..North on green."<br/>Uses directional arrows correctly.<br/>M3: "South on green. There's not a south on here."<br/>Continues on purple to find piece.<br/>M3: "You have to go the opposite way. Like if it's east you have to go west on purple to get out."<br/>Completes #1.<br/>#2: Sees all the directions and comments, "this is hard. I'm going to play a different game. That's way too hard."</p> |
| <b>Appeal</b><br>Mean = 4.5 |    |    |    |    |
| <b>What was liked</b>       | I like mazes. It was fun.   | I liked it but did not understand.  | You have to find out how to get back   | I like mazes  |
| <b>Difficulty</b>           | NA  | Hard  | Just right   | Just right for first part. Too hard for the second part.  |
| <b>Play again sometime</b>  | NA  | NA  | Yes  | NA  |
| <b>Learned from game</b>    | NA  | NA  | If you went one way, you have to go to the opposite.   | NA  |



## Double the Donuts

The three third graders who played expected something different than a change in picture. They did not understand the goal of the interaction and thus rated the game as "hard."

| Player                      | F1   | F2  | M1  |
|-----------------------------|--|---|---|
| <b>Why chosen</b>           |  | I like donuts and dragons   |   |
| <b>Observations of play</b> | Laughs at "magical" donuts.<br>Clicks on double but then stops. Agrees that she doesn't know what to do. "I clicked on this and it gave me two more."<br>Clicks again. Looks around screen with mouse. Then quits. | Felt she "messed up" when the doubled numbers grew larger than 20: "It was only supposed to go to 20." Asks for paper to check $2 \times 32 = 64$ . F2 talks about the number 40.<br>"The story said that he needed 40 donuts." R. asks her to look back to see what the story said.<br>Reads story. Goes back to doubling screen and understands that she has to hit double button 20 times.<br>Laughs as the donut pile grows.<br>Completes game.<br>"It wasn't really a dragon. It was Buzz and Delete." | Clicks on <double> then clicks at top of table several times and sees change in picture. Says, "Hm, I don't get this." R. asks, "what's happening?" M1 responds, "Whenever I click on something, it's getting bigger."<br>Clicks up to the 20 times. R. asks "what happened." "He got too big and he burst, but he still has one donut left." |
| <b>Appeal</b><br>Mean = 3.7 |    |   |   |
| <b>What was liked</b>       | I didn't know what to do.  | It was fun. I liked seeing the donuts pile up.<br>R. asked what the problem was in the beginning: "I thought I made too much, but I made less." Meaning she thought that she had doubled too many times but she had not doubled enough times.   | I liked that there was a lot of donuts. It was a story, not a game.   |
| <b>Difficulty</b>           | Sort of hard because I didn't know what to do.   | Hard. I didn't know what to do.   | Hard to understand  |
| <b>Play again sometime</b>  | No   | No  | Maybe   |
| <b>Learned from game</b>    | No   | No  | No  |


### Make a Match

Two girls played this game. Both were quite facile with fractions and felt the game was easy for them.

| Player                      | F1  | F3   |
|-----------------------------|---|--|
| <b>Observations of play</b> | Understands the directions. Very fluid in producing correct answers. No problems. Completes game. | Very good at levels one and two. Level 3: "I wondered if it's another picture." Finds Level 3 too hard and quits. Could not see the $1/2 = 8/16$ relationship. |
| <b>Appeal</b><br>Mean = 3.5 |                  |   |
| <b>What was liked</b>       | It was too easy   | I like fractions   |
| <b>Difficulty</b>           | Too easy  | Easy except for third level  |
| <b>Play again sometime</b>  | No  | Yes  |
| <b>Learned from game</b>    | No  | No   |


### Poodle Weigh-In

Out of five games played, F1 liked this game the best. Her younger first grade sister came in at the end of the session and this game was the one that F1 showed her. With F1's explanation, the first grader was successful at playing the game.

| Player                      | F1   |
|-----------------------------|--|
| <b>Observations of play</b> | F1 had seen the show related to this game. Understands what to do. She clicked correctly to put weights on and to take them off. She completed the game with ease. |
| <b>Appeal</b>               |   |
| <b>What was liked</b>       | I liked that you have to decide what number would even them [the balance pans] out. I'd like to do more than 10 poddles.   |
| <b>Difficulty</b>           | Easy   |
| <b>Play again sometime</b>  | Yes  |
| <b>Learned from game</b>    | No   |




## Maze and Marbles


| Player                      | F1  |
|-----------------------------|---|
| <b>Observations of play</b> | Reads the directions aloud. Doesn't know what to do with arrow keys. Tries <help>. "You try to get the marble in here." Plays with arrow keys and figures out that "you have to get it down without it hitting like that." Recommends a direction of 'try to get the marble in the slot.' F1 plays intensely with lots of verbal exclamations when she is unsuccessful. |
| <b>Appeal</b>               |    |
| <b>What was liked</b>       | It was hard at first but easy when I knew what to do.   |
| <b>Difficulty</b>           | Hard at first then easy   |
| <b>Play again sometime</b>  | Yes   |
| <b>Learned from game</b>    | NA  |

## Estimation Contraption


This game was giving incorrect feedback when F2 played it – all feedback screens said her estimates were too low. Despite the wrong feedback, F2 liked playing. She frequently used <Enter> instead of clicking <okay> which produced the next estimation problem instead of a feedback screen.

| Player                      | F2   |
|-----------------------------|--|
| <b>Observations of play</b> | "20 + 80 + 70." Asks for pencil and paper. She adds up her estimates to 170, types it in. Types <Enter> instead of <ok> so F2 did not receive a feedback screen. She continues to type in answers and pressing <enter> and thinks her answers are correct without any feedback. R. says she needs to click <ok> instead of <enter>. At that point, we recognize that the feedback screens are incorrect. |
| <b>Appeal</b>               |   |
| <b>What was liked</b>       | It challenged me   |
| <b>Difficulty</b>           | Easy. I knew how to do it but I'm not that quick.  |
| <b>Play again sometime</b>  | No   |
| <b>Learned from game</b>    | Yes  |


### Send in the Trolls

| Player               | F2   |
|----------------------|--|
| Observations of play | No difficulty playing the first round. Quit in second round. She thought that she had the correct order but did not and did not know what to change. |
| Appeal               |   |
| What was liked       | Sound effects  |
| Difficulty           | Easy.  |
| Play again sometime  | Yes  |
| Learned from game    | Yes  |


### Can You Fill It?

| Player               | F2  |
|----------------------|---|
| Observations of play | F2 understands what to do. She overfills the first time "oops" and needs two tries to a "perfect" outcome. Round #2 - "oh, cool." No problems. Round #3 - "oh, cool." No problems. Plays the game completely again. |
| Appeal               |   |
| What was liked       | I like filling things. It has different shapes. Not the same over and over.   |
| Difficulty           | Easy.   |
| Play again sometime  | Yes   |
| Learned from game    | No  |

### Virus Hunt

| Player               | F2   |
|----------------------|--|
| Observations of play | F2 reads the directions out loud, stumbles on "navigate." Uses arrow keys to move along the pathways and across the green areas for 4 minutes. Pulls up map - "tells me where I am and where I should go and where are things that can block me." "I'd rather play another game because this is taking a long time." |
| Appeal               |   |
| What was liked       | I like the rocket ship. It was very big - the whole thing when I went around. It took a long time. I didn't see the little virus anywhere.   |
| Difficulty           | Hard   |
| Play again sometime  | No, well yes   |
| Learned from game    | No   |


### Symmetrizer

| Player                      | F2   |
|-----------------------------|--|
| <b>Observations of play</b> | Reads introductory screen. "That's cool. You get different shapes." "That one is really cool.' Clicks on fun fact but does not read it.        |
| <b>Appeal</b>               |   |
| <b>What was liked</b>       | Fun because I got to make really nice shapes like stars and snowflakes. I couldn't get a different picture. [she did not click on center icon] |
| <b>Difficulty</b>           | Just right   |
| <b>Play again sometime</b>  | Yes  |
| <b>Learned from game</b>    | Yes. You can make shapes out of anything – circles, diamonds.  |


### Cyberchase Squares

| Player                      | F3  |
|-----------------------------|---|
| <b>Observations of play</b> | This was the first game chosen by F3, who thought it "looks interesting." However, the game did not work with the Netscape 6.2 browser. No people appeared in the matrix. |


### Pattern Player

| Player                      | F3   |
|-----------------------------|--|
| <b>Observations of play</b> | #1 – Works quickly on this introductory player and clicks <next>.<br>#2 – She checks out all the buttons and eventually clicks on every cell. Appears to be enjoying it immensely. |
| <b>Appeal</b>               |   |
| <b>What was liked</b>       | You make music yourself  |
| <b>Difficulty</b>           | Easy   |
| <b>Play again sometime</b>  | Maybe  |
| <b>Learned from game</b>    | No   |

## Star Gazing


| Player                      | F3   |
|-----------------------------|--|
| <b>Observations of play</b> | Does not read instructions. Clicks <point telescope>. Reads balloon help. Types in angle, clicks <point telescope>, gets planet. Types in angle, types <Enter> instead of <point telescope>. Comments “ugh” when she uses <Enter> for several tries and forgets to click <point telescope.> Finds several planets then tries several angles where there are not planets. Runs out of time. Starts over and finds all planets. Spends considerable time on this game. |
| <b>Appeal</b>               |   |
| <b>What was liked</b>       | You got to make a scrapbook and got to see all the planets. Didn't like the planets with skeletons and vampires.   |
| <b>Difficulty</b>           | NA   |
| <b>Play again sometime</b>  | NA   |
| <b>Learned from game</b>    | NA   |

## Logic Zoo


| Player                      | M1  |
|-----------------------------|---|
| <b>Observations of play</b> | Understands easily what to do and why. He has extra animals that do not fit into the circles or cross-section of the circles. Figures out to put extra animals outside of the circles but inside the fence. Round #2 – plays fine. Round #3 –plays fine. Round #4 - chooses lower left pen. Puts bunny to the right of circle but inside the fenceline {R- it should fit there but it did not stay. The bunny stayed when M1 put it in the bottom of the area, that was inside the fenceline but outside the circles} |
| <b>Appeal</b>               |    |
| <b>What was liked</b>       | You could compare animals.  |
| <b>Difficulty</b>           | Easy  |
| <b>Play again sometime</b>  | Yes   |
| <b>Learned from game</b>    | No  |

## Tangrams


I asked M3 if he would like an outline of a tangram set in "Free Stuff" where he could print out tangram shapes. He liked the idea.

| Player                      | M3  |
|-----------------------------|---|
| <b>Observations of play</b> | "I like tangrams. They're from China." Reads directions quickly. Sees Rabbit. "Oh, I love this even though I've never played it before." Clicks <hint>, moves piece, clicks <hint>, moves piece, rotates piece "Oh, I thought there was some way to do that" referring to the rotation operation. Continues smoothly to make Rabbit. "I'm glad they don't have a timer on this; it's too hard to have a timer." Continues with Cat head but is distracted by R's question about free stuff (see above). |
| <b>Appeal</b>               |    |
| <b>What was liked</b>       | I like tangrams.  |
| <b>Difficulty</b>           | Just right  |
| <b>Play again sometime</b>  | Yes   |
| <b>Learned from game</b>    | No  |

## Spaceship Builder

| Player                      | M3   |
|-----------------------------|--|
| <b>Observations of play</b> | Clicks on <instructions>. Easily makes square ship. "That's a ship? I'm going to launch my ship. Clicks <launch ship.> Clicks <ok>. Clicks <hint>. "Put it into the shape of a line? I can't make it. Oh, I get it. You have to rotate all the pieces." M3 builds a vertical line. "I have no idea how to do that." Quits. |
| <b>Appeal</b>               |   |
| <b>What was liked</b>       | I like drawing. I couldn't do a line that they asked me to do.   |
| <b>Difficulty</b>           | Just right.  |
| <b>Play again sometime</b>  | Yes  |
| <b>Learned from game</b>    | No   |

## Crossing the River

| Player                      | M3  |
|-----------------------------|---|
| <b>Observations of play</b> | <p>"Oh, this is easy." Reads paragraph at top. Tries dragging characters. Clicks &lt;help.&gt; It says, click bottom of boat to move it. M3 tries dragging boat, tries dragging characters into boat. R asks if he is dragging and tells him that he just needs to click on things, not drag. M3 clicks on Marbles, clicks on boat, boat moves across with Marbles. M3 clicks on boat again and boat moves back with Marbles. M3 does these same actions several times. "So how do I get them across in the boat?" Clicks &lt;help&gt; It says someone has to be in the boat. M3 says, "someone is in the boat to drive it." Closes &lt;help&gt; and clicks &lt;help&gt; again and it says click on the bottom of the boat to move it. Clicks Matt into boat and Inez into the boat. Clicks &lt;help&gt; which tells him that Marbles fits into an empty boat (M3 chuckles at message.) Clicks bottom of boat several times. R asks how to get kids out. M3 clicks on kids and they both come out. M3 says, "Oh, that's the bad part about it. Someone needs to be in the boat to drive it." R: "How are they all going to get over there?" M3 "I don't know." M3 continues to move boat back and forth with and without people but not dropping anyone off. He quits: "I don't know how to do this."</p> |
| <b>Appeal</b>               |    |
| <b>What was liked</b>       | Too hard to figure out.   |
| <b>Difficulty</b>           | Hard  |
| <b>Play again sometime</b>  | NA  |
| <b>Learned from game</b>    | NA  |