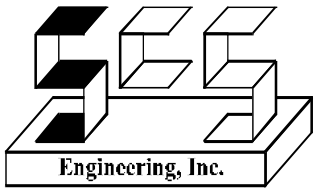
SCS Mosaic

Programmer's Guide
(Build V3.0)



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1. Overview

Mosaic is a standards-based learning tool that uses cutting edge technology to provide support to students who need reinforcement or additional assistance in the areas of Language Arts and Math. *Mosaic* is specifically designed to support students in ILS, SDC, Tutoring and Resource classrooms.

Mosaic stimulates students' learning through the process of exploring and interacting with both the software and other students in a fun and engaging way. Each student can participate in standards-based activities by himself/herself or work together with a partner to answer questions correctly. To support multiple learning modalities, *Mosaic* employs auditory, visual, and touch sensory stimulation.

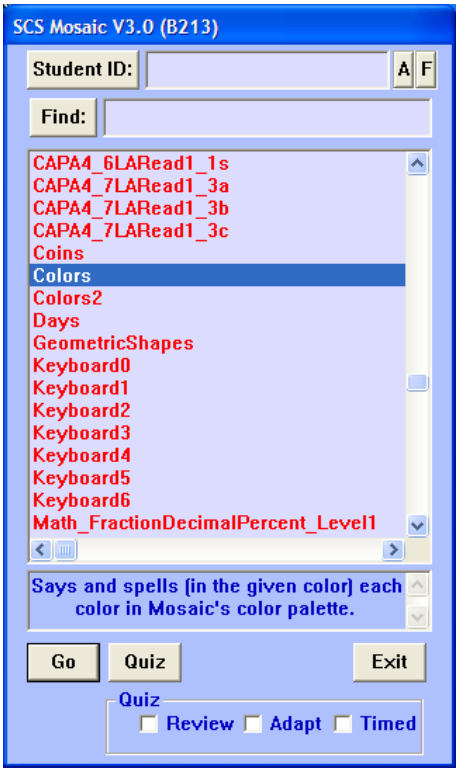
Finally, *Mosaic* incorporates an individualized assessment method to prepare each student for his/her own path to success. Students can take a pretest to evaluate the need for reinforcement in a particular area. They can then participate in activities that introduce/review the subject matter. A posttest is given to students to determine how well they have learned the material; retention of material can be evaluated at a later date.

The following instructions will provide guidance on how to use and program the Mosaic suite of products including Mosaic Basic and Mosaic Communicator.

2. Mosaic Activities

Locate the *Mosaic* program by going to the Start menu and clicking on All Programs. Scroll down to Mosaic and access the program. Or double-click on the Mosaic icon located on the computer's desktop:

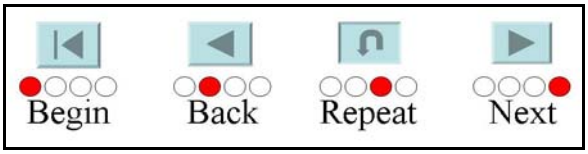
2.1. Selecting an Activity



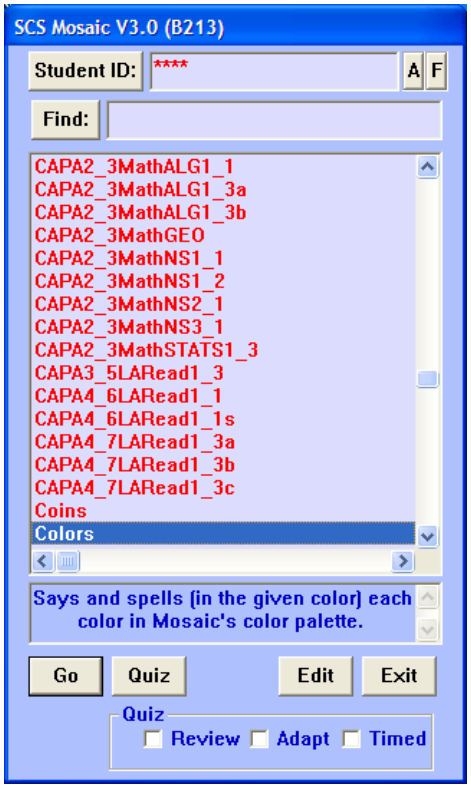
The main ***Mosaic*** dialog contains a list of ***Activities*** that are currently available. Select an ***Activity*** and a description of the ***Activity*** is displayed in the lower box. Click the **<Go>** button, to start the activity

(Note: you may also double-click on an ***Activity*** for the same results.)

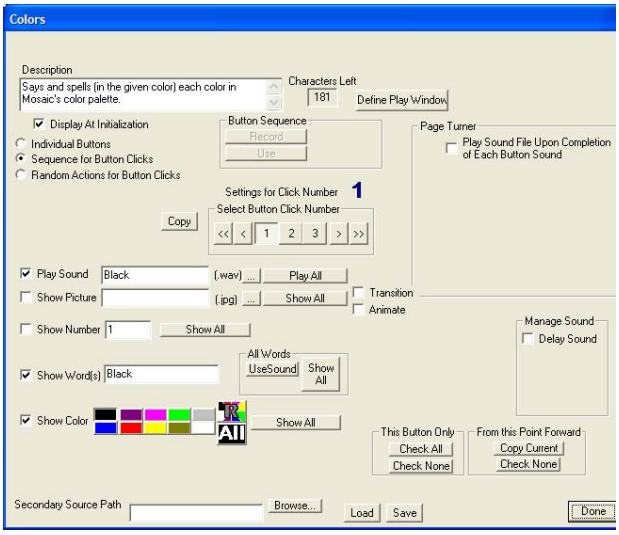
Using the ***Colors*** activity as an example, click on the panel with the red button to the far right (*Next*) which will bring up the next color. Continue to click on *Next* until all colors have been shown. When finished with the activity, click the <escape> button on the computer.



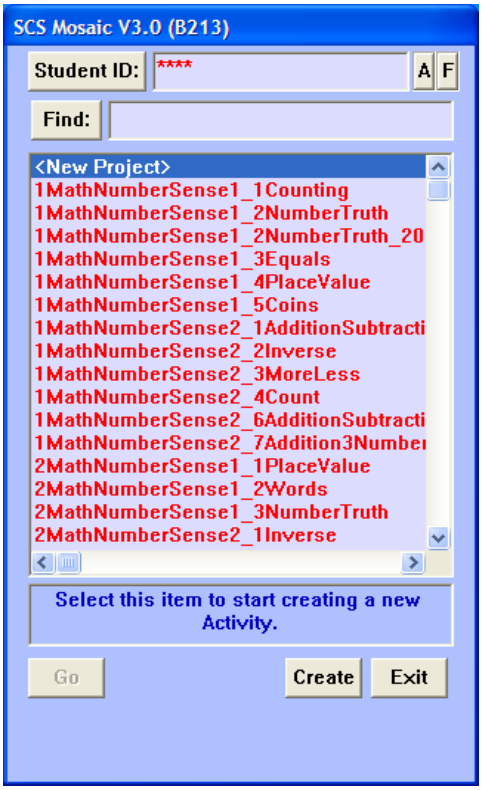
2.2. Editing an Activity



To change an ***Activity,*** type the code "MTEACHER" in the Student ID section. Select the activity and then click **<Edit>**. This will invoke the ***Set Up*** window where you can make any desired ***Design*** changes.

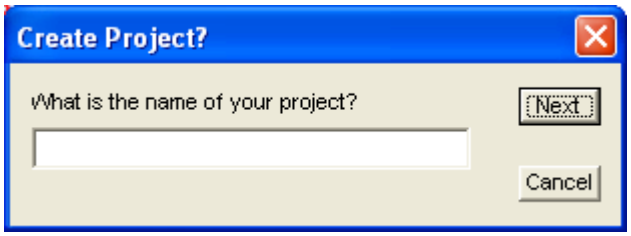


2.3. Designing an Activity



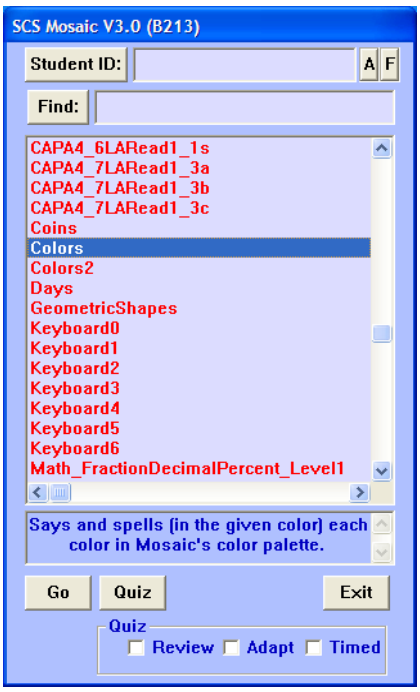
To create a new activity, type in the code "MTEACHER" in the **Student ID** section. Select "<**New Project**>" which is located at the top of the activity list. Click the **<Create>** button. This will invoke the "set up" window where you will identify a name for your project and then design your activity.

(Note: you may also double click "<New Project>" for the same results.)



3. Mosaic Quizzes

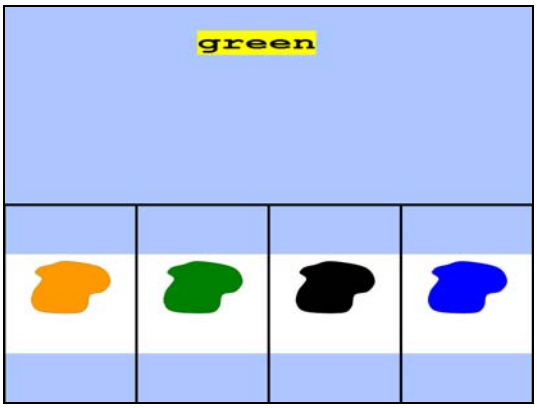
3.1. Selecting a Quiz



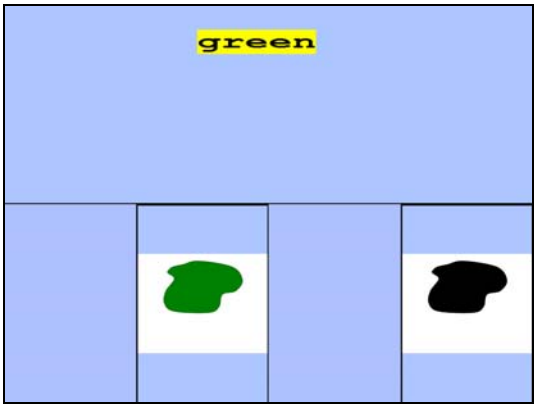
To select a **Quiz**, highlight the activity name and click on the <Quiz> button. There are several additional quiz options in the outlined box:

Review: this mode allows a student to take the quiz with only the correct answer offered as an option
Adapt: this mode alters the number of offered answer choices based on the student's progress
Timed: elapsed and final times will appear at the end of a quiz when this box is checked

Not all activities have quizzes, but those that do will be noted with the **Quiz** icon. To utilize the assessment feature for a student, be sure you enter the student's name in the **Student ID** section ***before*** clicking on the quiz button.



Using the ***Colors*** activity as an example again, click on the red button of the panel that indicates the correct answer. There are 4 buttons that coordinate with 4 possible answers on screen. The quiz will automatically move to the next question if the correct answer is selected.

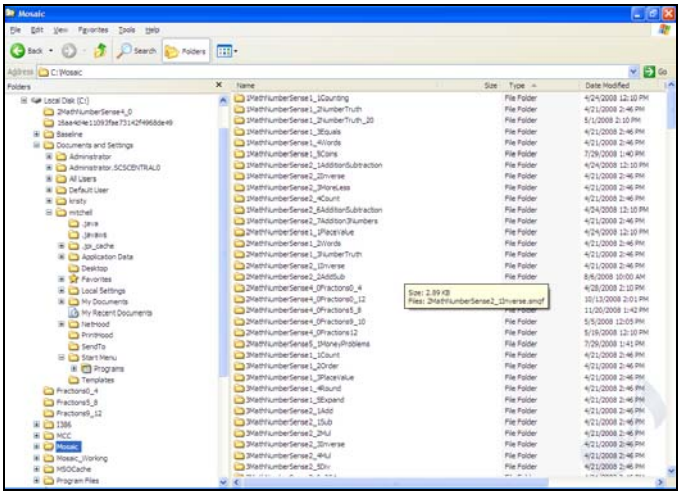


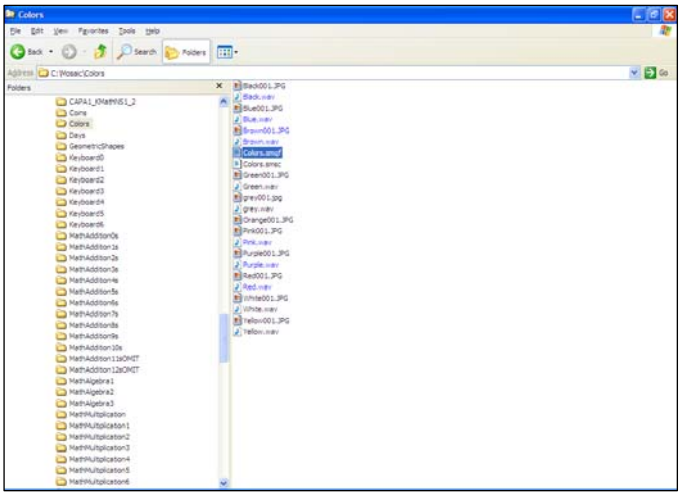
If an *incorrect* answer is chosen, it will be removed from the available options, and the student will try again until he/she selects the correct answer. When the quiz has been completed, a graphic will appear displaying the number of correct answers. The student will be instructed to push a button and the program will go back to the ***Mosaic*** menu. The student assessment for this quiz will be documented in a notepad file in the ***Mosaic*** folder.

3.2. Editing a Quiz

There are 2 different types of quizzes that can be edited. One type of quiz is an ***automated*** quiz in which both the questions and answers are automatically and randomly generated based on a set of programming parameters. Understanding the programming parameters will allow one to generate a variety of quizzes. These quizzes are solely mathematical quizzes.

The other type of quiz is a ***manual*** quiz in which both the questions and answers are manually entered into the quiz file. The questions will appear in random order but will have the same 4 answers appearing in a random location on screen. These quizzes can include any topic/subject that a teacher would like to assess for his/her students.



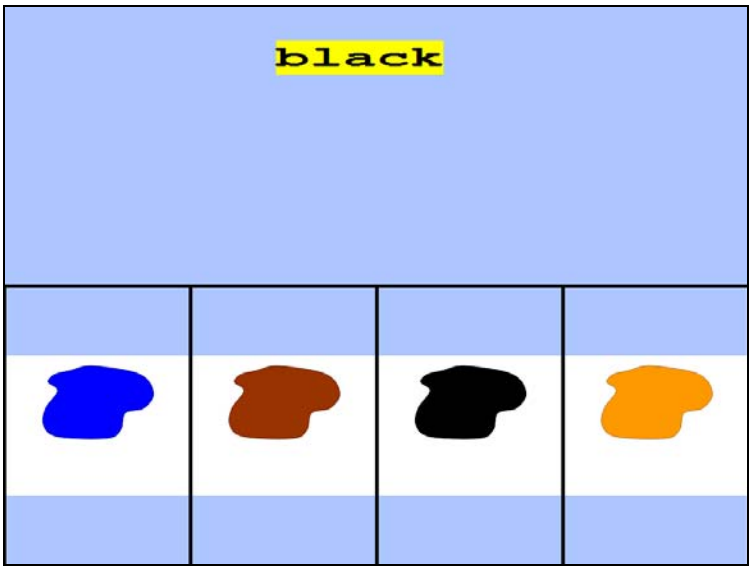


To edit a ***Quiz,*** go to the Mosaic folder in C drive and open the activity folder of the quiz you wish to change. As an example, ***Colors*** is open and the **Colors.smqf** file has been highlighted.

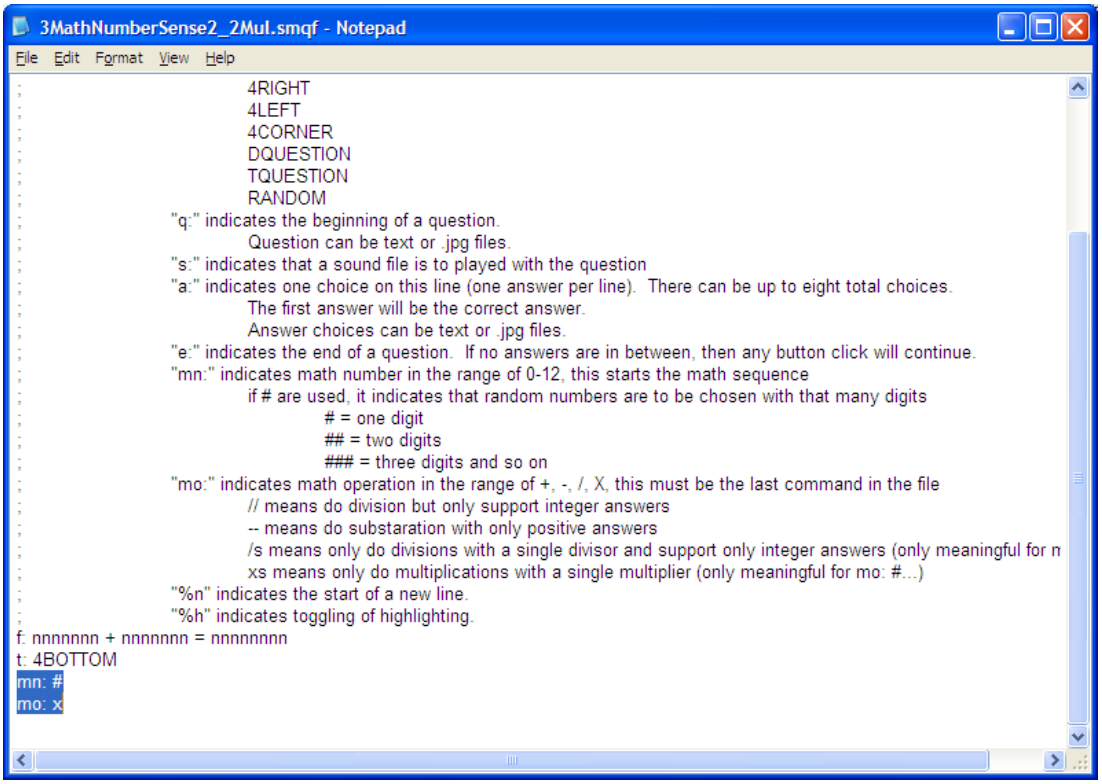
Colors.smqf - Notepad

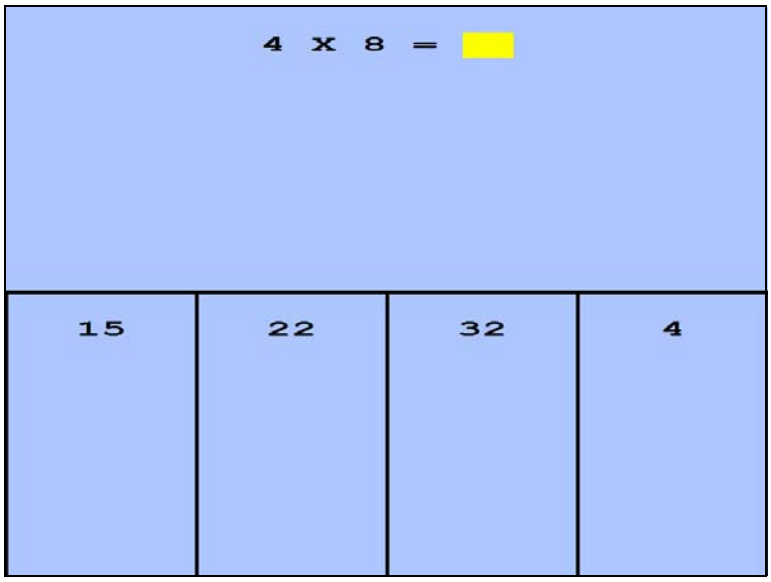
File Edit Format View Help

```
;Colors
;       File format:
;               "f:" indicates the font size to use.
;                       This font string indicates the maximum number of strings per line, the default is 40.
;                       f: 1234 -> would indicate that the maximum line length will be 4 characters.
;               "t:" indicates the kind of template to use.
;                       4BOTTOM (default)
;                       4TOP
;                       4RIGHT
;                       4LEFT
;                       4CORNER
;               "q:" indicates the beginning of a question.
;                       Question can be text or .jpg files.
;               "s:" indicates that a sound file is to played with the question
;               "a:" indicates one choice on this line (one answer per line).  There can be up to eight total choices.
;                       The first answer will be the correct answer.
;                       Answer choices can be text or .jpg files.
;               "e:" indicates the end of a question.  If no answers are in between, then any button click will continue.
;               "%n" indicates the start of a new line.
;               "%h" indicates toggling of highlighting.
f: What color is this?
t: 4Bottom
q: %hblack%h
s: black.wav
a: black001.jpg
a: brown001.jpg
a: orange001.jpg
a: blue001.jpg
e:
q: %hbrown%h
```



The file format shows the "codes". The first question of the quiz is highlighted above to show that it is just text which will be highlighted on screen as **black**. The word, black, will be heard, as noted by "s: black.wav". The correct answer is always listed as the first answer, but will appear in random order during the quiz. And in this example, the answers are pictures, as noted by "a: black001.jpg" This quiz is an example of a ***Manual*** Quiz in which all of the questions and answers can be changed according to the programmer's preference. For example, another color can be added to this quiz or the question and answer format can change to include text, pictures, and sounds.

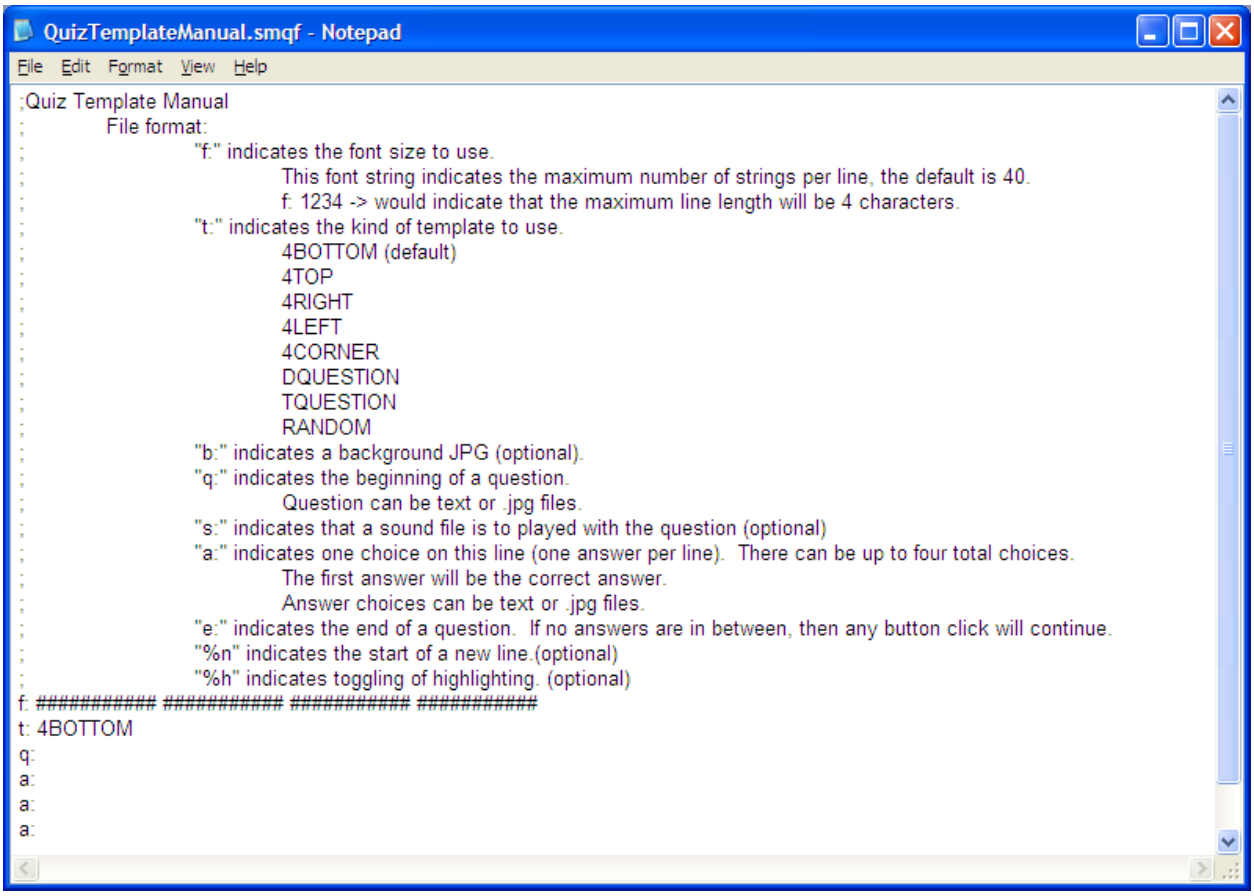




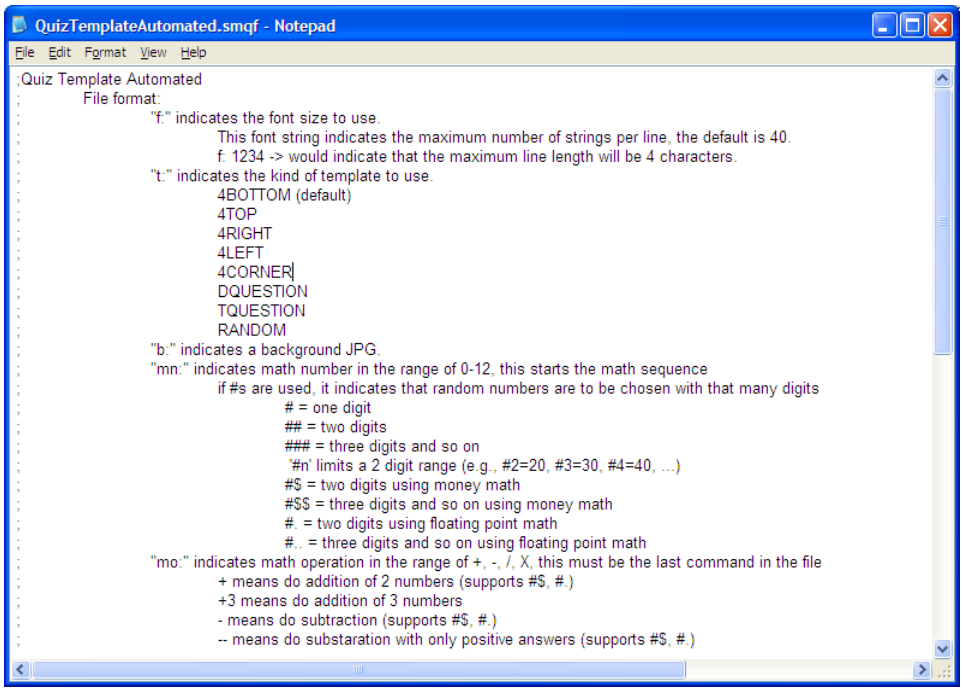
The quiz above is an example of an ***Automated*** Quiz in which all of the questions and answers are generated automatically via a specific set of parameters. For example, in this quiz the "**mn**" indicates a math number in the range of 0-9 with "**#**" symbol representing a one digit number. The "**mo**" indicates the operation. In this example, it is represented by "x" or multiplication. So, this quiz generates single digit multiplication problems.

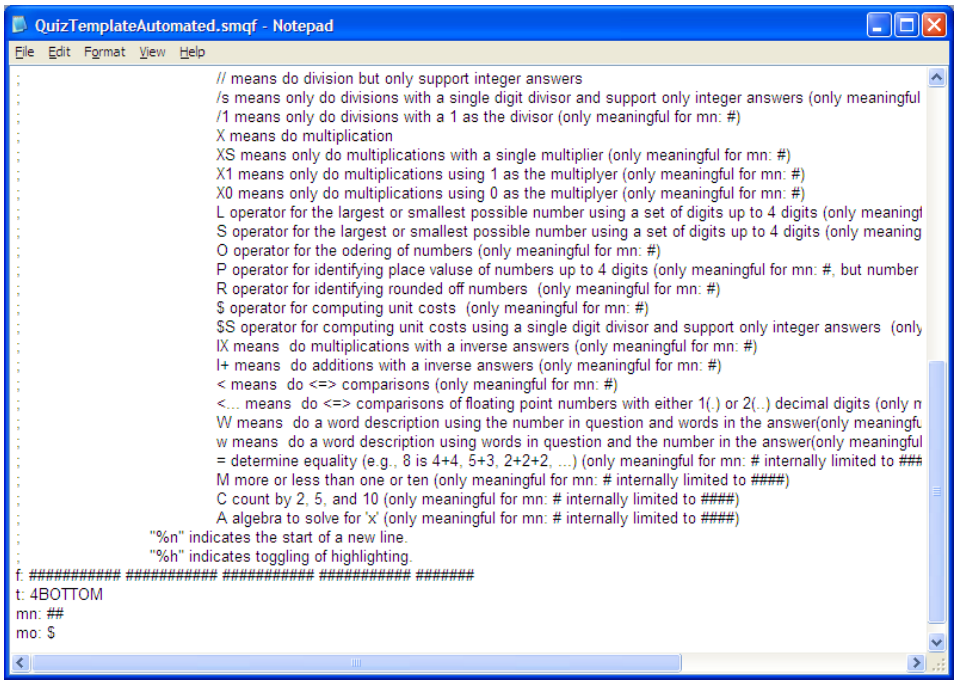
3.3.

To design a ***manual*** quiz, simply open the ***QuizTemplateManual.smqf*** file and fill in the information for each section. Use "save as" feature to rename the file and save to hard drive. Certain parameters are required such as ***font "f"***, ***template "t"***, ***question "q"*** and ***answer "a"***. Other parameters are optional and can be included as desired



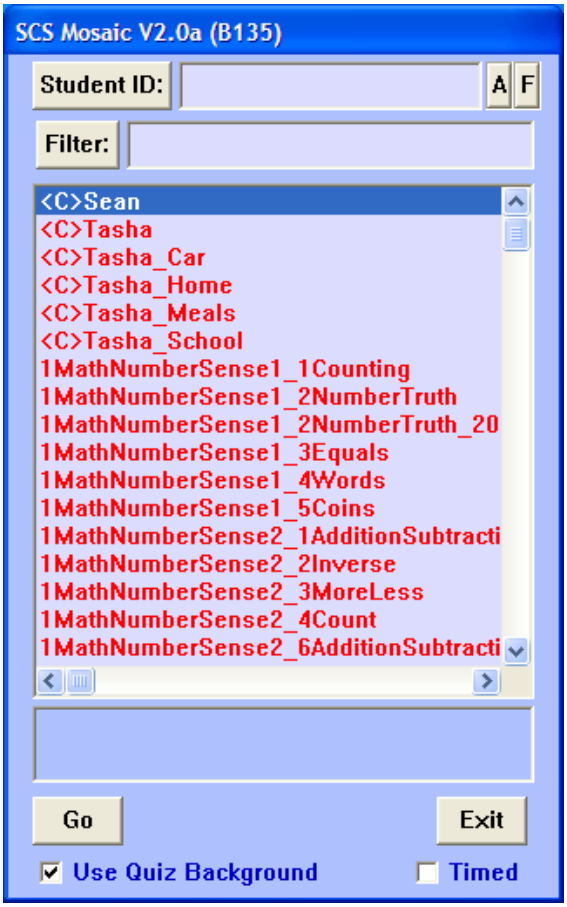
To design an ***automated*** quiz, open the ***QuizTemplateAutomated.smqf*** file and add the information for each section. Use "save as" feature to rename the file and save to hard drive. Certain parameters are required such as ***font "f"***, ***template "t", math number "mn"***, and ***math operator "mo"***. Other parameters are optional and can be included as desired.


QuizTemplateAutomated.smqf - Notepad
File Edit Format View Help
;Quiz Template Automated
; File format:
; "f:" indicates the font size to use.
; This font string indicates the maximum number of strings per line, the default is 40.
; f: 1234 -> would indicate that the maximum line length will be 4 characters.
; "t:" indicates the kind of template to use.
; 4BOTTOM (default)
; 4TOP
; 4RIGHT
; 4LEFT
; 4CORNER
; DQUESTION
; TQUESTION
; RANDOM
; "b:" indicates a background JPG.
; "mn:" indicates math number in the range of 0-12, this starts the math sequence
; if #s are used, it indicates that random numbers are to be chosen with that many digits
; # = one digit
; ## = two digits
; ### = three digits and so on
; '#n' limits a 2 digit range (e.g., #2=20, #3=30, #4=40, ...)
; #$ = two digits using money math
; #$$ = three digits and so on using money math
; #. = two digits using floating point math
; #.. = three digits and so on using floating point math
; "mo:" indicates math operation in the range of +, -, /, X, this must be the last command in the file
; + means do addition of 2 numbers (supports #$, #.)
; +3 means do addition of 3 numbers
; - means do subtraction (supports #$, #.)
; -- means do substaration with only positive answers (supports #$, #.)

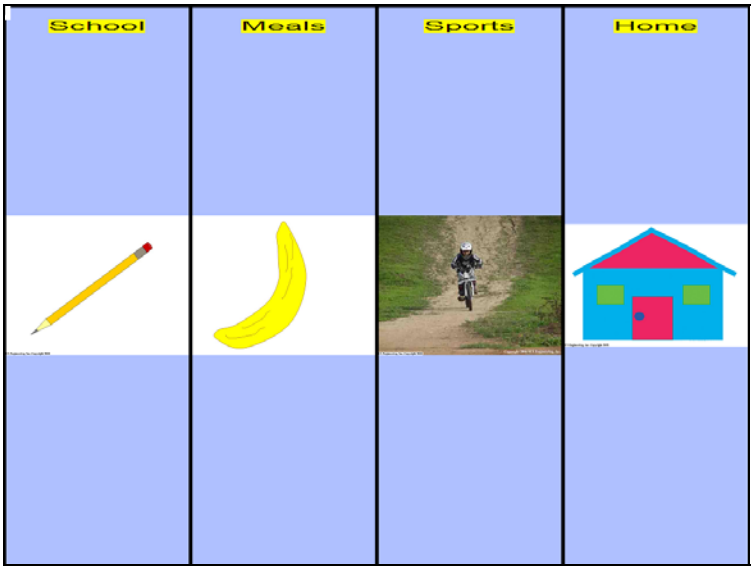

QuizTemplateAutomated.smqf - Notepad
File Edit Format View Help
; // means do division but only support integer answers
; /s means only do divisions with a single digit divisor and support only integer answers (only meaningful
; /1 means only do divisions with a 1 as the divisor (only meaningful for mn: #)
; X means do multiplication
; XS means only do multiplications with a single multiplier (only meaningful for mn: #)
; X1 means only do multiplications using 1 as the multiplyer (only meaningful for mn: #)
; X0 means only do multiplications using 0 as the multiplyer (only meaningful for mn: #)
; L operator for the largest or smallest possible number using a set of digits up to 4 digits (only meaningf
; S operator for the largest or smallest possible number using a set of digits up to 4 digits (only meaning
; O operator for the odering of numbers (only meaningful for mn: #)
; P operator for identifying place valuse of numbers up to 4 digits (only meaningful for mn: #, but number
; R operator for identifying rounded off numbers (only meaningful for mn: #)
; $ operator for computing unit costs (only meaningful for mn: #)
; $S operator for computing unit costs using a single digit divisor and support only integer answers (only
; IX means do multiplications with a inverse answers (only meaningful for mn: #)
; I+ means do additions with a inverse answers (only meaningful for mn: #)
; < means do <=> comparisons (only meaningful for mn: #)
; <... means do <=> comparisons of floating point numbers with either 1(.) or 2(..) decimal digits (only n
; W means do a word description using the number in question and words in the answer(only meaningfu
; w means do a word description using words in question and the number in the answer(only meaningful
; = determine equality (e.g., 8 is 4+4, 5+3, 2+2+2, ...) (only meaningful for mn: # internally limited to ###
; M more or less than one or ten (only meaningful for mn: # internally limited to ####)
; C count by 2, 5, and 10 (only meaningful for mn: # internally limited to ####)
; A algebra to solve for 'x' (only meaningful for mn: # internally limited to ####)
; "%n" indicates the start of a new line.
; "%h" indicates toggling of highlighting.
f: ########### ########### ########### ########### #######
t: 4BOTTOM
mn: ##
mo: $

4. Mosaic Communicator

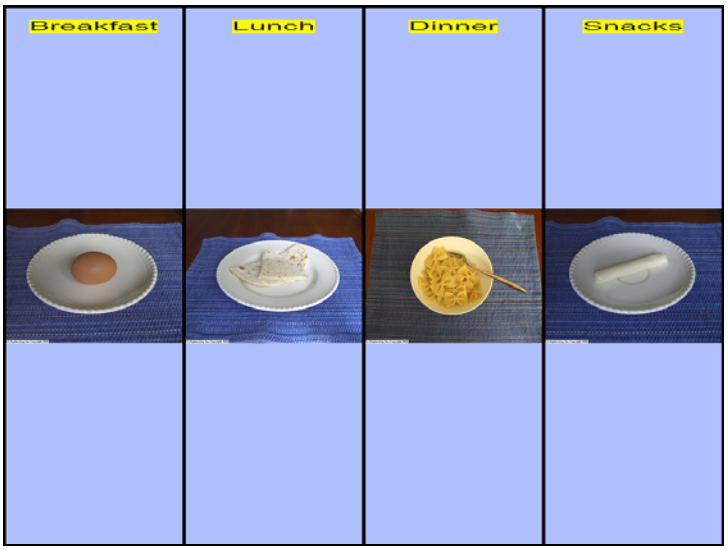
4.1. Selecting a Communicator File



A communicator file will be recognizable by the **<C>** symbol in front of it. Highlight with the cursor and select <Go>.

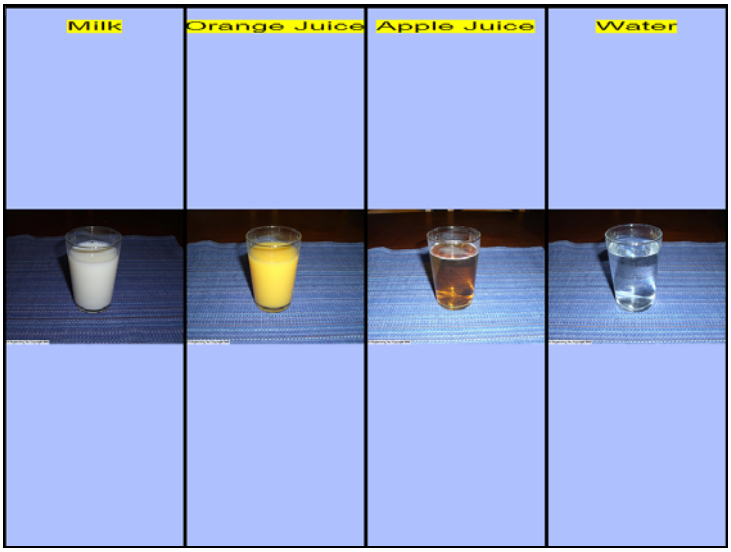


The initial screen will include 4 categories which utilize a "tree" structure to support unlimited depth and sequence for each category depending on its complexity. Voice or sound can accompany each category, also. Every communicator file can be customized with specific categories, photos/clip art, and sounds to meet specific needs of the user.



Selecting "**Meals"** from above brings up these 4 options from which to choose. The user can then determine which category fits his/her needs at the time and continue making choices.

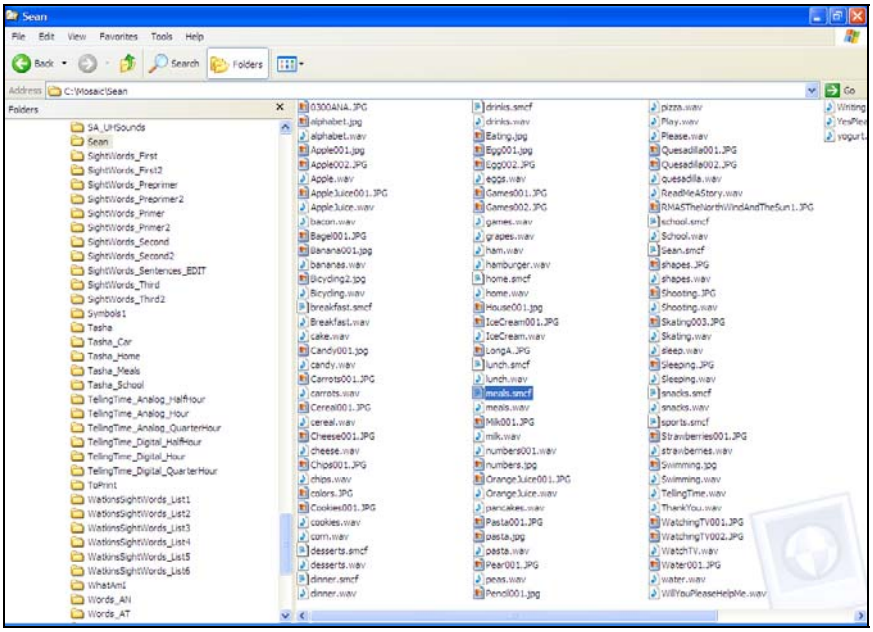
Selecting "**Breakfast"** from above brings up these 4 options from which to choose.



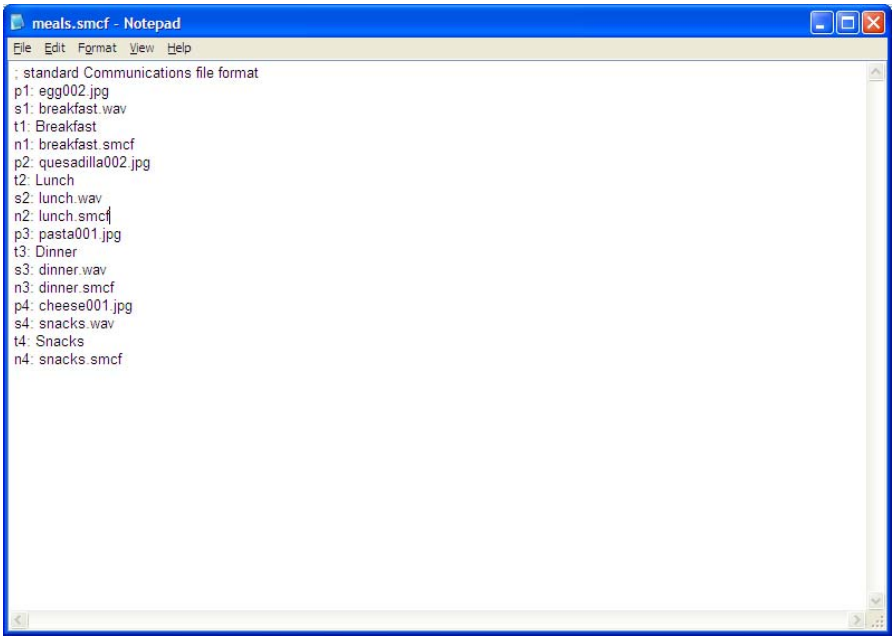
Select any of the breakfast items from above and then a list of drink options will appear. Once a drink is selected, the meal menu will appear again. The entire file can be closed by selecting the <**esc**> key on the keyboard.

4.2. Editing a Communicator File

Any of the Communicator files can be edited by selecting the file from the Mosaic folder in the C: drive. Because files build upon one another, it is important that when a change is made in one file, it is reflected in any other files to which it is connected.



In this example, we open the communicator folder named ***Sean***, and highlight the notepad file,**<meals.smcf>.**



Once opened, the 4 different categories can be modified with new pictures, new sounds, new text, or a new "tree". The "tree" or level is what that category will link to when selected.

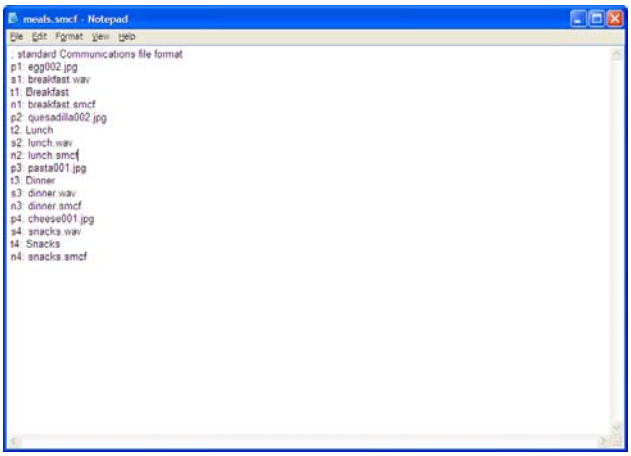
Key

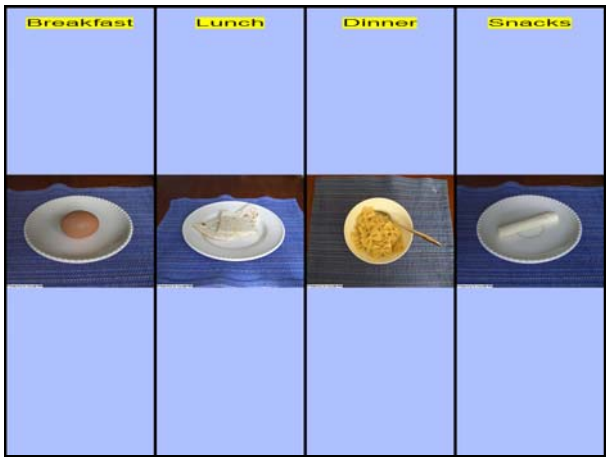
P = picture

T = text

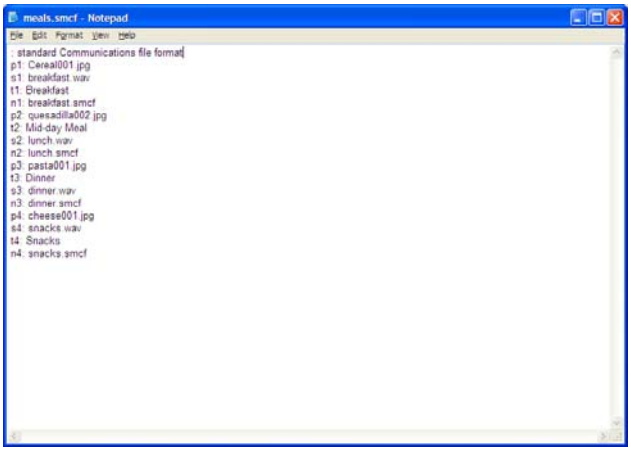
S = sound

N = next "tree"



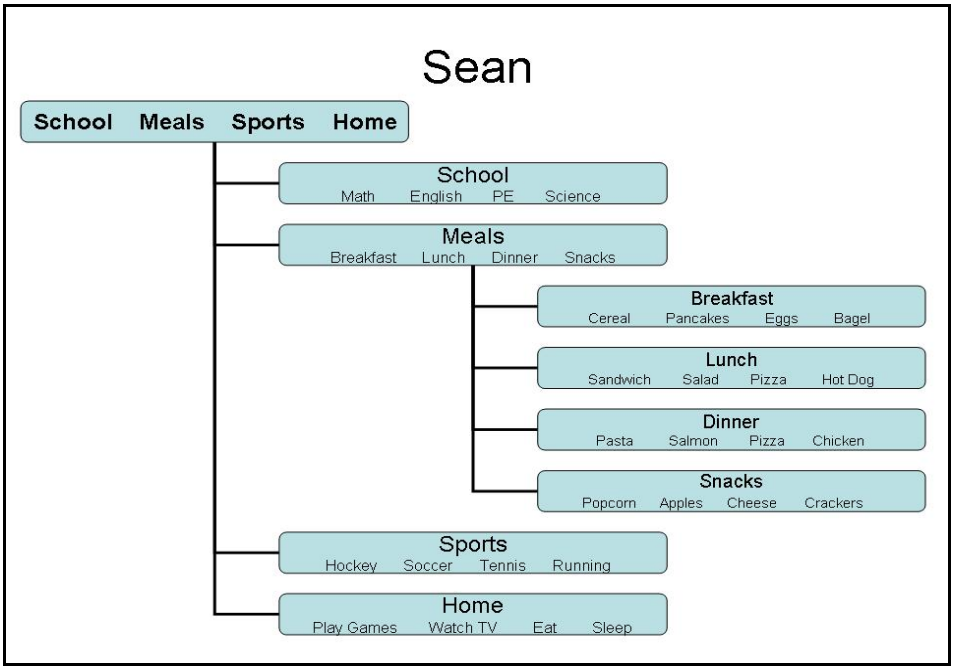


If one wishes to change the current picture for breakfast **(P1)**, from an egg to cereal, a new jpg must be entered on the P1 line and the actual jpg must be present in the ***Sean*** communicator folder. One could also change the current text for ***Lunch*** **(T2)** to ***Mid-day Meal***. The new name needs to be entered on the T2 line.



4.3. Designing a Communicator File

Creating a new Communicator file requires access to a Communicator template file. First, it is beneficial to "sketch" out a tree prior to creating the files, so one knows which files will connect and layer to other files. An example is shown below:



For example, the first level of ***Sean.smcf*** will include the first 4 categories (School, Meals, Sports, Home) and they will each be identified by number. Each category can then include a **P** (picture), **T** (text), **S** (sound), and/or **N** (next "tree").