



CHEM SQUARES

VERSION 2.0

A product of the
Chemical Casualty Care Division
U.S. Army Medical Research Institute of Chemical Defense



FEATURING CONTESTOBOT 400

OPERATOR MANUAL

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Product Based Upon:

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All individuals & sources are from USAMRICD unless otherwise stated

WHAT IS CHEM SQUARES?

Chem Squares is a fun and engaging group activity that parodies the classic game show, Jeopardy. Chem Squares is meant to review topics for chemical casualty care with three included editions; MCBC, FCBC and HM-CBRNE.

Chem Squares runs on a PC computer and is intended for multiple contestants or multiple groups of contestants. Up to eight individuals or teams can play.

The game is especially competitive if the Contestobot 400 learning response system is used which allows for independent verification of the first to respond.

Finally, Chem Squares is expandable. Chem Squares question sets can be updated as facts change. It is even possible to use the included editor to make new question set editions tailored to your unique needs.



PRE-GAME PREPARATION

In order to have a successful game, adequate preparation is needed.

- Print out squad sheets in advance, preferably on a color printer. These will be used to write responses to Final Chem Squares.
- Ensure that a working printer is connected to your presentation machine.
 - o This is more necessary for competition mode play because the host becomes responsible for knowing if responses are correct. In regular play, the answer will always display on the screen
- Plug in and turn on Contestobot 400 receiver, if available.
 - o The receiver connects to any USB port. The switch at the rear of the unit must be set to ON to receive radio signals from the transmitters.
- Distribute Contestobot 400 transmitters, if available. Leave them off until the Chem Squares team selection page is showing.

GAME RULES

The following text describes game rules for regular play. (When Contestobot 400 devices are used game play changes to Competition Mode, which has a slightly different play style).

The game begins with the selection of question categories and squads. A team can be represented by an individual or represent a whole squad of players. Once the play board populates, one of the squads is randomly selected by chem squares to choose a category and question dollar amount of 100-500. Teams may choose any dollar amount without regard to order. Questions at the 100/200 level are easier while those at 400/500 are more challenging.

Once a question is chosen, the question displays and the host reads the question aloud. The team then has a short period of time to deliberate and respond. If they are taking too long, the host can play a short musical piece at which time an answer must be forthcoming.

If the team cannot provide a response, the host may show the answer and mark it wrong or they may give the next team a chance to 'steal' the question for additional points. If the next team in sequence gets to steal, they still get their original turn when the question is over. Either way, the original team that was passed over loses points.

If the team does answer, they must always respond in form of a question (Who is Ulysses Grant? or What is an incapacitating agent?). Failure to respond with a question results in an incorrect response and loss of points. When an answer is given, the host shows the correct response on the screen and marks it correct or wrong. The team either gains or forfeits points based upon their response.

If there is some controversy regarding the question, the host attempts a reasonable interpretation. If this is not possible, the host can 'flush' the bad question down and have the team choose another without loss of points.

After the team has responded and been awarded/debited points, the next team is selected to play. Generally, this is done by choosing the next team to the right on the scoreboard. If the last team was rightmost, then the leftmost team is selected and the process is repeated.

There are two "Decon Double" questions that allow the team to set the dollar value of the question from 100-1000. Also, when time is low or when all questions on the board are completed, the game enters the Final Chem Squares round.



Final Chem Squares starts with teams placing bets. The teams may bet from 100 to their top score, or optionally bet \$1 dollar. Teams with scores of zero or negative scores will not be allowed to place bets, but can still try to answer the question. After betting, the question is displayed and the teams have about 45 seconds to write down their response in the form of a question using their handouts or a piece of paper. At the end of the special music, teams must show their answers by announcing the answer or giving their handout to the host. The correct response is then shown and the host credits or debits points for each team. Final scores are then displayed.

PLAYING THE GAME

START/SELECT EDITION



Chem Squares defaults to the “MCBC Edition” and will display a message to this effect when the program loads. If this edition is desired, the click on START to go on to the next step of selecting categories

If another edition is desired, select “LOAD DIFFERENT EDITION” and choose one of the XML files shown. There are MCBC, FCBC and HM-CBRNE editions available.

“questions.XML” is the question set that automatically loads when the program starts and is a duplication of the MCBC file.

It is possible to make any edition the default edition by renaming it to questions.xml.

SELECTING CATEGORIES



Six categories must be selected by clicking. When a category is selected, it will appear in one of the formerly blank spaces at the top of the screen.

If an error is made in selection, you must restart the program and select all new categories.

This screen will advance to team selection once six categories are selected or the randomize button is pressed.

The RANDOMIZE button will fill all empty categories randomly.

SELECTING TEAMS



Teams are selected by clicking on the large pill shaped buttons. Each team is named after a color. A team may represent a single individual or a group of players.



When a team is selected, its symbol appears on the scoreboard at the top of the screen.

In this example, white and grey teams have been selected.

***** WATCH OUT *****

This screen contains your only opportunity to print host notes.

If you need host notes, print them before pressing START.

Once all teams to play are selected, press START to begin Chem Squares.

PRINTING HOST NOTES



Printing host notes can only be accomplished from the team selection screen.

The upper left hand corner contains a host notes button.



When the host note button is pressed, this dialog box appears. Select a printer and click PRINT.

Obviously, you need to have a printer connected in order to use this feature.

The host notes feature prints seven pages: One for final Chem Squares and six for the active categories.

Printing host notes is not necessary for normal play, but is strongly recommended if using competition mode because the host will need to know the answers as the correct answer will not display on the screen until a player gets a correct answer or the available opportunities to answer are exceeded.

THE GAME BOARD



The game board contains four areas:

1. **SCOREBOARD** – *at the top of the screen*. You can set the active team here by clicking on a team's score. There is also a Fullscreen/windowed toggle on the right of the screen.
2. **QUESTION BOARD** – *middle/right of the screen*. This contains the available questions. Questions are selected by clicking on the appropriate blue box.
3. **PLAYER SCORE CONTROLS** – *left side of screen*. This displays the active team in a circle (currently YELLOW), the wager for the current question, if any, and controls. The triangles at the bottom allow the host to adjust scores in increments of \$100. The toilet plays a flush sound and can be used to discard a contested question.
4. **FINAL BUTTON** – *lower left of screen*. This takes you to final chem squares to complete the game. This button must be pressed twice.

DECON DOUBLE



Each question board has two hidden DECON DOUBLES!

When a team selects a DECON DOUBLE, they can bet from \$100-\$1000 for that question instead of the default value for that question.

If this is a competition mode game, the team selecting the double gets to answer it. The Contestobot devices will not be used for this question: The host adjusts the bet.

SELECTING AND ANSWERING QUESTIONS



When a question is selected, it is displayed as shown on the left.

The large blue display area contains a speaker control that can be used to play music to time a team if taking too long.

The PLAYER SCORE CONTROL now shows the current question score. The current category is displayed on the scoreboard at the top of the screen.

Notice that the PLAYER SCORE CONTROL in this example shows that the RED team is active.

Normally, the host will select ANSWER when the RED team offers one, but it is possible to make the RED team lose points and allow a new team to become active by then selecting another team. The control that does this is the white button with a red X to the lower right of the active team symbol.



Here is the display after the ANSWER button is pressed.

The correct response is displayed. The host selects either CORRECT, WRONG or TOILET to credit or debit the team or hold them harmless.

When any of these controls is selected, the view returns to the QUESTION BOARD.

ADJUSTING SCORES



A team's score can be arbitrarily adjusted by first clicking on that team's score.



The example here shows that the YELLOW team is now active.

The triangles with + or - can be used to adjust the team's score in increments of \$100.

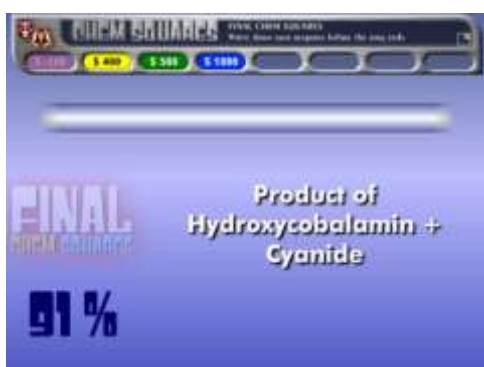
FINAL CHEM SQUARES



Final chem squares can be selected when all questions are answered or if time is running short. When “FINAL” is selected from the lower left corner of the question board, this betting screen is shown (left).

The betting screen permits all teams with positive scores to bet from \$1 to their total score.

The host can place the bets, or Contestobot users can repeatedly press their large red button to adjust their wager.



When the large “FINAL CHEM SQUARES” is pressed by the host, this screen appears (left).

One of five final chem squares questions are displayed and music plays for about 45 seconds.

All teams should use this as an opportunity to write their response on paper (in the form of a question). The Chem Squares CD contains a ‘handouts’ folder with printable color handouts.



When time is up, collect the handouts and press the smaller “FINAL CHEM SQUARES” button to reveal the answer.

This is often best done just after reading all teams’ responses.



When the final answer is rendered, the host presses the + or – buttons for each team based upon the correct response.

Final scores are displayed and the game ends.

COMPETITION MODE W/ CONTESTOBOT 400

STARTING A GAME WITH COMPETITION MODE



Contestobot 400 devices are custom made electronics for courses at USAMRICD. The Contestobot 400 system consists of eight color coded transmitters and one receiver unit.

These modules enable wireless participant interaction and greatly increase participation and competition.

Interaction with chem squares is done with the big red button (left). The yellow buttons are not used for this game.

Teams enter the game by turning on their Contestobot 400 devices when the team selection screen is displayed. Turning the boxes on before or after this point will not place team in the game.



Devices are turned on with the switch at the rear of the unit. A power indicator lights when the device is on.

When a device is turned on at the team selection screen, the large pill button with that team's name disappears and that team score appears at the top of the screen. In this example, the white and grey teams have entered the game.

If a team has turned on their device but their game entry has not registered with the program, ask them to press the large red button once or twice. If there is still no response, replace the transmitter unit's batteries.

As soon as Contestobot devices are detected, the display at the top of the screen indicates that it has detected remote control buttons and that Competition Mode is enabled.



GAME PLAY CHANGES



Competition is a modified method of game play for use with remote devices that increases competition and interaction.

In competition mode, teams do not take turns to answer questions. When a question is selected, the active team circle (LEFT) remains blank.



The first team that responds by pressing their button gets to answer the question. In this example, the red team was first to answer and the active team circle and screen background turn red.

In competition mode, the host should know the answers or have printed host notes. If the team's response is incorrect, then the host presses the red X box to the lower right of the active team circle. This deducts points from the active team and opens the question up to another contestant.

If the team answers correctly, then the host presses the answer button and clicks "correct" as usual.

The host should expect an answer almost immediately when a team has chimed in, otherwise they should get bounced out and lose points.

FINAL CHEM SQUARES BETTING



In final chem squares, teams can adjust their bets on their own by pressing their red button repeatedly.

CARE FOR YOUR CONTESTOBOTS



Contestobot devices were built to be rugged for game play, but they are custom built electronics and should be treated with care. It is especially important to avoid scratches and banging them as this will damage the spray paint coating.

Devices should always be turned off after use. This will conserve the batteries.

Nobody knows how long batteries last with these units, It is likely that they last for a number of hours. Batteries should be replaced when decreased performance is noted or every six months.

Battery changes are accomplished by removing a small Phillips screw on the rear battery pack. The unit uses four AA alkaline batteries. Remove batteries if storing units without use for more than 3-4 months.

CONTESTOBOT RECEIVER



The receiver is powered by a USB cable. Plug the receiver into a USB port and turn the rear switch to ON to activate the receiver.

When plugged in, your computer's operating system will recognize this as an "Ultimarc IPAC" human interface device. The receiver essentially emulates a keyboard, so no drivers are necessary for installation.

The front power indicator will illuminate when the unit is turned on. (It will stay lit when the switch is later set to off)

The switch on the rear controls power to the 802.15.4 radio modem receiver and not the keyboard interface portion of the receiver.

It is possible to keep this receiver plugged in all the time, but recommended that the switch be left in the OFF position except for times of Chem Squares play.

If no Contestobot 400 transmitters appear to be operating, the most common problem is that the unit switch is not turned to ON or the device is not plugged in.

MANAGING QUESTION SETS

STARTING THE QUESTION EDITOR



Chem Squares includes a question editor that allows for modification of existing editions or creation of new ones. This can be accessed from the title page of the program by selecting EDIT OR CREATE QUESTION.

This editor does not function when using web based versions of the program.



After choosing to edit or create questions, a dialogue box appears and asks you to select an edition to edit.

All editions are XML files:

- fcbc_2009.xml
- mcbc_2009.xml
- hm_cbrne_2009.xml
- blank_questions.xml

are your options.



In this example, the blank question template was chosen and this template now appears in your question editor.

OPTIONAL QUESTION EDITING METHOD:

Experienced users can edit XML based question sets directly with an XML editing program.

QUESTION EDITOR



The question editor allows for renaming the edition and inclusion of up to 30 categories + a mandatory final chem squares category.

The LEFT ARROW and RIGHT ARROW controls select the active question. The final chem squares question is the 31st category.

Each category must have a brief name and all 5 questions and answers.



The circle at the top of the screen copies a new edited XML file to the computer's clipboard. See "Saving your custom edition" for more details.

Save to clipboard often. It does not take much to lose your work.

More complex editing and copying of categories between editions can be accomplished with a professional XML editor

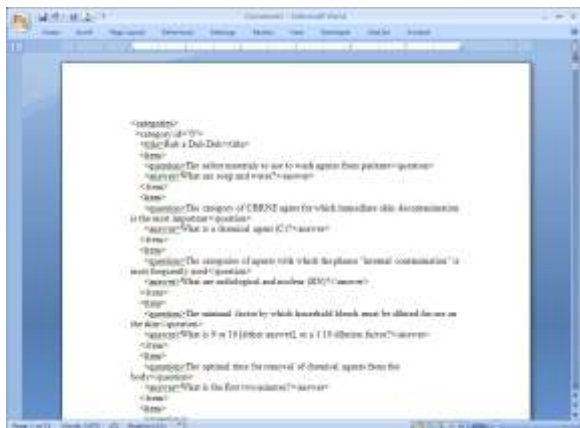
PRINTING QUESTIONS



The "HOST NOTES" button copies a text document with all questions and answers that can be pasted into a word processor and kept for reference.

These can then be printed out from your word processing software.

SAVING YOUR CUSTOM EDITION

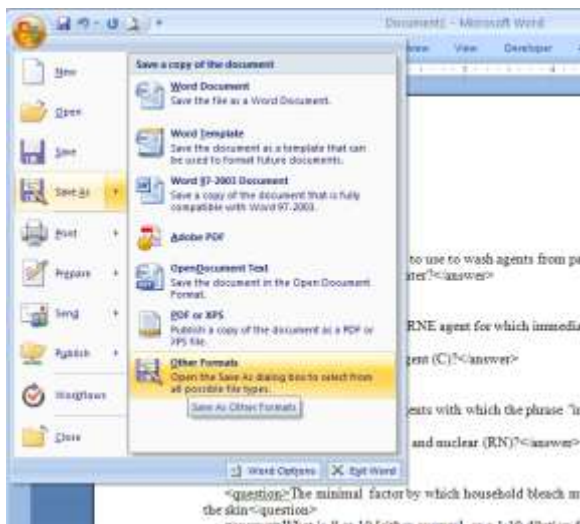


When you have selected "COPY TO CLIPBOARD", an XML file is generated.

Open a brand new empty document in your word processor and select PASTE or CTRL-V. The XML file should appear and look like the image on the left.

DO NOT TYPE ANYTHING INTO THE WORD PROCESSOR, this could corrupt the file.

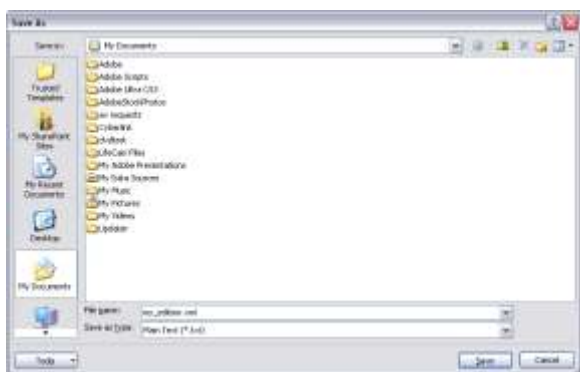
(this procedure works with other editor programs too, but not with notepad)



You now need to save this XML file as a text file. This example uses Microsoft Word 2007.

Select SAVE AS

Choose OTHER FORMATS



Choose the folder, usually the same on your copy of chem squares is located in. (If you have chem squares on a CD, you should copy it into a folder on your hard drive first)

Type in a file name on the "File Name:" line.

Under "Save as type", choose "Plain Text (*.txt)"

Under "File Name:", change the ".txt" extension to ".xml"

In this example, the new edition is called "my_edition.xml"

CREATING A NEW EDITION



The same process is involved with creating a new edition as editing an existing one. Select EDIT OR CREATE QUESTIONS



Your chem squares program comes with a "blank_template.xml" file for this purpose. Select it.



You must supply

- Name of edition (same on every page)
- Categories (name and five questions/answers)
- Final Chem Squares questions

Leave unused categories completely blank.

Categories must be filled sequentially. Example (1-15 with 16-30 blank). You cannot have 1-3 filled, 4 empty then 5-6 filled, for example.

It is often better to compose questions and answers in a word processor first, then past the results into the editor.

BUNDLED EDITIONS

MCBC EDITION (DEFAULT)

<u>CATEGORY TITLE</u>	<u>DESCRIPTION</u>
You Got The Nerve	Nerve agents
Lotta Twitchin Goin On	Nerve agents
Pardon My Runny Nose	Nerve agents
Old News	History
Ancient Tales	History
Exfoliation Treatment	Vesicants
Grey Poupon	Vesicants
Pop Go The Blisters	Vesicants
Hun Stoffe	Vesicants
You SOB	Pulmonary agents
Ypres Creepers	Pulmonary agents
Cooties	Biological agents
Sort It Out	Triage
Green Fields	Field management
Lost n Spaced	Incapacitating agents
Out to Lunch	Incapacitating agents
Disperse 'Em	Incapacitating agents / Riot Control Only
Can't Get This at Walmart	Equipment
Boy's Toys	Equipment
Detect This, Protect That	Equipment / Protective mostly
What a Gas	Potpourri
Rub a Dub Dub	Decontamination
Scheele's Folley	Cyanide
Cyanara	Cyanide
Info-Toxic	Informatics
Eyes have It	Ophthalmology
Disaster Plan	Threat and Response
Bad Boys	Terrorism
Four Letter Words	Potpourri using 4 letter acronyms

FCBC EDITION

<u>CATEGORY TITLE</u>	<u>DESCRIPTION</u>
You Got The Nerve	Nerve agents
Lotta Twitchin Goin On	Nerve agents
Pardon My Runny Nose	Nerve agents
Old News	History
Ancient Tales	History
Grey Poupon	Vesicants
Hun Stoffe	Vesicants
You SOB	Pulmonary agents
Ypres Creepers	Pulmonary agents
Cooties	Biological agents
Sort It Out	Triage
Green Fields	Field management
Out to Lunch	Incapacitating agents
Disperse 'Em	Incapacitating agents / Riot Control Only
Can't Get This at Walmart	Equipment
Boy's Toys	Equipment
Detect This, Protect That	Equipment / Protective mostly
What a Gas	Potpourri
Rub a Dub Dub	Decontamination
Scheele's Folley	Cyanide
Cyanara	Cyanide
Info-Toxic	Informatics
Eyes have It	Ophthalmology
Four Letter Words	Potpourri using 4 letter acronyms

HM-CBRNE EDITION

<u>CATEGORY TITLE</u>	<u>DESCRIPTION</u>
Rub a Dub Dub	Decontamination
Disperse Em	Incapacitants / Riot Control
NIMS Whims	NIMS
You Got the Nerve	Nerve agents
Acronym Hospital	Acronyms (Regulatory)
Control Freaks	HICS
Cyanide and Seek	Cyanide
Rad to the Bone	Radiation / Nuclear
Prophylactics	Protective Equipment
What a Blast	Conventional Explosives
Battle of the Bugs	Biological agents / Bacteria
Hospitable Hospitals	Hospital emergency management
Grey Poupon	Vesicants / Mustard
Ypres Creepers	Pulmonary agents
Ladies and Germs	Biological agents
Psyched out	Incapacitating agents
A Pox on Ewe!	Biological agents / Viruses
Death and Toxins	Mid spectrum agents / Toxins
Have a Blast	Conventional Explosives
Rays and Waves	Radiation
Hazard Pay	Hospital emergency management

QUESTIONS.XML

WHAT IS IT? Whatever is named questions.xml will automatically load when chem squares is started. By default, the questions.xml file is a duplicate of the MCBC edition.

BLANK_TEMPLATE.XML

WHAT IS IT? This is an empty template for creating your own edition by scratch using the question editor.