

STEM & Innovation Fair

November 29, 2017

STUDENT & PARENT GUIDE

Dear CHVE Parents and Students,

CHVE is preparing to host the annual STEM & Innovation Fair on Wednesday, November 29, 2017. All CHVE students and their families are invited to attend and participate. We encourage parents and students to review the enclosed information together.

Why a STEM & Innovation Fair?

To many, STEM & Innovation is a foreign term and a STEM & Innovation Fair is even more daunting. But really, a STEM & Innovation Fair opens the door for kids who like more than just the traditional science topics. In today's world we need to be raising children who are not just thinking within the box; but rather children who can critically think about the world around them. OUT OF THE BOX!!!

The goal of CHVE's STEM & Innovation Fair is for students to have *fun* with science, technology, engineering and math. Students need opportunities to experience science, technology, engineering and math for themselves by asking questions and discovering answers. Performing an experiment or designing an invention is the best hands-on way to enjoying and learning. A student's interest is greatest during elementary years, so take advantage of this time with your children, let them roll up their sleeves and dive into things they always wonder about and are excited to learn and know!

What is required to participate?

1. **Registration**: Please register by submitting the registration form located on the last page of this handbook no later than **11/15/2017**. The registration form can also be downloaded from www.chve.org, look under Academics then Stem Fair. Individual projects are encouraged; however more than one student can work on one project together.
2. **Choose a topic**: If your child/children are interested in doing a project, help them choose an appropriate topic. Simple, well-researched questions with a nice, organized display are key to a good project. Parental help is needed for direction and encouragement only. Learning will be enhanced if parental involvement is minimal and children are allowed to do their own work. Some ideas to get you started can be found in the Student Journal or go on line to www.chve.org, click on Academics, then STEM Fair 2017-2018.
3. **Display the project**: Projects should be presented on a tri-fold display board or in a slide show on a Chromebook, with relevant information displayed in an organized manner. We encourage all student participants to follow and include the elements of the engineering design process. This process is clearly outlined in the STEM & Innovation Fair Journal. You can download and print the Journal from www.chve.org.

STEM & INNOVATION Fair Odds and Ends

1. Each student may enter only one project. Individual projects are encouraged; however, students are allowed to work with other students on a project. All students should register separately with the exact same project title. **Please mention the name of your partner on your registration form.**
2. The format of this STEM & Innovation Fair is non-competitive. Projects will not be judged or graded. There will still be members of the community coming through to view all projects and ask students questions on their projects. Therefore students should still practice giving an oral presentation and be prepared to answer questions.
3. The STEM & Innovation Fair is voluntary. Although participation is strongly encouraged, it is not mandatory for any grade level.
4. Please turn in the STEM & Innovation **Registration Form** to your classroom teacher. The form is located at the end of this Handbook and online at www.chve.org look for Academics, then drop down to STEM & Innovation.
5. Parents and other responsible adults may **advise** the students in doing the project; however parents should allow students to do the actual work. The best projects are the simple ones where students can demonstrate command of the subject matter in the experiment/design.
6. Electrical switches and cords needed for exhibits must be provided by the participant and be in good working condition. All electrical and/or technology requirements must be disclosed on the Registration form under SPECIAL REQUIREMENTS.
7. The school and teachers assume no liability for loss or damage to exhibits. All students must agree to be careful and respectful of the work of other student scientists and engineers when viewing the STEM & Innovation Fair exhibits.
8. **No harmful animal or human experiments are allowed.** Parents must carefully monitor any experiment that is performed.
9. A space of about 3' wide will be provided for the display of the tri-fold board, computer, experiment, model and any record book.

We would like to thank the CHVE administration, staff and PTCO for their support with CHVE's new STEM & Innovation Fair!

Suggested Student Planning Guide: 6 Step Plan

A STEM & Innovation Fair project must answer a question. It doesn't matter if it's a demonstration, invention, or an experiment, you should design the project around a question.

STEP 1: Choose a topic (put it as a question) Learn the Engineering Design Process. Download the STEM & Innovation Fair Journal from www.chve.org. Gather information from research, books, experts and interviews.

STEP 2: Start recording your research in your STEM & Innovation Fair Journal. Organize and plan the experiment/design. Think about how to display the work. Write all your thoughts, data and research in your Journal.

STEP 3: Conduct your experiment or create your invention and test it out. Take pictures of the project. You may want to include an experimental control as part of the procedure. Do more than one trial (three trials or more are recommended). Record data. Continue to write in your STEM & Innovation Fair Journal. Have fun!

STEP 4: Remember, if the results are not what you expected, it is not a failure! Look at the results and figure out what happened. Make adjustments and try again. Record data. Analyze results. Tweak your invention. Make conclusions. Write in your STEM & Innovation Fair Journal.

STEP 5: Complete the project, record and write the results. Make graphs, charts and headings for display on the project board.

STEP 6: Set up the display at home – make sure it works. Review your work – practice your presentation to answer people's questions. Now you're all set for CHVE's STEM & Innovation Fair!!

REGISTRATION FORM
CHVE STEM & INNOVATION FAIR – November 29, 2017

DUE: Wednesday, November 15, 2017 (turn in to your teacher)

Student's Name: _____

Grade/Teacher: _____

Will you be working with a Partner?

Partner's Name: _____

Grade/Teacher: _____

What is your question:

Special Requirements (if any) ie: electric plug in, 3-D Printer, Chrome book, speakers...

PARENT PERMISSION: (MUST BE SIGNED)

___ Yes, I give my permission for my child's name and/or photo to be included in articles about the CHVE STEM & Innovation Fair in local newspapers (e.g. The Villager Crier).

___ No, my child's name & photo cannot be placed in any local newspapers/newsletters.

Parent Name: _____

Parent Signature: _____

Parent Email: _____

Parent Phone: _____.

PHONE CONTACT and PARENT EMAIL (*REQUIRED FOR PROJECT APPROVAL CONFIRMATION)