

Homework Menu #6



name: _____ date: _____

Directions: For homework this month you will be working on and completing projects of your choice. Below is a list of projects that you may choose from.

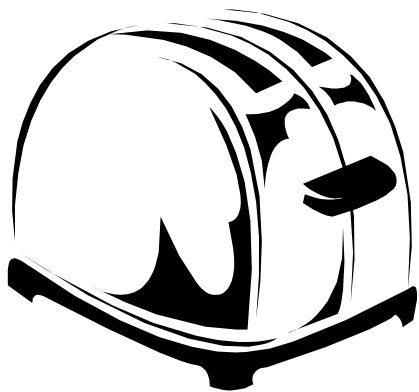
If you have an idea of your own which is not listed, check with Russ for permission to try it. As you complete each project you will have a chance to share it with your classmates. Some projects may take more time than others to finish. To keep track of the time you spend on your homework projects, you and your parents will complete a homework time sheet that is to be turned in each Friday. When you finish one project, begin working on your next project as soon as you can. All projects will be due no later than the nearest Friday to the end of the month. At that time a new menu will be given out.

Focus of the Month: Machines and Mechanics

Skills included: Reading comprehension; interpreting/infering; data collection & research; oral and written communication; interviewing; artistic representation; expository writing/presenting, analysis; spatial representation; multimedia creation.

Project Menu:

- When I was young I loved to take apart broken machines. I did this because I thought I could fix them. What really happened was that once I got them apart, I couldn't figure out how to put them back together again! Doing this however helped me learn how things work. With the help of your parents, find a broken machine (or one that they don't mind donating to the cause). It could be an old clock (not digital), a lawn mower, a bicycle, or any number of things. With your parent's help using any tools you might need, begin to systematically take the machine apart. Be careful not to break anything when you do this and do it in a safe manner. If the machine and its parts are small enough, use a hot glue gun to glue the parts onto a poster board. Group them in categories and label the parts as best you can. Include the name of the machine in your poster's title. If the machine you dismantled is too big to place on a poster, take pictures of the parts and paste the pictures on the poster instead. Bring your poster to school and share it with the rest of the class. Bonus idea: make a PowerPoint or other electronic presentation instead of a poster.



- Cars are one of the most common machines we notice each day. They are very complex and powerful, and they also make getting places a lot simpler. The heart of automobiles and motorcycles is their engine. Some are large and some are small, but they nearly all have many parts in common. Make a poster-sized drawing of a car or motorcycle engine, including a cutaway view of its inside. Label important parts. Bonus idea: explain what some of the engine's important parts do, how they work. Note: a good source for information to help you do this project can be found in auto repair manuals.



- Webster's Dictionary defines a mechanic as, "A person who is skilled in repairing, building, or using machines and tools." Using that definition you can see that there are a lot of mechanics among us, moms, dads, brothers, sisters, cousins ... A professional mechanic is someone who gets paid for repairing, building, or using machines and tools. Find a professional mechanic and interview them. Find out what types of things they do, how they got interested in becoming a mechanic, what they think the best part of their profession is, and anything else you can. Ask them to show you some of their tools and some of the things they are working on. If you can, take some pictures. When you are done, write a report on what you discovered, create a poster with a transcript of your interview and pictures you took, or create some other form of presentation to share with the class.
- Find information about how a machine works. You might look for a book in the library, check in an encyclopedia, or on the Internet. Whatever you decide to do, find out how a machine of your choice works. Once you have a good understanding of "what makes it tick," create a presentation or a lesson to help the rest of our class understand what you have learned. One place on the Internet that might help you is the "How Stuff Works" website (please note, this site is best viewed with your parents). The URL is <http://www.howstuffworks.com/> Bonus idea: create a documentary movie that shows how something works, you can be the star!



□ Other: _____

Expectations: It is expected that chosen projects will be finished completely, neatly, and in a timely manner. It is also expected that students will gain a depth of understanding about their project's topic upon completion. Further, while students are encouraged to work on one project at a time, it is entirely possible for students to complete any number of projects in the timeframe given. Students should also remember to keep homework interesting by challenging themselves to learn as much as possible and to do the best work they can.

Important: These projects will likely require mutual involvement of students and their parents. To ensure the quality and depth of understanding expected, they likely cannot be completed in one evening prior to the due date. Each student will have to use their time wisely, doing a little bit at a time until a project is complete. Use the Project Planning Form to help you successfully complete your project on time.

