

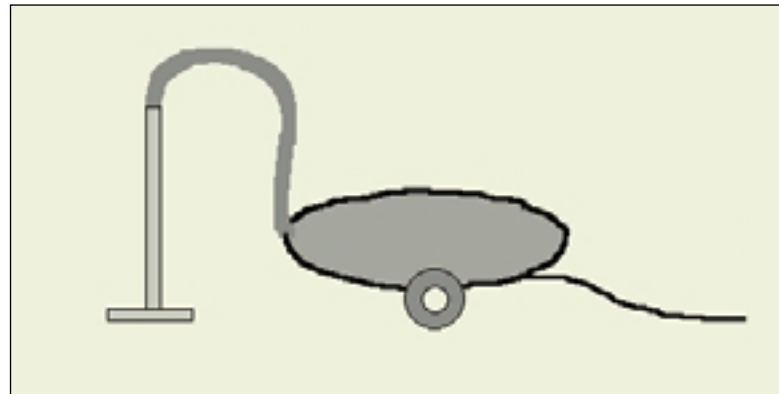
# Design, make and appraise

The following activity was demonstrated at an inservice course I attended and I tried it with my students. Students used graphics software to develop their ideas and design improved household appliances.

A major aspect of the Science and Technology syllabus is to encourage students to think through a situation and to design, make and appraise solutions to problems found within the situation. Students working in groups of three were given the task of creating a better household appliance using the BAR strategy. This is where ideas to improve something are generated by thinking about how it could be made **bigger**, by **adding** a feature or by **replacing** a feature.

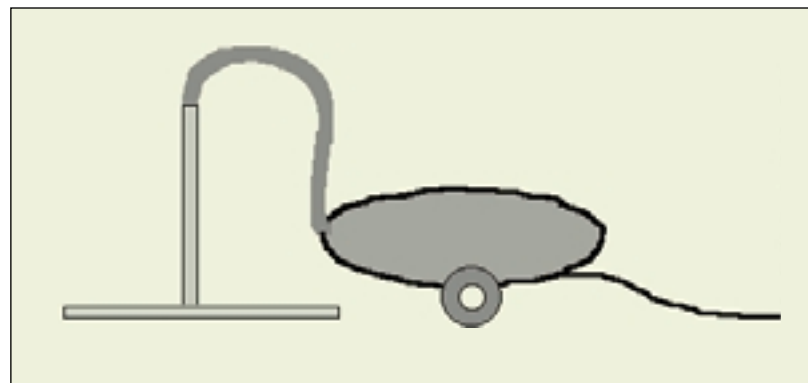
Here is one example, using *Kid Pix* to create the graphics. This can be done in any paint software including *ClarisWorks* or *Windows Paint*.

The students decided to redesign household items. One group redesigned a vacuum cleaner. They drew the vacuum cleaner and saved it as "Vacuum 1".



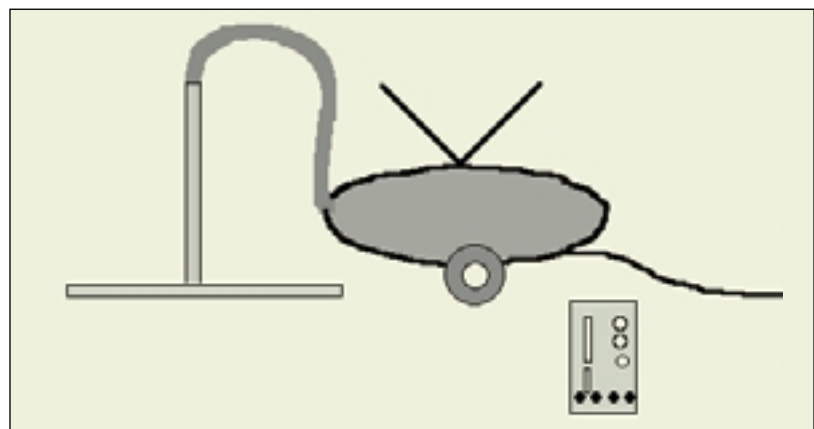
**The original design**

Some of the students decided to improve the vacuum cleaner by making the carpet tool bigger. They redrew the carpet tool and saved it as "Vacuum 2".

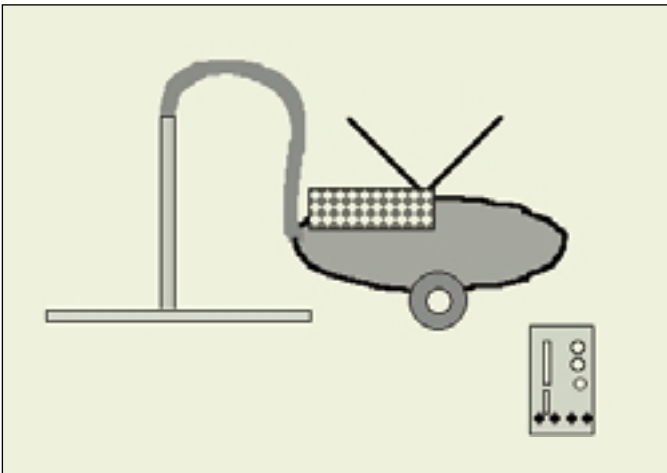


**Making something bigger**

Others decided to add a remote control device so they could relax while vacuuming. They saved it as "Vacuum 3".

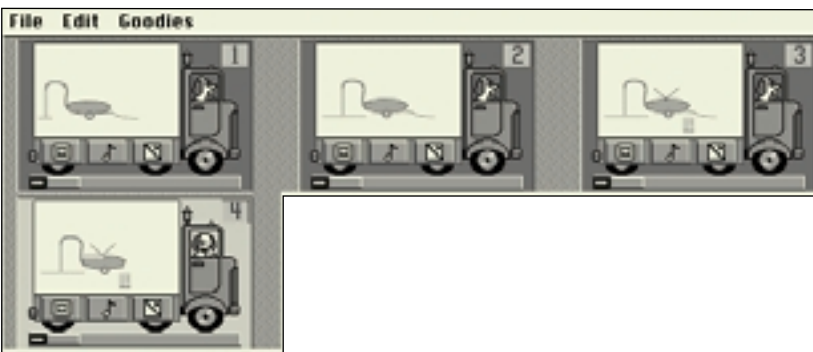


**Adding a remote control device**



**Replacing 240volt power with a solar panel**

They then replaced the 240volt power with safer, cleaner and less cumbersome solar power. They erased the power cable and drew in a solar panel and saved it as "Vacuum 4". They printed each step of the design process for display.



**Four frames from a Kid Pix slide show.**

They also made a slide show to present their work to the class, including a narration to outline their thinking processes.

Other examples of student work from Stages 2 and 3.

