



# Fact Sheet

## Inclusion of Students who have Severe/ Profound Disabilities

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Students with the most profound and complex disabilities can and should be included with their peers in school activities. The logistics, however, may take some creativity and planning. This article outlines the process that one specialist took to include a student with sensory, cognitive, and mobility challenges in the baking of pies for a school bake sale.

Educators sometimes think of equipment as an activity. For example, they may have “switch time” or “choice board time” in the schedule. Although these devices can build great skills, they are simply a means to an end. The goal is the activity. The devices assist the student in getting there.

In this case, the activity was baking apple pies to sell. The student was a teenager who had multiple complex disabilities, including deafness, visual impairment, restricted mobility, and cognitive impairments. Her strengths included the ability to grasp, push and bang objects firmly, a developing understanding of cause and effect, and an interest in movement and vibration.

The specialist first went online to find an easy recipe requiring minimal ingredients that would taste great. She avoided recipes with any steps that might burn, cut, or pose a choking hazard for the student. She also looked in the student's medical file for food allergies, and tried to pick a recipe without raw eggs or meat products given that the student likes to put objects and her hands in her mouth. One of the best places to find recipes is online at <http://allrecipes.com>. It has tens of thousands of free recipes with feedback provided by other cooks.

After the recipe had been found, she then listed the steps and ingredients, and how the student could carry out each step independently. Here is her list:

1. First was to peel and cut the apples. This is a vital step to making an apple pie but how could the student do it safely, independently, and quickly (we had to make at least 10 pies)? The



specialist searched the Internet for “automatic apple peeler” having no idea what would come up. She found this: A fairly inexpensive machine that peels apples or potatoes. Because it plugs in, it could be switch adapted with the use of a power link, a very useful device that can adapt any device that can be plugged in to be switch-adapted. A vibrating timer alerted the student when it was time to stop the peeler.



2. The apples needed to be sliced. The “slicing” mode on the classroom’s food processor was hooked up to a power link. The power link was then attached to a jelly beamer switch, a wireless plate-type switch.

3. Apples and other ingredients were poured into a large bowl. Instead of having a teacher do this part of the activity, it was adapted so that the student could participate in a few steps.

a. First the apples were poured by a teacher into the bowl. Then the student used a grasp switch to pour ingredients into the bowl.

Although the most common switches are the plate type, activated by a push of a large button, there are many others. This specific switch is activated by a tight squeeze of the hand, a motion that the student was known to be able to do easily. When she squeezed the tube, the pourer turned on. She was also able to do this purposefully, it wasn’t the result of responsive or seizure-type movements, which are sometimes made without a student’s awareness, and trying to shape these types of movements often doesn’t have the desired effect.



This picture shows a measuring spoon hooked up to the pourer. Here the grasp switch, seen in the bottom center of the picture, is used. Squeezing it would signal the pourer to turn the measuring spoon,

which would dump its contents into the bowl below.



b. Another student, also with significant disabilities, had the job of measuring the flour and spices. He was given a communication board. It first had a colored measuring cup or spoon. He would find the spoon or cup that matched the picture, each of the cups and spoons had their own color. They were purchased at a company that supplies equipment for adults who are blind/visually impaired. He then looked at

the next symbol, which pictured an ingredient. He used the spoon or cup to measure out the ingredient and put it into the bowl. If there were more than one needed, the communication board would have multiple symbols for the ingredient. As he poured each one, he would pull its symbol off the board.

c. Another device used to pour the milk was called a roll-n-pour. The roll-n-pour was designed for people with orthopedic disabilities. It holds a milk jug and uses gravity to pour it slowly with the touch of one finger. With a second touch, the jug rights itself.





We placed a device called a level indicator in the measuring cup. This makes a chime or vibration when liquid hits a certain level in the measuring cup. The student was alerted to touch the roll n' pour again, which would make it stop pouring.

4. The pre-mixed pie dough then had to be rolled out and placed in the pie plate. A clear plastic sleeve was used to make it easier to roll out the right shape of dough. The sleeves are available from many sites, and are used by cooks and bakers. Both students rolled out the dough, using rolling pins and their hands.



5. A teacher poured the ingredients from the bowl into the piecrust. The students used gloves and cookie cutters with Velcro to cut out the top crust, which were used to make leaf-shaped holes. Using this technique, the student simply had to bring her hand down repeatedly, and the cookie cutter made the right shaped holes.

6. The pies were then ready to bake and eat or sell!! The best part!

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**For more information about the CO Services for Children and Youth with Combined Vision and Hearing Loss Project contact:**

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