

Adapt-a-Toy

Grade Level: 5th grade and up

Overview:

The following activity explains how to “adapt” a toy for a child with special needs. Access to small buttons and switches on many toys are difficult for children with fine motor impairment. Connecting a switch with a large hitting surface is a simple way to make toys accessible to disabled children.

Required Materials:

Battery/button activated toy (anything that sings, dances, giggles, shakes!)
Dollar store stick on light (looks like a big button)
Wire, like speaker wire

Goal/Purpose:

- To apply knowledge of science to helping the handicapped
- To learn about different ways to make our world accessible to more people

We would love for your class to brainstorm other ways to adapt their favorite toys/games. You can email us your ideas and we will post the best ones! You can even take it a step further and actually try out some of the ideas in your classroom.

Background:

Girls with Rett Syndrome are severely disabled. They have little to no hand function. They also cannot speak or walk. Days can get very boring! Being able to access a toy and have control to hear music or watch something move is very exciting!

Procedures:

STEP 1: Brainstorm

Ask your students the following:

- What is your favorite game?
- What if you could not use your hands very well?
- What kinds of things would help you?

STEP 2: Create

The following instructions for “How to Adapt a Toy for \$1” come from a father of a little girl with Rett Syndrome. His name is Eric Diamond. Their family lives in NJ.

My daughter loves those walking, talking, singing, dancing, tickling, robotic plush toys. What annoys us most is that our daughter cannot activate the toys because she cannot squeeze the appropriate hand, ear, foot, etc. Well, I found a way around that and it only costs a dollar.

PREPARING THE ADAPTED SWITCH:

1. Go to your local Dollar Store and look for those battery-operated stick-on lights; (they look like big buttons) some even have designs like smiley faces on them.
2. Open the light, you will see a PUSH BUTTON SWITCH on one side with two wires attached to it.
3. Cut those wires leading to the bulb.
4. Leave yourself at least one inch of wire to splice.
5. Attach speaker wire, or another type of wire, to each side of the switch.
NOTE: Leave plenty of wire length (at least 2 feet) so you can place the button where the person can reach it!
6. Secure the wire and screw the light back together. (You do not need batteries for the light; you are only using it as a switch).

PREPARING AND CONNECTING THE TOY:

CAUTION: PLEASE REMOVE BATTERIES BEFORE “OPERATING” ON THE TOY

1. Slice the hand or ear carefully to get the “squeeze switch” that is embedded in the toy.
2. Pull it out carefully and you will see the wires that it is attached to.
3. Cut off the switch and securely attach the other end of the speaker wire to the exposed wires in the toy.
4. The adaptive “switch” you created should complete the circuit when pressed and the toy will turn on.

TEST AND COMPLETE

1. REPLACE THE BATTERIES IN THE TOY
2. After you test that it works, carefully glue or sew the limb back together and you are done!

STEP 3: SHARE

Once your students have completed their adapted toys, it is time to play! Perhaps you can set up a time with the school's OT (Occupational Therapist) for each group to take their toy to a therapy session with a special needs child. Introduce the toy and see if they are able to make it work!

It is exciting for students to know their work has real-life application.

Questions? Comments? Suggestions?

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