

## Re: Is it safe for kids to take apart electronics?

**Source:** <http://sci.tech-archive.net/Archive/sci.electronics.repair/2005-02/1337.html>

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**From:** Sam Goldwasser ([sam\\_at\\_saul.cis.upenn.edu](mailto:sam_at_saul.cis.upenn.edu))

**Date:** 02/12/05

Date: 12 Feb 2005 08:50:03 -0500

"Asimov" <Asimov@-removethis-bbs.juxtaposition.dynip.com> writes:

> *"momwithtools" bravely wrote to "All" (11 Feb 05 17:50:25)*  
> *--- on the heady topic of "Is it safe for kids to take apart electronics?"*  
>  
> *mo> From: "momwithtools" <shoppinghall@nosspam.sbcglobal.net>*  
> *mo> Xref: aeinews sci.electronics.repair:10246*  
>  
> *mo> For an elementary school project, I'd like the children to take apart*  
> *mo> some old electronics to get an idea of how things work, what goes into*  
> *mo> each product, etc. My question is: Are there certain electronics or*  
> *mo> appliances we should stay away from because of chemicals or something*  
> *mo> else that would be unsafe for the children? Please advise.*  
> *mo> Thank you!*  
> *mo> Mom With Tools*  
>  
> *The lead (Pb) on circuit boards is very toxic to children and can lead*  
> *to brain damage resulting in developmental retardation. Some*  
> *heatsinks have highly toxic beryllium oxide insulators which can be*  
> *dangerous if broken or scratched. Be sure they always wash their hands*  
> *well. Any cuts or scratches must be thoroughly flushed clean in*  
> *addition to disinfection. There are new studies implicating common*  
> *plasticizers (phtalates), which may cause reproductive abnormalities,*  
> *repressed immune system. It has been found that these are breaking*  
> *down in the environment into more toxic forms instead of dissipating.*  
> *Never let children chew on plastic pens, wire insulation, parts, etc,*  
> *which tend to leach such plasticizers. There are many unknown circuit*  
> *cleaning compounds which trace amounts may have deleterious effects.*  
> *The list is long but I'll probably get flamed for just these few...*

I certainly agree that eating the components on circuit boards is not advised but it's more likely you'll find something toxic playing in dirt than on a most circuit boards. Beryllium is very rare in consumer electronics.

And, yes, if they are too young follow instructions not to lick their fingers until thoroughly cleaned, then a show and tell would be better.

sci.electronics.repair: Re: Is it safe for kids to take apart electronics?

— sam | Sci.Electronics.Repair FAQ Mirror: <http://repairfaq.ece.drexel.edu/Repair> | Main Table of Contents: <http://repairfaq.ece.drexel.edu/REPAIR/>  
+Lasers | Sam's Laser FAQ: <http://repairfaq.ece.drexel.edu/sam/lasersam.htm>  
| Mirror Sites: [http://repairfaq.ece.drexel.edu/REPAIR/F\\_mirror.html](http://repairfaq.ece.drexel.edu/REPAIR/F_mirror.html)

Note: These links are hopefully temporary until we can sort out the excessive traffic on Repairfaq.org.

Important: Anything sent to the email address in the message header above is ignored unless my full name is included in the subject line. Or, you can contact me via the Feedback Form in the FAQs.