

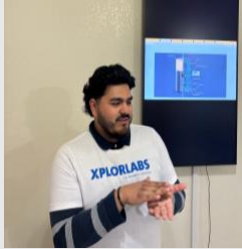
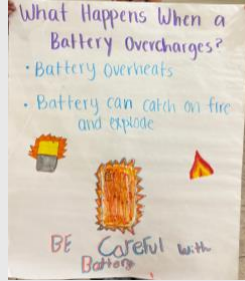



Xplorlabs Learning Experience: Lithium-ion battery safety for elementary students

Instructional phases	Engage	Explore	Explain	Evaluate	Extend
Visual storyline					
Timing	10 - 15 minutes	20 minutes	15 minutes		
Overview	Learners think about their own family and community to identify where batteries are used and for what purpose. They complete a group KWL chart. If students do not bring up the PV power station that they helped build for the community center, the facilitator will lead them to do so.*	Learners explore the Xplorlabs virtual cityscape to identify more uses of batteries in their community. Then, different types of batteries are passed out to students, who identify their characteristics and commonalities. The facilitator will lead a discussion on their findings.	(1) The facilitator explains how batteries are used and made and how they power everyday items, with the community center's PV power station as an example.* (2) The facilitator guides an open discussion on how to be safe around batteries and what to avoid doing wrong with batteries.	Learners create a safety poster for the PV power stations they helped make for their community.*	Learners learn to use and take home a solar power bank.
	* This end goal should be adjusted to relevant community projects of the group.				
Supporting Documents	Presentation Slideshow (in additional resources)		Xplorlabs Alkaline battery interior interactive Xplorlabs video on how Li-ion batteries work Xplorlabs video of thermal runaway Xplorlabs overcharge test		