

**3M****Young Scientist Lab**

in partnership with: **Discovery**  
EDUCATION

## Science of Summer Family Activities

### Create a First Aid / Emergency Preparedness Kit

#### Overview

Create or update your household first aid kit, and make it part of a comprehensive Emergency Preparedness Kit. This is a good project for parents and older kids to work on together. Begin by doing research online to make sure you're covered for all weather-related and other natural risks in your region of the country.

#### Materials

Every household should have a fully stocked first aid kit. Do an inventory and update your existing kit, or start one from scratch. The Red Cross recommends the following for a family of four:

- 2 absorbent compress dressings (5 x 9 inches)
- 25 Nexcare™ adhesive bandages (assorted sizes)
- 1 Nexcare™ Durable Cloth First Aid Tape (10 yards x 1 inch)
- 5 antibiotic ointment packets (approximately 1 gram)
- 5 antiseptic wipe packets
- 2 packets of aspirin (81 mg each)
- 1 blanket (space blanket)
- 1 breathing barrier (with one-way valve)
- 1 Nexcare™ Instant Cold Pack
- 2 pair of nonlatex gloves (size: large)
- 2 hydrocortisone ointment packets (approximately 1 gram each)
- Scotch™ Precision Scissors
- 1 roller bandage (3 inches wide)
- 1 roller bandage (4 inches wide)
- 5 sterile gauze pads (3 x 3 inches)
- 5 sterile gauze pads (4 x 4 inches)
- Oral thermometer (non-mercury/nonglass)
- 2 triangular bandages
- Tweezers
- First aid instruction booklet

## **Activity**

### **Update or Create a First Aid Kit**

Every household should have a fully stocked first aid kit. Do an inventory and update your existing kit, or start one from scratch. Use the Red Cross list above as a checklist.

### **Research and Create an Emergency Preparedness Kit**

Does your family have an Emergency Preparedness Kit? Do you know which types of emergencies you should prepare for in the region where you live? You may need to survive on your own after an emergency. This means having your own food, water, and other supplies in sufficient quantity to last for at least three days.

Click on all weather types and natural disasters that may apply to your region, and make a list of recommended materials and supplies.

<http://www.redcross.org/portal/site/en/menuitem.86f46a12f382290517a8f210b80f78a0/?vgnextoid=92d51a53f1c37110VgnVCM1000003481a10aRCRD&vgnextfmt=default>

Be prepared – print out this list from ReadyGov to make sure you have everything you need. <http://www.ready.gov/america/getakit/index.html>

### **Create a Pet Preparedness Kit**

Don't forget your four-legged friends! Download a Pet Preparedness Guide and Checklist from the Ready Classroom website and gather supplies:

<http://readyclassroom.discoveryeducation.com/familypet.cfm>

## **Discussion Points**

### **Smoke from Wildfires**

Smoke from wildfires is a mixture of gases and fine particles from burning trees and other plant materials. Smoke can hurt your eyes, irritate your respiratory system, and worsen chronic heart and lung diseases.

- 3M – Disposable Respirators vs. Dust Masks, etc.

<http://multimedia.3m.com/mws/mediawebserver?mwsId=66666UuZjcFSLXTmxMcoXMyEVuQEcuZgVs6EVs6E666666-->

### **Ash from Volcanoes**

Volcanic ash is made of pulverized rock and glass. The abrasive texture can cause irritation and scratching of the surface of the eyes. People who wear contact lenses should wear glasses during an ashfall, to prevent eye damage. Furthermore, the combination of volcanic ash with moisture in the lungs can create a substance akin to liquid cement.

Ash is very dense, Exposure to ash can harm your health, particularly the respiratory (breathing) tract. To protect yourself while you are outdoors or while you are cleaning up ash that has gotten indoors, a disposable particulate respirator (also known as an “air purifying respirator”) may be considered. An N-95 respirator is the most common type of disposable particulate respirator.

- USGS – Properties of Ash

<http://volcanoes.usgs.gov/ash/properties.html>

## **Mold from Floods**

Flooding can cause dangerous levels of mold within days. If you plan to be inside the building for a while or you plan to clean up mold, you should buy goggles and an N95 mask at your local home supply store and wear them while in the building.

- 3M – Q & A on Molds and Mold Remediation

[http://multimedia.3m.com/mws/mediawebserver?mwsId=SSSSSu7zK1fslxtUM8\\_G5x\\_9ev7qe17zHvTSevTSeSSSSSS--](http://multimedia.3m.com/mws/mediawebserver?mwsId=SSSSSu7zK1fslxtUM8_G5x_9ev7qe17zHvTSevTSeSSSSSS--)

## **Links**

Red Cross – Preparedness Fast Facts

<http://www.redcross.org/portal/site/en/menuitem.86f46a12f382290517a8f210b80f78a0/?vgnextoid=92d51a53f1c37110VgnVCM1000003481a10aRCRD&vgnextfmt=default>

Fighting Mold – The Homeowner's Guide

[http://www.cmhc-schl.gc.ca/en/co/maho/yohoyohe/momo/momo\\_005.cfm](http://www.cmhc-schl.gc.ca/en/co/maho/yohoyohe/momo/momo_005.cfm)

Wildfire Science – Smokey the Bear

<http://www.smokeybear.com/wildfire-science.asp>