GRAB-AND-GO WATER ACTIVITIES

for Orange County K-12 students



WHAT'S INCLUDED

- ✓ Activity Background
- ✓ Learning Objectives
- ✓ Activity Procedure
- ✓ List of Materials
- ✓ Engineering Design Process Worksheet
- ✓ Natural and Human Social Systems Venn Diagram
- ✓ Key Terms and Definitions

Build An Emergency Go-Bag

Children engage with their peers or families through a fun, interactive activity to put together an emergency survival kit – or "Go-Bag." The assembled Go-Bag is a packed case that can be grabbed on the way out the door that will help kids be ready for challenges they could face in a natural or human-made disaster. By discussing each unique emergency's causes and effects, children will investigate the problems that might arise during and after an evacuation, and develop solutions for survival in the best-case scenario. Through inquiry and examination, children discover how to use pre-purchased items and resources from the environment to create a kit of assets that will increase their success during a disaster. Children will also be able to explain their process for selecting Go-Bag items to others.

Activity Background

Chances of surviving a natural or human-made disaster will increase significantly by working with others to prepare a plan. Throughout this activity, children will talk with family members, peers, and community members to identify and list resources available to them in an emergency. Then, they will put together essential items needed for a Go-Bag that will better prepare them for challenges they may face during an evacuation.

Resources that the environment can provide (e.g., water, food, shelter) and community resources (police, fire, and schools) should be included in discussions throughout this activity. Also, consider items that will be necessary for basic survival as well as for comfort. It will be important to talk about how the health of natural systems (waterways, food chains, etc.) and human social systems (government, transportation, finance, etc.) will affect the usefulness of the Go-Bag items selected. Throughout this activity, children discover the importance of preparing a plan and will more easily identify resources around them that are essential to survival.

The purpose of a Go-Bag is to provide the bare necessities needed for a certain amount of time – typically 72 hours. Did you know? Nearly 60 percent of people living in the United States have not practiced what to do in the event of a disaster!





Learning Objectives

Through this activity, students should be able to:

- Ask probing questions that will help prepare an operational emergency Go-Bag
- Research and identify both environmental and human resources needed to endure a disaster
- Engage in inquiry and discussion to identify and solve potential problems
- Develop a thoughtful and actionable emergency preparedness plan
- Explain the basic need for a Go-Bag to others, and make adjustments to the Go-Bag based on discoveries uncovered through those discussions

Selecting Go-Bag Items

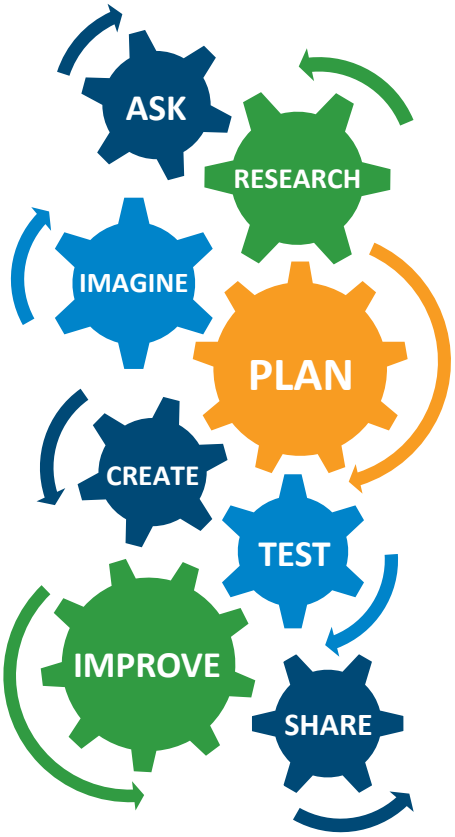
Being prepared means ensuring that you and your family have the proper supplies needed in an emergency or disaster situation. Thoughtfully selected Go-Bag items are essential to sustaining yourself for some time with little to no outside help. A well-packed Go-Bag will fit YOUR skills and location.

Be sure discuss both environmental and human social system resources to draw from, asking guiding questions to help students connect, reflect, and communicate Go-Bag selections to their families and peers.

Since the spring of 2020, the Center for Disease Control (CDC) has recommended additional Go-Bag items to help prevent the spread of coronavirus or other viruses and the flu. Visit the CDC's website as an additional resource when building your Go-Bag: www.cdc.gov.

PROCEDURE:

- Begin by choosing a natural or human-made disaster to explore.
- On a sheet of paper, have students begin to make a list of items that will be packed. Remember, the bag will be carried for an undetermined amount of time, so weight will be a factor. Travel-sized items should be considered.
- Identify potential problems with accessing the four (4) mandatory resources needed in any emergency situation. They are **Air**, **Shelter**, **Water**, and **Food**. Consider surroundings, both natural and human-made, and discuss solutions that can be found in the environment and within human social systems.
- Next, research, investigate, and discuss the following categories: CLOTHING, MEDICAL, NAVIGATION, POWER, HYGEINE, FINANCE (Money/Change) COMMUNICATION, IMPORTANT DOCUMENTS, and TOOLS. Continue to add items to the packing list.
- Once Go-Bag items are finalized, have children present their items and describe their reason for selecting those particular items to peers or family members.
- Based on questions or suggestions received in their presentation, have students evaluate and amend their list.



LIST OF MATERIALS

- ✓ Notebook or sheets of paper
- ✓ Attached engineering design sheet

TYPES OF DISASTERS

- ✓ Earthquake
- ✓ Flood
- ✓ Wildfire
- ✓ Citywide Riot
- ✓ Toxic Spill
- ✓ Power Shutdown
- ✓ Zombie Apocalypse (just kidding… maybe)

Note: *Can you think of more? Include both natural and human-made disasters in your discussions.*

EMERGENCY GO-BAG CHALLENGE

Engineering Design Process Worksheet

NAME: _____

DATE: _____

ASK

What is the problem? What are your constraints? What do you hope to accomplish?

RESEARCH

Use books, technology, or human resources to research common problems associated with disaster planning, as well as typical Go-Bag items.

IMAGINE

Brainstorm ideas that could help you discover and select Go-Bag items most appropriate for the disaster you are exploring.

PLAN AND CREATE

Draft a plan for building your Go-Bag, identify potential needs, and begin making a packing list.

TEST AND IMPROVE

Discuss Go-Bag solutions with family members or classmates. Were your selections met with questions or overwhelming approval? How can you improve upon your original sections?

OBTAIN

Discuss how Go-Bags can be packed with items that you have access to already. What are some items you can obtain without purchasing them?

EMERGENCY GO-BAG CHALLENGE

Natural Systems and Human Social Systems

NAME: _____

DATE: _____

System: When different parts or components connect to form a whole. Example: Pedals, handle bars, and wheels are different parts or components that connect to form a bicycle.

Natural Systems: Systems that occur in nature without any human influence like weather, rivers, or trees.

Human Social Systems: Systems that are created by humans like schools, freeways, parks, and government.

STEP 1

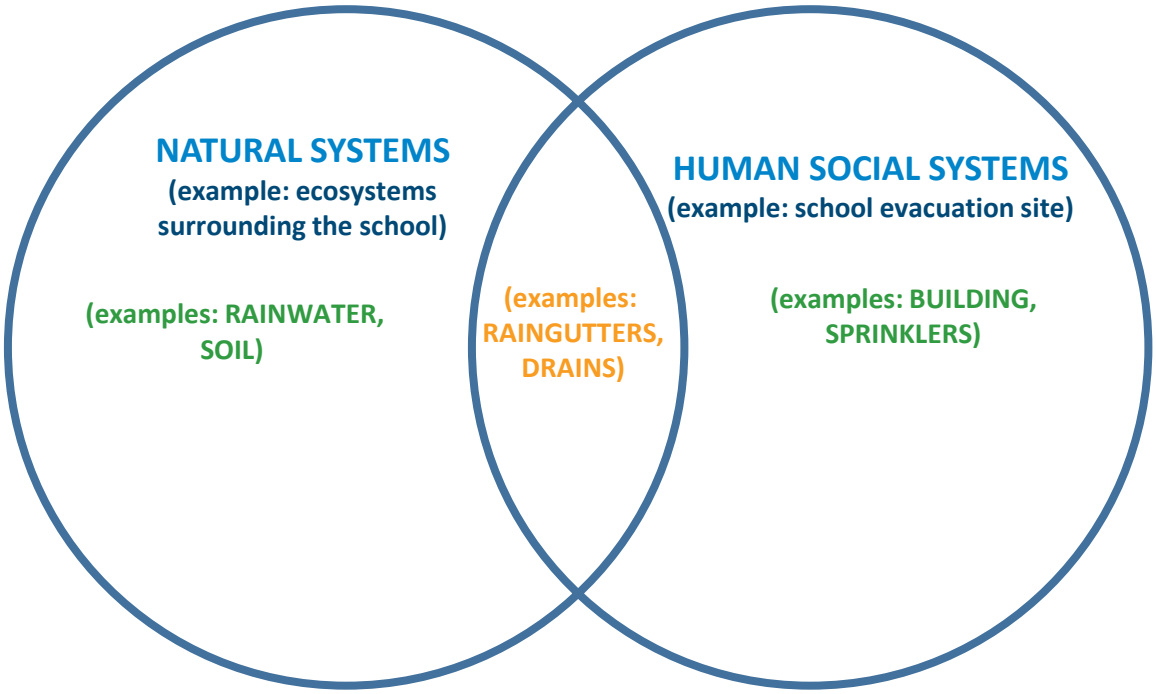
Explore your home and neighborhood. Observe examples of natural and human social systems. Where can water be found in an emergency situation? How does water get to this particular area? Could this water source potentially get contaminated or be interrupted?

STEP 2

In the event of an emergency, what other natural resources might you be able to use directly from your surrounding environment, either for food, shelter, navigation, heat, medical uses, tools, etc.? Take a closer look. In what ways are these natural resources influenced by water?

STEP 3

A school is a human social system. It is built and operated to provide a learning space for students under the direction of teachers. For the purpose of this exercise, the school will be used as an example of a human social system and also an emergency evacuation site. Write your list in the human social systems circle below.



STEP 4

In the center of the two circles, make a list of connections between the natural systems and the human social systems. Think about the materials used to construct the buildings and what natural elements could be used in an emergency.

How have human activities caused changes to natural systems in your home or neighborhood?
Are there ways that you can help protect emergency water supply sources at home or in your neighborhood?

EMERGENCY GO-BAG CHALLENGE

Key Terms and Definitions

01 **Asset:** A useful or valuable thing, person, or quality.

02 **Community Resource:** Assets in a community like people, places, or structures, that help meet certain needs for those around them. Examples include hospitals, police and fire departments, and grocery stores.

03 **Disaster:** A sudden event, such as a human-made accident or natural catastrophe, that causes great damage or loss of life.

04 **Emergency Preparedness:** The steps you take to make sure you and your family are safe before, during, and after a natural or human-made disaster.

05 **Evacuation:** The removal of persons or things from a dangerous place or disaster area to ensure safety or protection.

06 **Freshwater:** Naturally occurring water such as glaciers, lakes, rivers, and streams. This does not include seawater or water from the ocean.

07 **Go-Bag:** A bag packed and ready to go with essential items needed to survive or endure a disaster or emergency event.

08 **Human-made:** Things created or caused by people; not naturally occurring.

09 **Infrastructure:** Facilities or systems that support the functions of a country, state, or region. Examples include water supply, roads, housing, schools, hospitals, and airports.

10 **Natural Resource:** Materials or substances that are found in nature and can be used by people, like plants, wood, rocks, sand, and water.

11 **Skill:** The ability to do something well; expertise.