

SAFETY FIRST – Marker Flag and Paint Color Knowledge



Subjects	Science, CTE
Duration	Activity: 10 minutes
Setting	Classroom
Objectives	Understand the meaning of marker flag colors.

Materials

- Copies of the student sheet
- Computer

Educator Background

After submitting an online request or calling 811, public utilities will go out to a work site, business or home to locate underground utilities such as natural gas pipelines, electric lines, water, sewer, reclaimed or irrigation lines and communication lines for TV, cable and fiber optics. Each utility is represented with a different color of marker flag or paint. Paint is used on hard surfaces like roads and concrete.

Classroom Activity

Start a classroom discussion – Have you ever seen colored flags stuck in the ground? Have you wondered what they mean? Who put them there? What are they for?

Utilities were asked by a business or homeowner to locate any underground pipelines or utility cables on their property before they dig. Contractors, road crews, landscapers, sewer and water repair crews, excavators and any other workers who will dig into or remove something from the dirt should contact 811. This request protects the workers from injury and death and the pipelines or utility cables from damages. Know what's below. Call 811 before you dig.

Wrap-up

1. Ask students to name other utility devices that are found along the road or in the air that could denote the type of utility that might be nearby.

Answers might include: water hydrant, electric meter, pad mount transformer, intersection crossing signal, traffic lights, communications/telephone line junction box, cable TV junction box, substation, power poles, sewer manhole cover plates, sprinkler heads, water meters, above ground valves for natural gas and water.

2. At a jobsite, discuss what should be done if there are no flags or paint marking the area where you are to dig.

Answers might include: DO NOT dig. Call the worksite supervisor for confirmation that 811 has been contacted and that they have marked the area as safe because no utilities are in the area. Workers may have the wrong date to be able to begin as the utilities have not been marked. Workers might be at the wrong address, slight variances with: street versus avenue or SW instead of SE make a difference.

3. At a jobsite, discuss what should be done if some or many of the flags previously marking an area are pulled up, scattered around or laying on the ground.


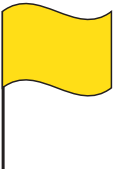




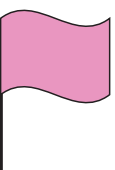
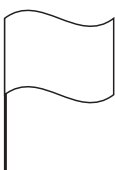
Answers might include: DO NOT dig. Contact 811 and have the area remarked. Workers cannot rely on memory to be sure where underground utilities are buried.

Answer Key

1. red - electric, orange - communication, yellow - natural gas
2. orange - communication, green - sewer
3. orange - communication, green - sewer, purple, reclaimed water or irrigation
4. orange - communication, blue - water, yellow - natural gas
5. red - electric, orange - communication, blue - water
6. orange - communication, green - sewer, yellow - natural gas
7. red - electric, orange - communication, yellow - natural gas, green - sewer
8. blue - water, green - sewer

Student Sheet – SAFETY FIRST: Marker Flag and Paint Color Knowledge

Study the flag colors and meaning below and determine what utilities are marked in the photos.

Blue Potable Water	Yellow Natural Gas	Red Electricity	Green Sewer
			
Purple Reclaimed or Irrigation Water	Orange Communications: TV, Cable, Fiber-optics	Pink Temporary Survey Marker	White Proposed Dig Site
			

1. Hint: number of flag colors in photo - 3 _____



2. Hint: number of flag colors in photo - 2 _____



3. Hint: number of flag colors in photo - 3 _____



4. Hint: number of flag colors in photo - 3 _____



5. Hint: number of flag colors in photo - 3 _____



6. Hint: number of flag colors in photo - 3 _____



7. Hint: number of flag colors in photo - 4 _____



8. Hint: number of flag colors in photo - 2 _____

