

Planet Distance

Activity



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ABOUT VIVIFY

Vivify is a team comprised of two Aerospace Engineer friends, Natasha and Claire, who live in Texas. We met as college classmates and roommates at Texas A&M University and later left engineering careers in the Department of Defense and Air Tractor to pursue our passion for STEM education. Learn more of our story [here](#).

Our goal is to bring engineering to life—to vivify learning—for kids of all ages. Please connect with us so we can learn how to better serve your students!

- Natasha & Claire, The Vivify Team



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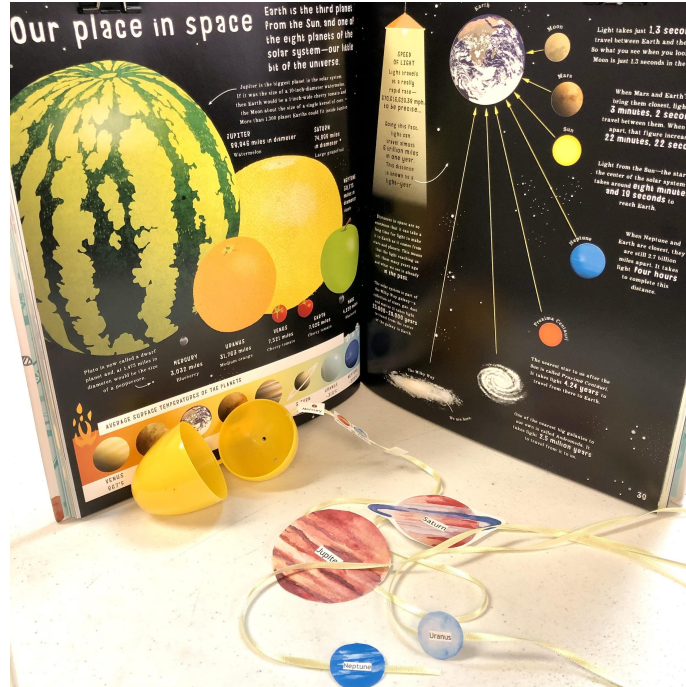


bit.ly/thestemspace

ACTIVITY INSTRUCTIONS

STEM challenges usually require at least 90 minutes of class instruction to fully utilize the engineering design process. This is an introductory activity to illustrate the distance between planets. Note that the sizes of the planets are not correctly proportional to each other. We recommend doing another activity to illustrate the size comparison or watch a video like this: <https://youtu.be/isTEYefMzzM> You may also be interested in The [Book of Comparisons by Clive Gifford](#) that illustrates differences between the size, temperatures and other facts about the planets (among other things).

This activity also provides practice with measurement in addition to knowledge of our solar system.



MATERIALS & DIRECTIONS

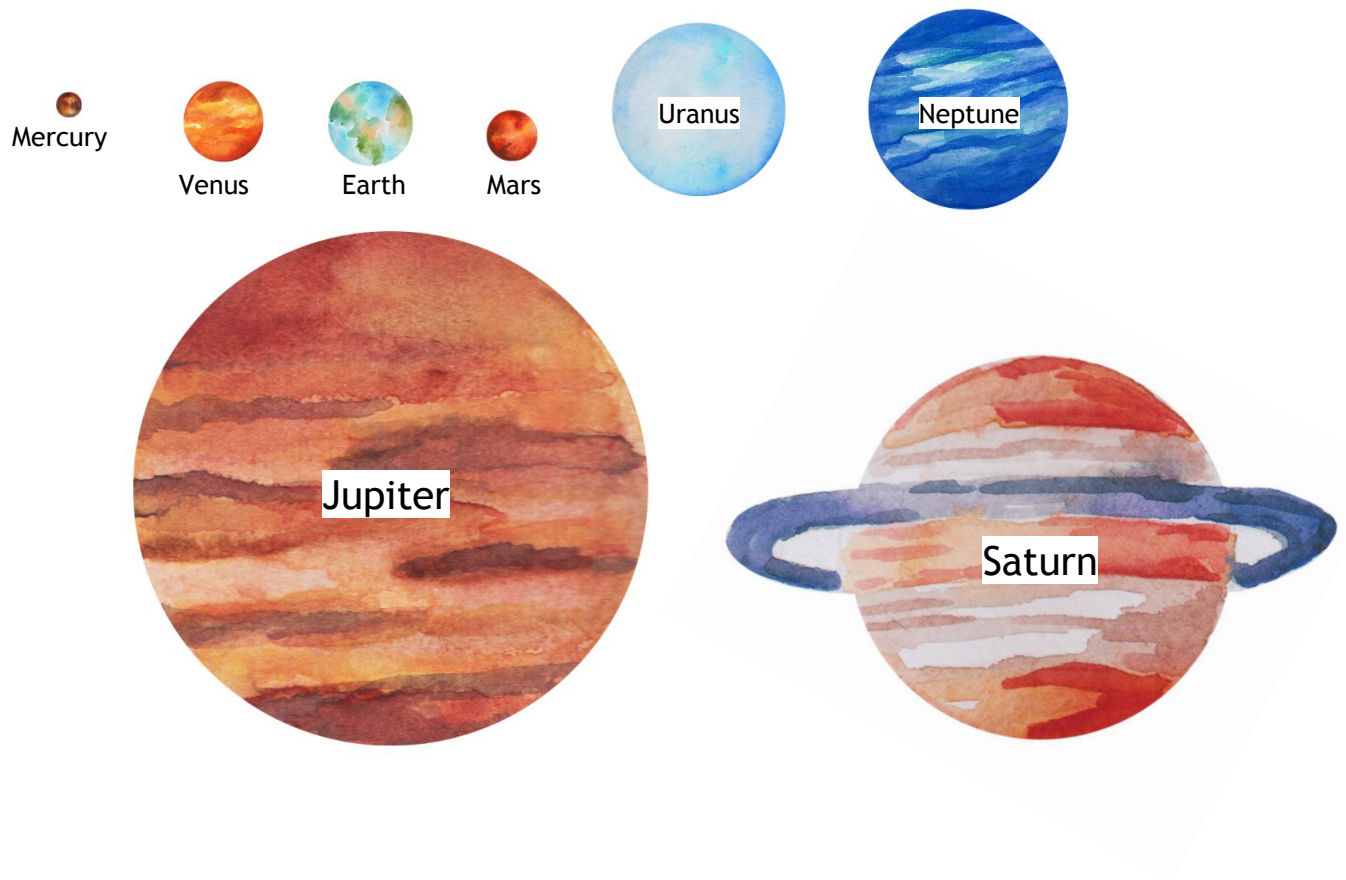
Below are materials for this challenge. Students will mark the string/ribbon with the locations of the planet, then glue or tape the planets (from the next page) in the correct order in their correct locations. The planets can then be rolled up and put inside the egg “sun”.

MATERIALS FOR EGG SOLAR SYSTEM

- Large yellow plastic egg
- Ribbon or string (165 cm or 75 in)
- Paper for printable (next page)
- Tape or glue



Planets



PLANET ORDER AND SPACING

The following should guide you in the correct spacing and order of the planets along the string.

Planetary Body	Distance from sun (km)	String Length (from Sun)	
		Centimeters	Inches
Sun	0		
Mercury	57,900,000	2.1	0.9
Venus	108,200,000	3.9	1.8
Earth	149,600,000	5.4	2.4
Mars	227,900,000	8.2	3.7
Jupiter	778,600,000	28.0	12.7
Saturn	1,433,500,000	51.5	23.4
Uranus	2,872,500,000	103.2	46.9
Neptune	4,495,100,000	161.5	73.4