

**Subject: TAG**  
**Grade: 4<sup>th</sup>**

Note: TAG instruction occurs one day a week for each student. These plans are meant to replace the time that would be spent on core learning activities (reading, ELA/writing, math, social studies/science) for that one day each week. Students should still complete activities for specials classes (art, music, PE) on their TAG day.

**Week 2: Aug 24-28**

Standards	<p><b>S4E1.</b> Obtain, evaluate, and communicate information to compare and contrast the physical attributes of stars and planets. a. Ask questions to compare and contrast technological advances that have changed the amount and type of information on distant objects in the sky.</p> <p><b>Advanced Research Skills</b></p> <p>6. The student develops and uses systematic procedures for recording and organizing information.</p> <p><b>Higher Order Critical Thinking Skills</b></p> <p>4. The student makes and evaluates decisions using criteria.</p> <p><b>Advanced Communication Skills</b></p> <p>3. The student creates products and/or presentations that synthesize information from diverse sources and communicate expertise to a variety of authentic audiences.</p>
Brief Description	<p>Students will learn about NASA by reading article on “NASA Space Technology and Inventions.” Students will use note taking sheet to list pros and cons of space funding. Then decide if space exploration is worth the cost of funding.</p>

**Student Directions:**

- Complete the Brain Tickler.
- Complete the creative prompt.
- Read the article on “NASA Space Technology Inventions and Products” and complete Compass Points activity sheet.
- Use the article and cartoons to complete the pros and cons note taking sheet.

- Now decide if space exploration is worth the cost of funding by writing a persuasive letter, creating a song, or making a collage to show your choice with evidence to support your decision.
- Take a picture or send all completed documents (compass points, pros/cons notetaking sheet, and choice product) to your teacher.

### **Brain Tickler**

If Susan is 10, Arabella is 20, and Jim and Neal are both 5, but Richard is 10, how much is Jennifer by the same system?

### **Creative Prompt**

The answer is wahoo! What is the question?

# Compass Points

## **E = Excited**

What excites you about this idea or proposition? What's the upside?

## **W = Worrisome**

What do you find worrisome about this idea or proposition? What's the downside?

## **N = Need to Know**

What else do you need to know or find out about this idea or proposition? What additional information would help you to evaluate things?

## **S = Stance or Suggestion for Moving Forward**

What is your current stance or opinion on the idea? How might you move forward in your evaluation of this idea or proposition?



## NASA Space Technology Inventions and Products



By Cristen Conger

The question is asked, "What has NASA space travel and exploration ever done for me?" Many products have been developed as a result of space exploration, space travel and space technology. Here are just a few of the hundreds of devices and inventions that have been developed from knowledge gained with NASA space engineering.



**Smoke Detectors** Where there's smoke, there's fire. NASA engineers knew that simple fact when they were designing Skylab in the 1970s. Skylab was the first U.S. space station, and the astronauts would need to know if a fire had started or if noxious gases were loose in the vehicle. Teaming up with Honeywell Corporation, NASA invented the first adjustable smoke detector with different sensitivity levels to prevent false alarms.

**Scratch-resistant Lenses** Because of dirt and particles found in space environments, NASA needed a special coating to protect space equipment, particularly astronaut helmet visors. Recognizing an opportunity, the Foster-Grant sunglasses manufacturer licensed the NASA technology for its products. The special plastics coating made its sunglasses ten times more scratch-resistant than uncoated plastics



**Memory Foam** NASA -helps some people sleep better at night. Temper foam found in brand mattresses and similar brands was originally developed for space flight and later repackaged for the home. The open cell polyurethane-silicon plastic was created for use in NASA aircraft seats to lessen impact during landings.

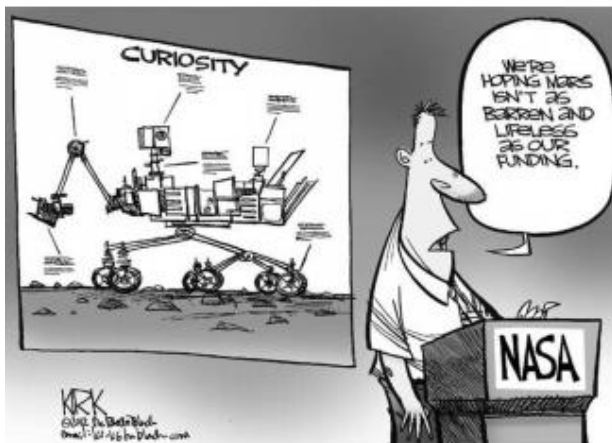


**Water Filters** Astronauts needed a way to cleanse water they take up into space, since bacteria and sickness would be highly problematic. Water filter technology had existed since the early 1950s, but NASA wanted to know how to clean water in more extreme situations and it clean for longer periods of time.

# Cartoons



With the fear of funding issues looming, NASA looks to alternative methods of completing their moon base.



# Pros and Cons Notetaking Sheet

Directions: Think of reasons to reduce the funding of NASA and write them in the REDUCE FUNDING box. Think of reasons that encourage the funding of NASA and write them in the INCREASE FUNDING box.

<b>REDUCE FUNDING FOR NASA</b>	<b>INCREASE FUNDING FOR NASA</b>
<i>Example: Space travel is dangerous</i>	<i>Example: NASA invents new products</i>