Space could solve water problems

Have you ever tasted saltwater? I guess you have and if so, you will agree with me that it's not very refreshing. In fact, drinking more than a few cups worth can kill you.

According to the United States Geological Survey, whose mission is to collect and disseminate reliable, impartial, and timely information that is needed to understand the nation's water resources, about ninety-seven percent of the water on our planet is saltwater; the rest is stored in lakes, rivers, glaciers and aquifers underground. Moreover, only about one-third of the world's potential fresh water can be used for human needs. As pollution increases, the amount of usable water decreases.

Water is the most precious and taken-for-granted resource we have on Earth. It is also one of the most threatened resources. Increased population and possible climate change will put more and more strain on supplies of this vital resource as time goes on. What could we do in this situation? Though it may seem like science fiction, the solution could lie in outer space.

I'm not saying we're going to be teleporting to a spring on the other side of the galaxy or colonizing another planet just to have longer showers — it's much more mundane than that. What we could achieve realistically in this century is the successful use of the solar system's rare metals and water, barring the invention of the matrix.

You may be surprised to learn that the metal in your keys, coins, cell phone, computer, car and everywhere else, originally came to this planet from space. When Earth formed, the heavy metals sank to the center and formed a solid core. The lighter elements formed the mantle and the crust we live on. Asteroids and comets that struck the Earth brought water and metals to the surface.

There are thousands of asteroids orbiting near Earth. Most asteroids are made of rock, but some are composed of metal, mostly nickel and iron. Probes could be sent out to these to identify useful ones. Then larger probes could push them towards the Earth where they can be handled in orbit.

In order to fuel ships and probes, we simply need to find a source of water, such as a comet or the surface of the moon. We collect the water and pass an electric current through it from a solar panel. The water separates into oxygen and hydrogen, which in liquid form is a powerful rocket fuel.

Is this really possible? We may soon find out. Private company SpaceX has already started delivering equipment to the International Space Station (ISS). The ISS is proof that countries once at each other's throats, like America and Russia, can work together and pull off multi-billion dollar projects.

Recently, a company called Planetary Resources Inc. made the news for getting big names like Google and Microsoft to invest in exploring asteroids for material gain. Although it will take many decades, it is wise to put the gears in motion now.

We've already landed probes on the surface of asteroids and taken samples from them. We can put something as large as the ISS, which weighs just short of 500 tons, according to National Aeronautics and Space Administration (NASA), in orbit.

We can make a half-million-mile round-trip to get rocks from the moon. We can do all of these things already. They just need to be applied and developed in a smart way.

The Google and Microsoft (paragraph 9) are mentioned to...

1. ...explain how Planetary Resources Inc. became famous.
2. ...prove that asteroids can be commercially attractive.
3. ...show that space research is important for computer science.
4. ...prove that asteroids can interfere with the Internet.