Fun Facts:

**URANUS**

* **History:**
  + It had been spotted numerous times, but most times it was thought to be a dim star.
  + Discovered on March 13, 1781 by British astronomer William Herschel
    - Using his telescope he resolved the dim star to a sphere. He tracked it and noticed it was moving too fast to be a star, so Herschel thought it was a comet. Its orbit was a bit more elliptical than other known planets at the time, but more circular than a comet. Eventually he and others realized that it was a planet. It was the first planet discovered since prehistoric times.
  + Herschel wanted to name it “the Georgian star” in honor of King George III, his patron.
  + British Royal Academy selected Uranus. In Greek mythology, Uranus was the father of Saturn (although Uranus is a Greek name and the previous other planets were named after Roman gods).
* **Explorations:**
  + In 1986, Voyager 2 flew past Uranus. It is the only time we have visited it.
* **Facts, Figures & Characteristics:**
  + 3rd largest planet
  + Almost 32,000 miles in diameter, 4x larger than Earth
  + Mass is 14.5x Earth
  + 2nd least dense planet (Saturn is the least)
  + 84 year orbit
  + 1.8 billion miles from the Sun (Earth is 93 million miles from Sun)
  + 1 day on Uranus is 17 hours
  + Uranus is coldest planet – 372⁰ F
  + Atmosphere: 83% hydrogen, 15% helium, 2% methane
  + Looks ice blue, cyan, turquoise, or aqua…but it is all because of the methane
  + Strong winds cover the planet, up to 560 mph that blow opposite the direction that the planet spins at the equator, near the poles the wind blows in the opposite direction
  + Internal pressure is 8 million times sea-level Earth pressure
  + Internal temperature is about 8500⁰ F
  + Pressure & temperature can cause methane to break apart into hydrogen & carbon
    - Carbon at high pressure becomes diamonds and at higher pressure becomes liquefied
    - Uranus might have oceans of liquefied diamonds with diamond icebergs & diamond hailstones falling from the sky
* **Uranus is a sideways planet:**
  + Maybe Uranus got hit by an Earth-sized object, tipping it on its side
  + Rolls like a ball instead of spinning like a top like the other planets
  + Each pole gets 42 years of light and 42 years of dark
* **Rings:**
  + In 1977 they discovered 5 faint rings. Voyager 2 discovered 13 rings circling the planet sideways, so the rings are vertical, not horizontal.
  + Rings are thought to be a shattered moon…but it would’ve been small.
  + Most of the rings are small & dark, but the outer ring shimmers blue like Uranus. The blue color of this ring is likely from ice particles instead of methane however.
* **Moons:**
  + 27 moons
  + Moon names are taken from the works of William Shakespeare & Alexander Pope and include names like Juliet, Puck, Portia & Cupid.
  + Most are fairly small…just hundreds of miles across.
  + Titania & Oberon were discovered by William Herschel in 1787.
    - Oberon is largest moon at 943 miles across. It contains a mountain that reaches 4 miles high. Percentage-wise, this would be like a mountain 34 miles high on Earth, 6x taller than Everest.
  + Ariel & Umbriel were discovered in 1851 by William Lassell.
    - Ariel is 713 miles in diameter. It reflects 34% of light that strikes it, so it would shine very brightly (our Moon reflects 12% of light). Ariel is also a young moon, containing craters likely filled in by some sort of flooding by liquid ethane or methane.
  + Miranda
    - It has lots of cracks. It looks like it has been broken into pieces and clumsily put back together. This probably happened due to gravity of Uranus & other moons pulling it apart and back together again. It has likely shattered and reassembled at least 5 times.
  + Voyager 2 discovered 10 more moons in 1986.
  + A dozen more have been discovered by Hubble & ground based telescopes.

*\*Most of this information is taken from “It’s Your Universe - Episode 9: Uranus” podcast, hosted by Jeffery Kluger.*

*https://soundcloud.com/panoply/episode-9-uranus*