**Mercury:**

Named after Hermes – Mercury. He’s fast, he can fly – winged shoes.

Orbits the sun quickly – 88 days (revolution)

Surface features: caloris impact basin

Diameter: 4880 Km – the radius is 2/5th compared to the sun.
So small because it is too close to the sun.

Distance to sun: .4 AU

Gravity: 2.8

Axis tilt: 0

Density: 5.42 g/cm3

Rotation: 59 days

Revolution: 88 days

Mass: 1/20th that of Earths

No Satellites

3/2 Spin Orbit resonance: For every 3 days, you have 2 years.
slow rotation: mercury makes only 3 rotations every 2 orbits.
One solar day on Mercury is 176 Earth days.
So 2 years for every 1 day----
This is an example of spin orbit resonance.

Lots and lots and lots of craters

Orbital inclination: 7 degrees

Surface pressure= 0 degrees (pretty much no atmosphere)

Temperature: has the greatest temp change of any planet

 Min – Max

 100 – 700 K

 173 – 427 C

 279 – 801 F

Why doesn’t Mercury have an atmosphere? – As a gas gets hot, it moves faster and faster. Easier for a hot gas to escape than a cold gas.
Also--- Mercury is small, low mass—gasses escape into space.
 42% He, 42% sodium, 15% oxygen, 1% other

Mercury is known as a being a morning and evening star- right before sunrise and right after sunset.
Mercury has phases like our moon.

Monday, May 9th – Transit of Mercury
Happens every 7 years.

Surface Features:
Impact craters
Scarps (Cliffs)
Almost no atmosphere
Crater Rays
Coloris Impact Basin

Magnetic Field:
Needs: Rotate really fast, and Metal Core

Mercury has metal core but slow rotation--- has a weak magnetic field.

Probes:
1973: Mariner 10
Could never orbit around the planet—

2011: Messenger
Is still giving us information today.