In-class activity 11

This assignment is worth a maximum of 3.0 points, and is due in class today. No in-class assignment is accepted after the end of class.

Work cooperatively and collaboratively as a team on this in-class assignment. Each person in your group will be awarded the same points as the entire assignment. *Turn in this sheet at the end of class, and attach another page if necessary.*

Assemble Your Group

1. [0.5 points.] Find your assigned group members, and sign in below.

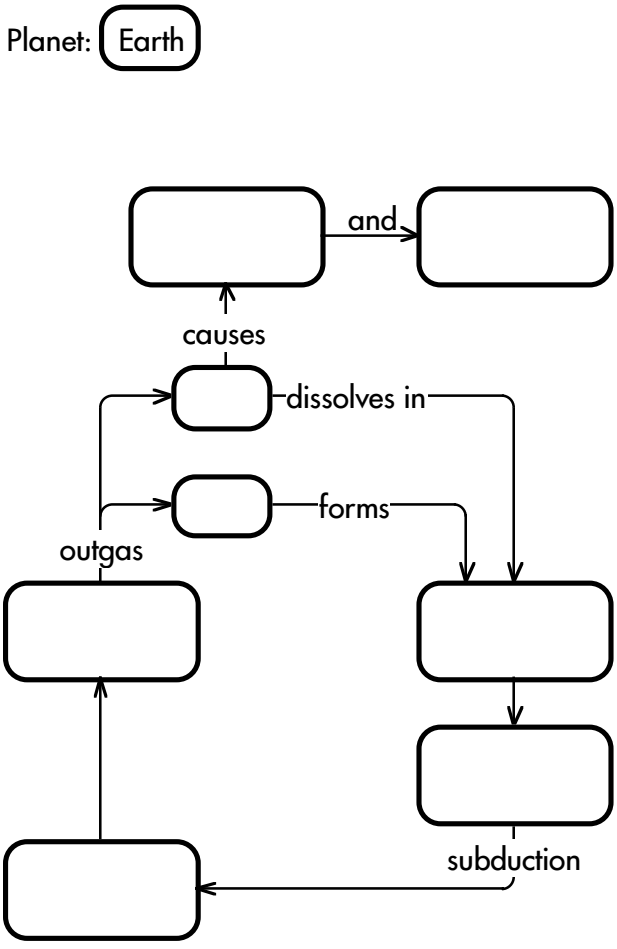
Team member: _____ Team member: _____

Team member: _____ Team member: _____

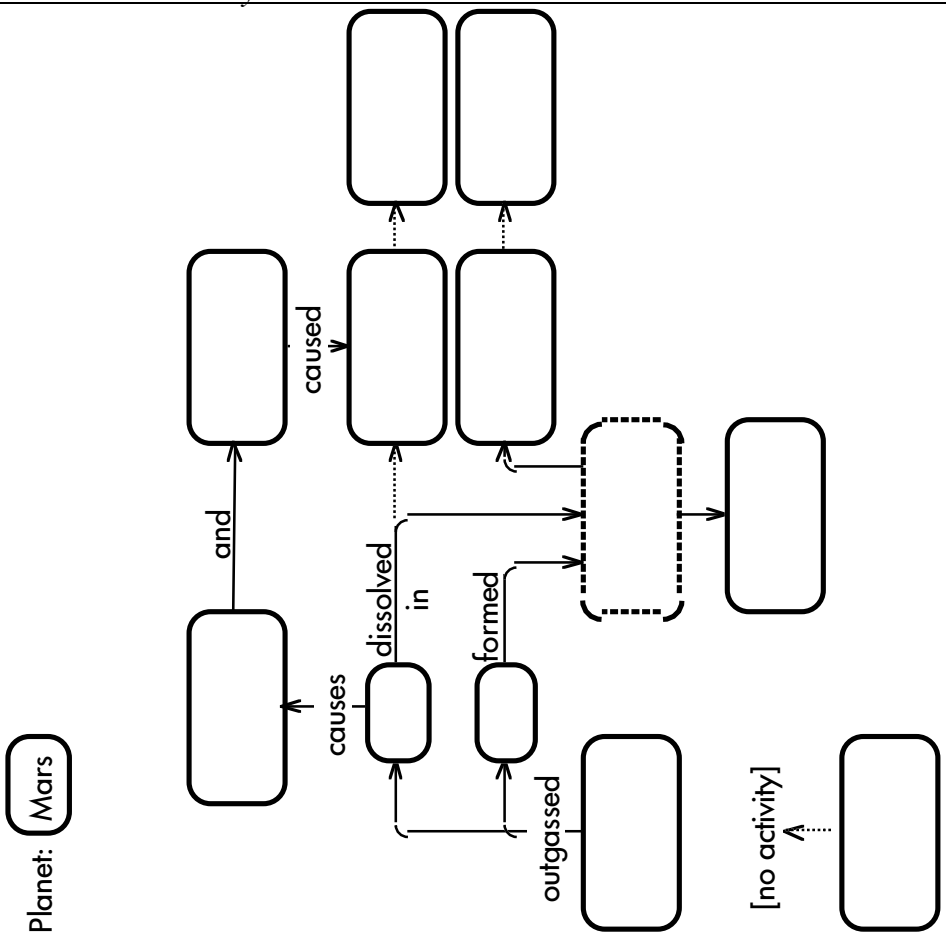
Planetary Atmosphere Cycles

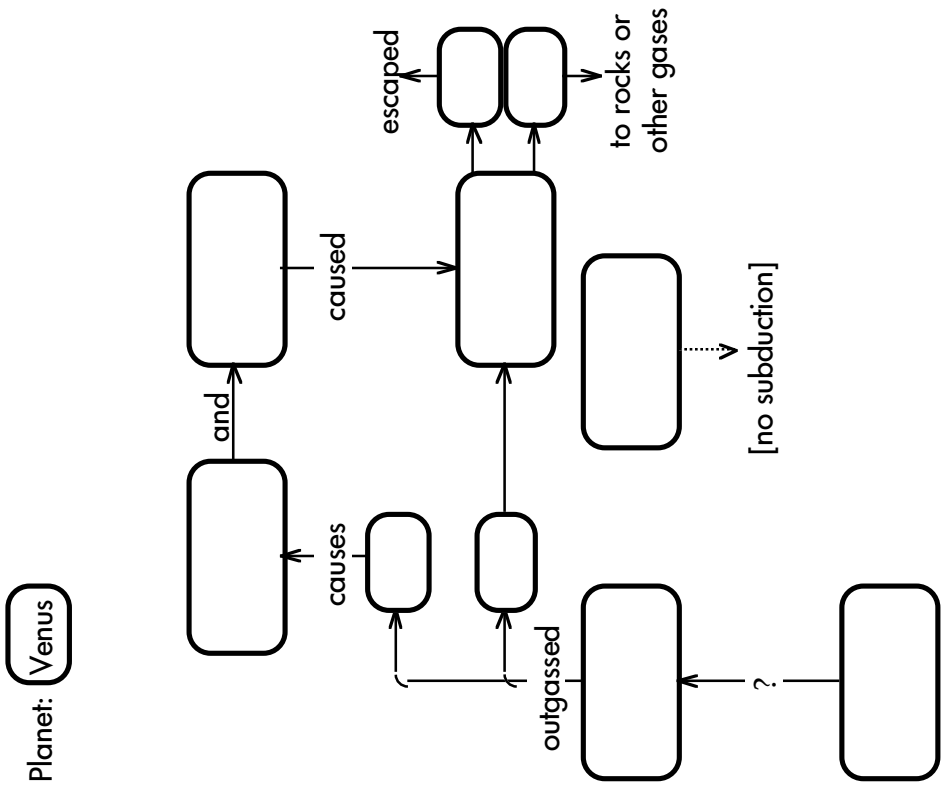
2. [2.5 points.] (*Cf.* Fix, *Astronomy to the Cosmic Frontier, 4/e,* pages 227-228, and 255-258 for more details.) On the following pages, fill in the atmosphere cycle charts for Earth, Venus, and Mars. Every one of the 30 rounded corner boxes should have an entry from the list below. Each term should only be used once, except where explicitly noted.

Active volcanos
Chemical reactions
CO_2 ("carbon dioxide molecule") (3)
Crust
Dead volcanos
Deposition*
Dormant volcanos
Freezing
H_2 ("hydrogen molecule")
H_2O ("water molecule") (3)
High temperatures
Low temperatures
Mantle (3)
Medium greenhouse effect
Moderate temperatures
O ("oxygen atom")
Oceans (2)
Permafrost
Polar dry ice caps
Sedimentary rock (2)
Strong greenhouse effect
Weak greenhouse effect



* The "freezing" of a gas from gaseours to solid form at very low temperatures.


Planet: Mars
and
caused
causes
dissolved
in
formed
outgassed
[no activity]


Planet: Venus
and
caused
causes
escaped
to rocks or
other gases
[no subduction]
outgassed
?