Atmosphere and Heat Transfer Stations

Name: _____ Date:_____ Class Period: _____

Station #1 – Simulation

Altitude (km)	Density (%)	Pressure (Pa)	Temperature (°C)	Phenomenon?
0				
5				
10				
25				
50				
60				
75				
100				
150				
200				
400				

1. If a rocket launched to the height of 210km above sea level what layer would it be located in? Would it encounter any phenomenon?

   _____

   _____

2. What layer do you live in? What meteorological phenomenon can you experience in this layer?

   _____

   _____

Station #2 – Study Jams!

Word	Definition
Atmosphere	
Air Pressure	
Sea Level	

After viewing the Study Jam, complete the "Test Yourself" and record your score here:

_____

Station #3 – Card Sort

Radiation	Convection	Conduction

Station #4 – The Dancing Quarter

- glass (empty) soda bottles
- oil
- quarters
- hot water
- bowl

Step 1: Put a dab of oil on side of the quarter.
Step 2: Place the glass bottle into the bowl.
Step 3: Place the quarter on top of the glass soda bottle, with the oil side facing down. (The oil acts as a sealant and keeps the air trapped inside the bottle).
Step 4: Observe the quarter while you pour hot water into the bowl.

1. What do you see the quarter doing? _____
2. How is that happening?
   _____
   _____
3. Explain what heat process (convection, conduction or radiation) is taking place? -
   _____

Station #5 – The Great Space Elevator

1st read through the article.

Summarize the Article in a Paragraph (3-5 sentences):

_____
_____
_____
_____
_____
_____
_____

Where will the elevator be located? _____

When will the elevator be open? _____

How long will the trip up to the exosphere take?

_____

Do you think that this is a dangerous idea? Explain.

_____
_____

If you had the opportunity to take a trip on the elevator, would you go? Why or why not?

_____
_____
_____

Draw a picture of what the elevator might look like?