TEACHER KEY

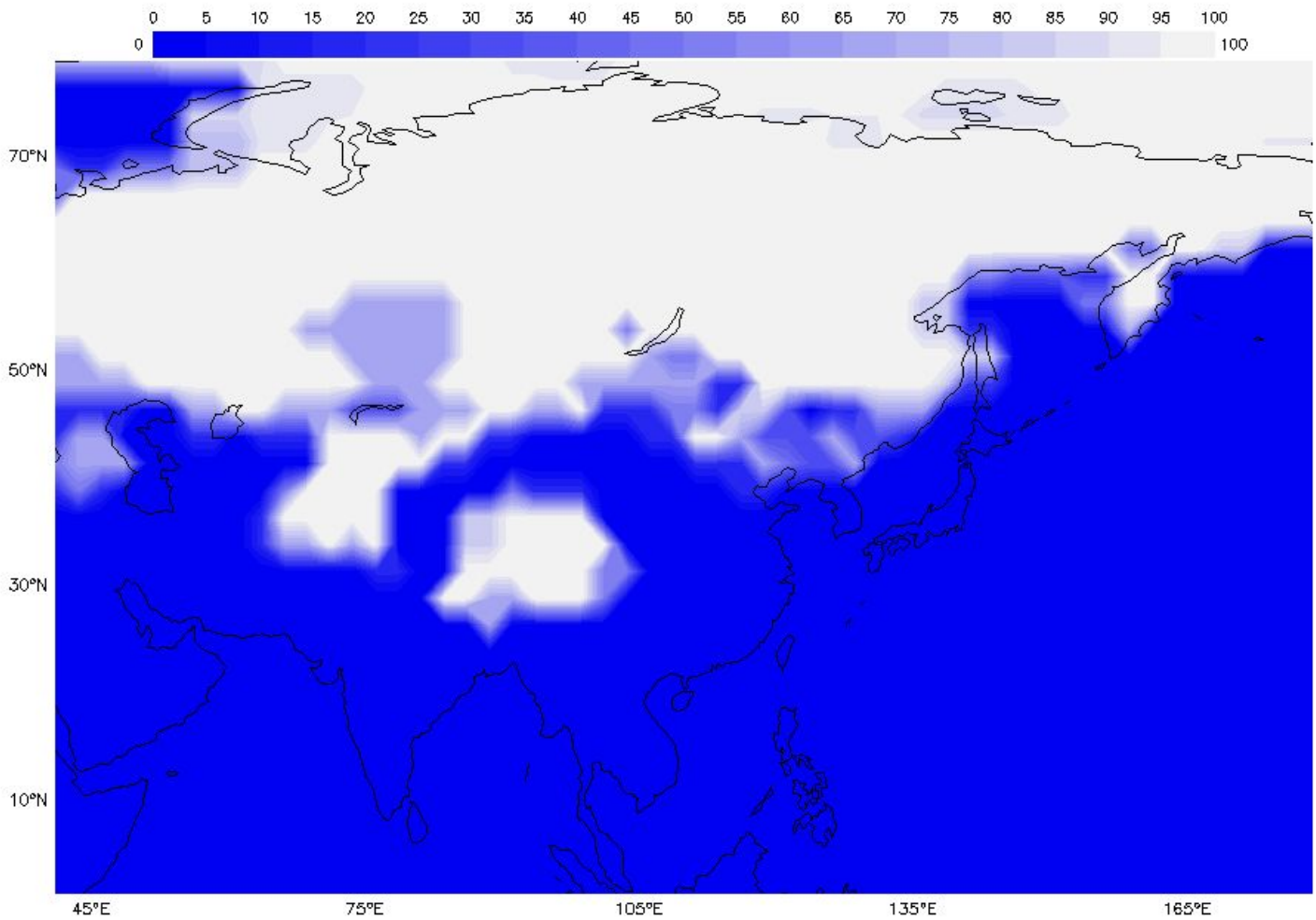
Scientists Monthly Mix-Up Datasheet

Observe the snow and ice amount on the maps. Complete the chart below. Under Evidence, write your observations. Include longitude and latitude of key locations and amounts of snow and ice. In the Claims section, match the maps with the months: January, March, or June.

Model Example	
Evidence: • Latitude 65°–70° have the most snow • Snow appears above 30°N • 90°E has most snow • Snow covers upper half of the map • Russia contains 90% of the snow	Claim: • November is a very cold month in Northern Asia that includes high levels of precipitation.

MAP 1	Evidence: • Half US is covered in snow/ice • Great lakes light blue • Less white than Map 2 and 3 • etc. *Answers will vary*	Claim: *(might include comparison of maps and evidence from the observation box)*
MAP 2	Evidence: • US almost entirely blue • No snow covering Eastern or Western portions • Alaska has 50% less snow than Map 2 • etc. *Answers will vary*	Claim: This is June because . . . The map has the least amount of snow compared to the other two, meaning it is a warmer month. *(might include comparison of maps and evidence from the observation box)*
MAP 3	Evidence: • More snow cover than Map 1 • Snow creeps down western part of US • One big sheet • etc. *Answers will vary*	Claim: This is January because . . . snow/ice cover almost all of the map, meaning that it is much colder now. And in my state we have snow in January and so does this map. *(might include comparison of maps and evidence from the observation box)*

Asia


0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100
0
100
70°N
50°N
30°N
10°N
45°E
75°E
105°E
135°E
165°E

TEACHER KEY

Our Investigation! Datasheet

1. What do you know about Monthly Leaf Area Index?

Observe the Monthly Leaf Area Index on the maps. Complete the chart below. Under Evidence, write your observations. Include longitude and latitude of key locations and amounts of leaf area or canopy cover. In the Claims section, match the maps with the months: January, March, or June.

MAp 1	Evidence: • There is more white shown, less leaves, than Maps 2 and 3 • Dark green appears in warmer regions, south • Map is half white • Etc.	Claim: This map shows January because there is a lot less leaf area than the other two maps, which typically means it is a colder month.
MAp 2	Evidence: • Most of the map is covered in green, >85% • Contains more dark green, West, than Maps 1 and 3 • Canada covered too • Etc.	Claim: This map shows June, because the map is mostly covered in greens and lots of dark greens. This means it is a warmer month because it has more than both Maps 1 and 3.
MAp 3	Evidence: • Alaska now has greenery • More green than Map 1 but less than Map 2 • About 60% of map is covered in green • Etc.	Claim: This map shows March because the amount of green/leaves is in between Map 1 and Map 2. The green has stretched farther up North and has less darker green than Map 2.

1. Compare and contrast the maps for snow/ice and leaf area. Explain what you noticed.
   Both maps appeared to show an increase or decrease in their amounts when the months were changing. Like, snow/ice amount decreased as the months got warmer, but leaf area increased as the months got warmer. So, both variables fluctuate with seasonal change. This could indicate that these are both receptors to temperature or amount of sunlight.

2. Based on your observations, predict other events that may help tell what season it is and explain.
   Other events could be precipitation, maybe in the warmer months more precipitation occurs. Another, is temperature because we know it gets colder in the winter and warmer in the summer.

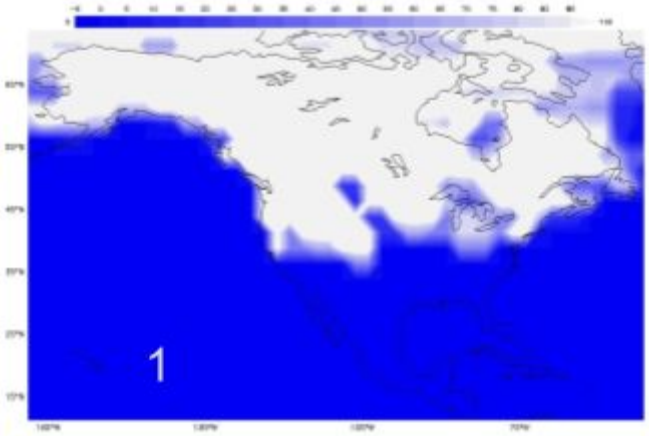
Snow/Ice Amount (percent) November 1999 **MODEL EXAMPLE**

Data Visualization

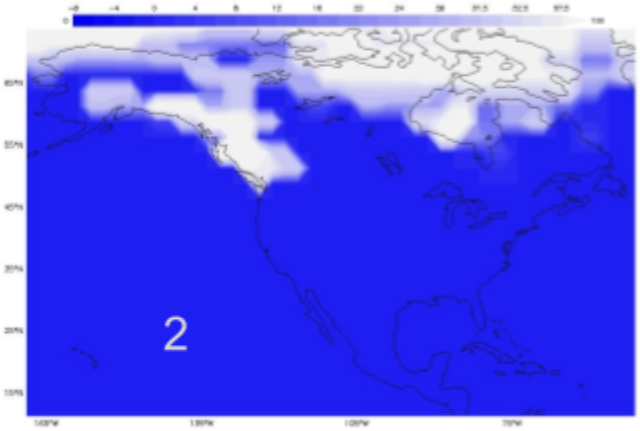
TEACHER COPY

Snow/Ice Amount (percent)

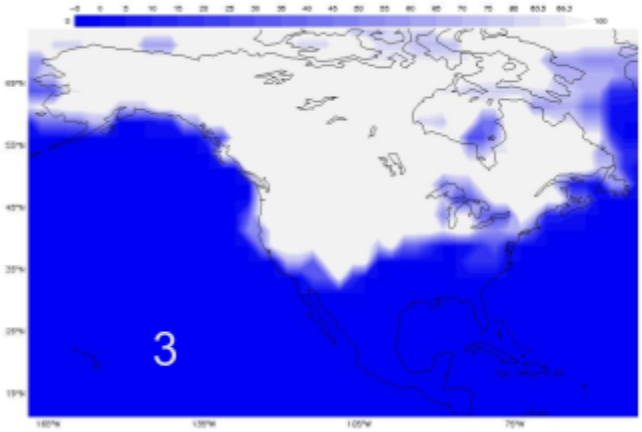
March 2008



June 2008



January 2008

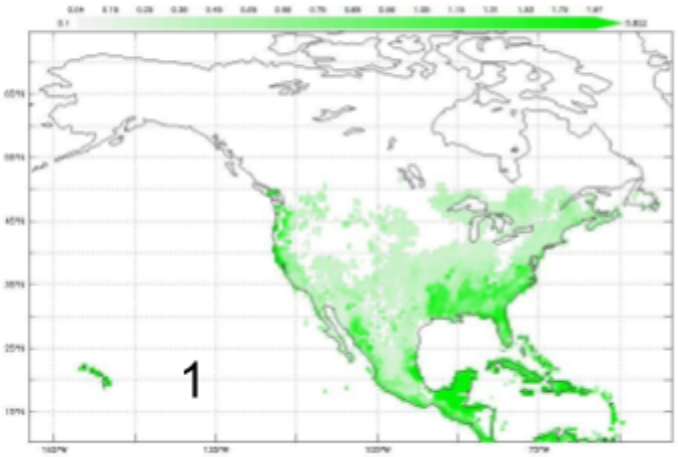


Data Visualization

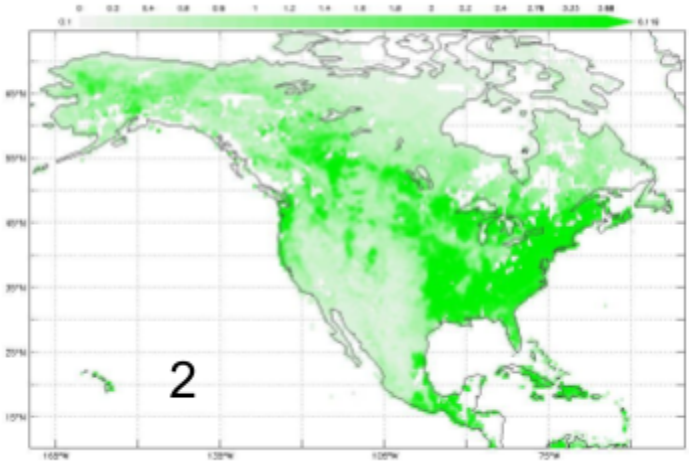
TEACHER COPY

Monthly Leaf Area Index

January 2008



June 2008



March 2008