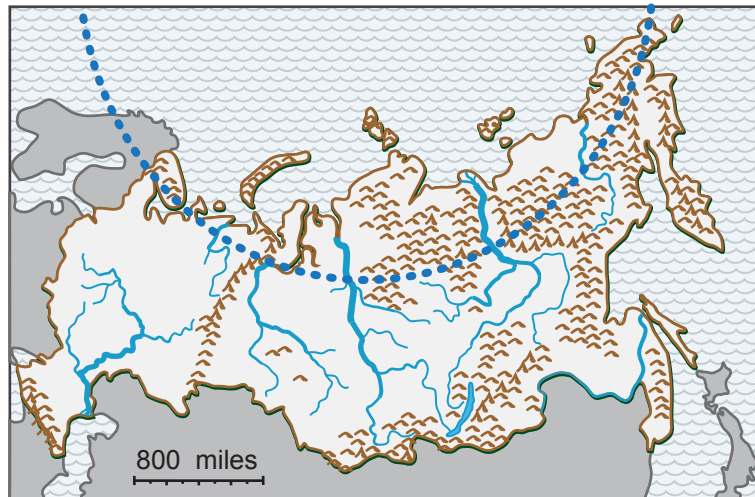# Russia mini-ATLAS

Double click to open the .pdf file.

At the edge of the screen is
a vertical line of tiny icons;
click on the one that looks
like a short stack of pages.

This will open a list of data layers.
Small checkmarks in the boxes
mark the layers that are visible.

◆ Clicking on an empty box will
   make that data layer **visible**.

◆ Clicking on a checked box will
   make that layer **invisible**.

◆ Clicking on the word "options"
   will give you more choices, including a way to reset
   the map to the way it was when you opened the file.

800 miles

1. The dotted line that runs across the northern part of Russia is the Arctic Circle.
   Put an x on the line by the best description of the importance of this line of latitude:
   ____ All places north of this line have at least one day in winter when the sun never rises.
   ____ All places north of this line have snow that keeps getting deeper and never melts.
   ____ All places north of this line have temperatures that never rise above freezing.

2. Click to turn on the river names. Circle the only big river that flows mainly toward the south:
   Amur   Kolyma   Lena   Ob   Volga   Yenisei

3. The four large northward-flowing rivers freeze every winter - in fact, people can use them
   as roads during the winter. In summer, the southern end of these rivers warms up first.
   Circle the main environmental problem that might be caused by this fact about the rivers:
   Serious water pollution in winter   Flooding in late spring   Shortage of water in summer

4. Click to turn the river names off (to minimize clutter for the next investigation).
   Click to show the areas with permafrost (soil that is permanently frozen underneath
   a thin surface layer that melts during the short summer). In general, does the presence
   of mountains make a place more or less likely to have permafrost?   more   the same   less
   Why do you think this is so?

5. Click to show the route of the Trans-Siberian Railroad. The distance from Los Angeles
   to New York City is about 2500 miles - roughly one tenth of the way around the world.
   How does the length of the Trans-Siberian railroad compare to the LA to NY distance?
   about the same   one and a half times as far   twice as far   three times as far   four times as far

6. Click to show all the railroads. Does the evidence support the idea that permafrost
   makes railroad building (circle one):   easier   about the same   harder
   Why do you think this is so?

7. Russia has a long and complicated geologic history, which gives it more than its "fair share"
   of metallic minerals and petroleum deposits. What are you more likely to find in rugged
   mountainous areas, metals or oil? Why do you think so?

Russia mini-ATLAS Investigation

Turn individual layers of the mini-Atlas on and off in order to investigate the relationships between mountains, rivers, latitude, permafrost, metal ores, oil deposits, railroads, cities, and autonomous ethnic areas (areas occupied by people who are not historically Russian). Write a paragraph that contains a topic sentence and at least five generalizations to summarize your investigation. Each of your generalizations should describe the map pattern of one thing and/or note possible causal relationships between two or more things (which often are on different data layers in the mini-Atlas).

Example: "The Trans-Siberian Railroad stays close to the southern border of the country in order to go mainly in areas that are less likely to have permafrost."