

Figure 1 Areas with the Highest Frequency of the A Allele

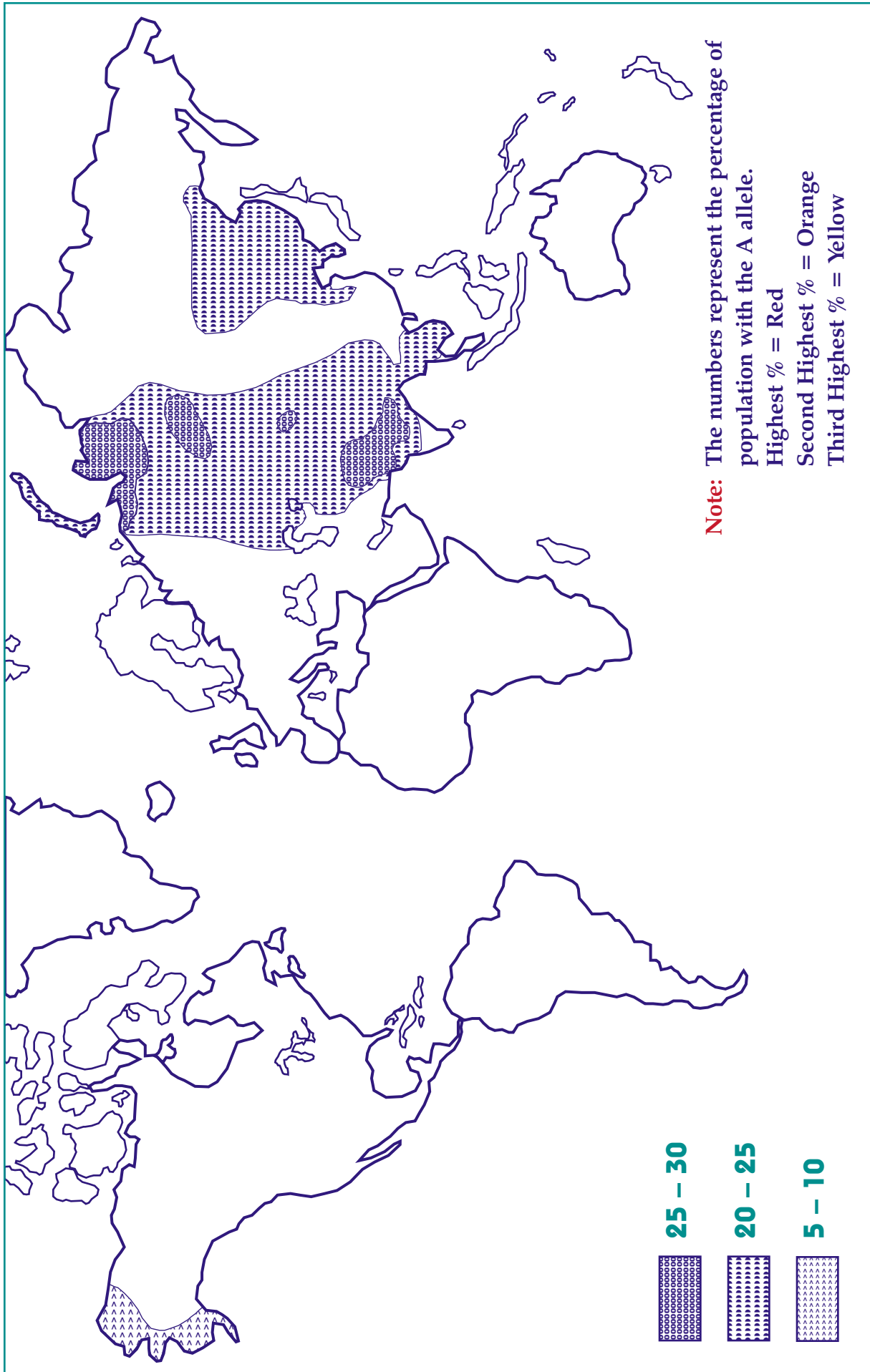


Figure 2 Areas with the Highest Frequency of the B Allele

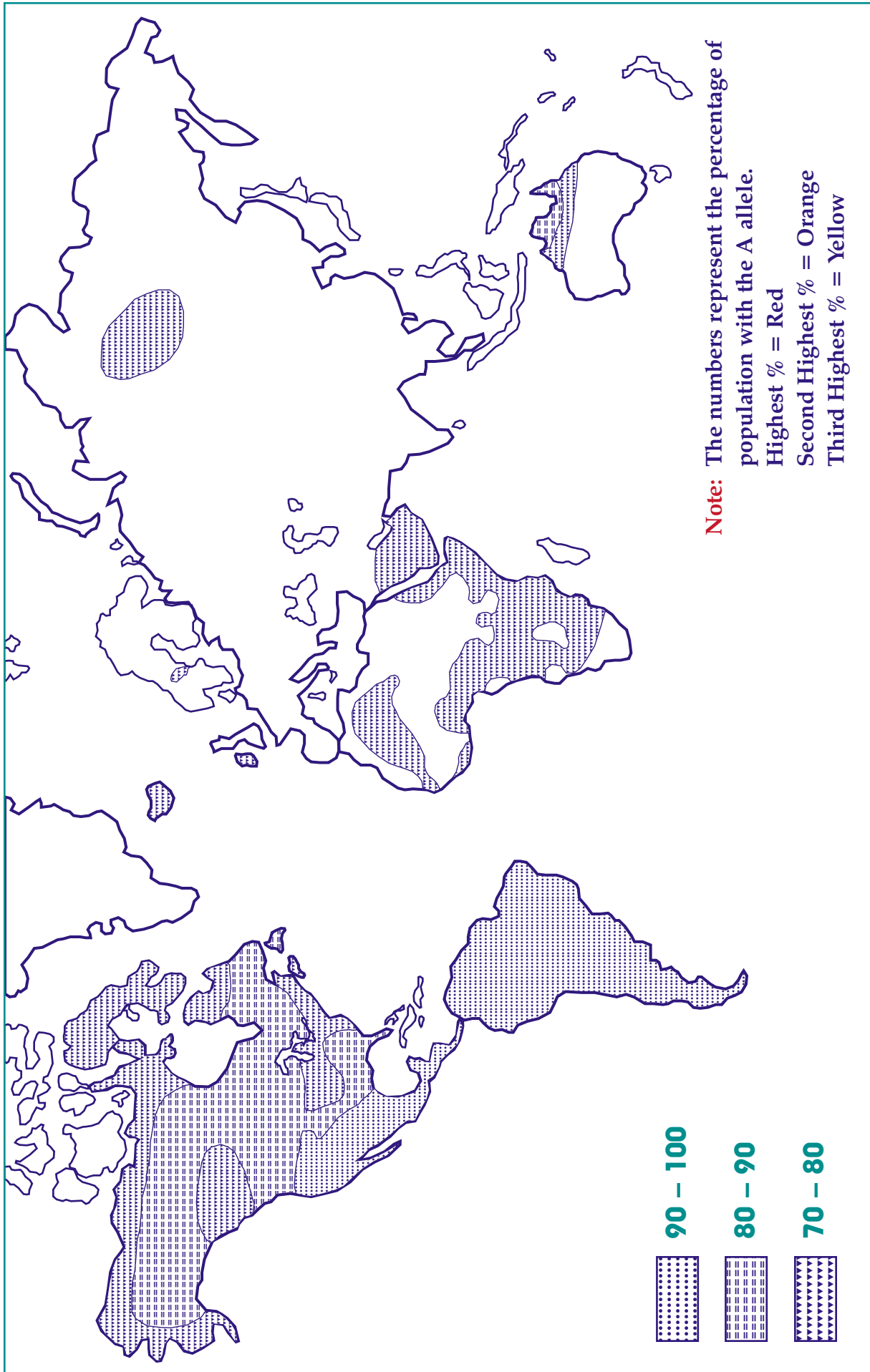


Figure 3 Areas with the Highest Frequency of O Blood Type

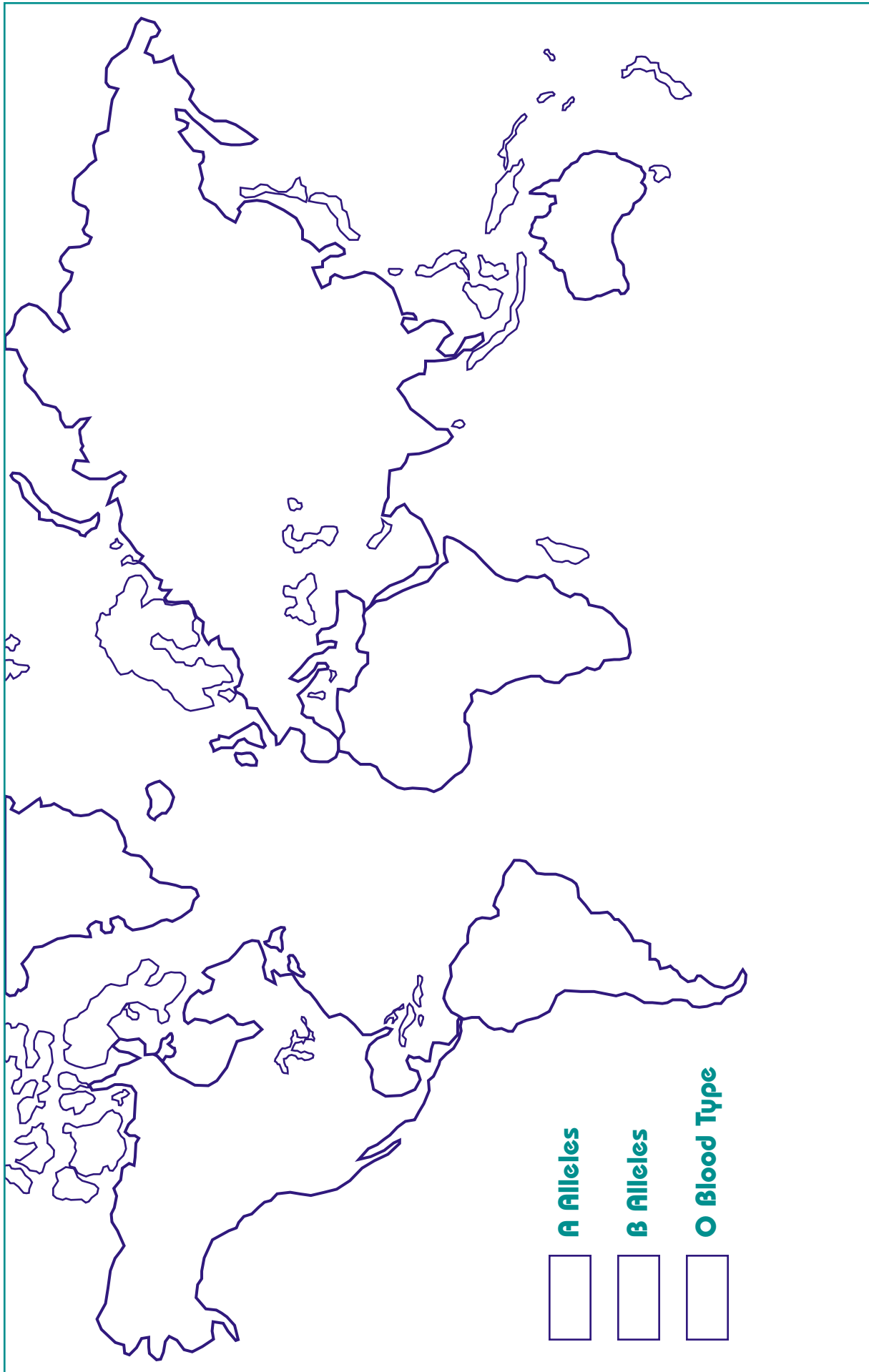
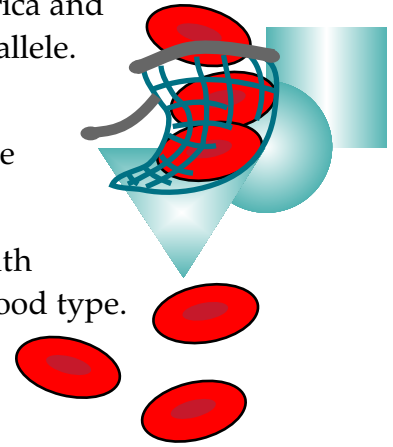


Figure 4 Highest Worldwide Frequency of Each ABO Allele

Using the three maps you just completed, you will map the highest percentage (**red**) area for the **A** and **B** alleles and for the **O Blood Type**. Use the 1/4 Inch Grid Transparency to estimate these areas. Use red for the **A Blood Type**, blue for the **B Blood Type**, and green for the **O Blood Type**, and make a legend for your map.

1. Western Europe, Australia, and the subarctic regions of North America and Greenland contain the highest percentages of people having the **A** allele. Color this region **red**.
2. Central Asia and East Asia contain the highest percentages of people having the **B** allele. Color this region **blue**.
3. The western part of the United States, Mexico, and Central and South America contain the highest percentages of people having the **O** blood type. Remember that these people do not have either the **A** or **B** allele. Color this region **green**.



Processing Out:

1. Which allele is located mainly in the Western Hemisphere?

2. Which allele is located mainly in Western Europe?

3. Which allele is not found in Australia?

4. Which continent had the highest frequency of the **B** allele?

5. Which allele is not found in the Western Hemisphere except for western Alaska?



6. What conclusion can be made about the worldwide distribution of the **A** allele?



7. What conclusion can be made about the worldwide distribution of the **B** allele?

8. What conclusion can be made about the worldwide distribution of type **O** blood?

9. A person with type **AB** blood must have both the **A** allele and the **B** allele. Which part(s) of the world would you expect to find people with type **AB** blood? Explain your answer.

10. What part of the world would you **NOT** expect to find people with type **AB** blood? Explain your answer.



LESSON 3
ACTIVITY 3E