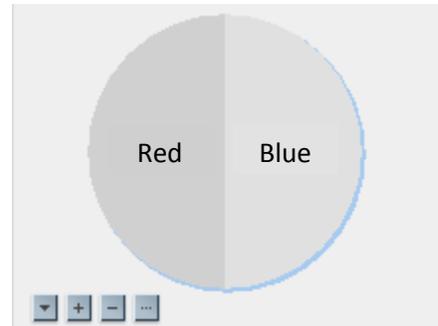
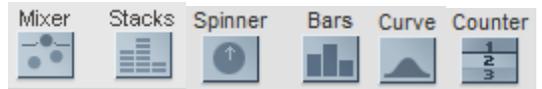
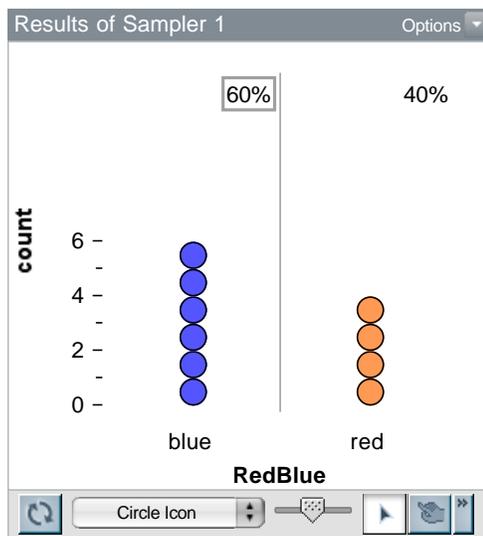


Unit 5 Tinkerplot Instructions

1. Open Tinkerplots
2. **File | New** to open a new TinkerPlots document.
3. Drag a sampler into the document. Click and drag its corner to make it larger.
4. At the bottom of the sampler, you'll see six devices.
5. Choose the Spinner. To use a spinner, drag a spinner from the sampler's bottom toolbar and drag it into the sampler.
6. Click *Attr1* above the spinner and rename it *RedBlue*
7. Change "Draw" number to "1".
8. Click *a* in the spinner and change it to *Red* or R. Click *b* and change it to *Blue* or B.
9. Note the four buttons in the lower left corner of the spinner device.
 - a. Clicking the first icon shows the **Device options** menu, including Show Percent. The Show Percent option displays percentage of each sector, and dragging will change that percent.
 - b. Clicking the + and – buttons adds and subtracts sectors to the spinner, and the ... option allows you to enter a range of values into the device.
10. To make Blue as likely as Red, you'll need to change the position of the divider in the spinner. Click the divider and drag it so the spinner is divided into equal parts. Or, click the **Device options** menu and choose **Equalize Angles**.
11. At the top left corner of the sampler, click the Repeat number, 5, and change it to 10 to generate data for 10 trials (spins).
12. Click the **RUN** button at the top left corner of the sampler. Watch as the sampler generates data for Red and Blue.
13. Drag a plot from the upper left toolbar and drag it into the document. Click the RedBlue column in the Results box. Notice that circles in the plot have changed color into red and blue.
14. Click a case icon (circle) and drag it to the right. As you do so, the cases will separate into bins. Keep dragging the case icon to the right, and the cases will fully separate along a horizontal axis.
15. Click the **Stack cases vertically** button in the upper plot toolbar to stack the case icons and click on the % to show the percentage of blue and red.
16. Run the sampler a few more times to see what happens.





17. To collect 300 samples, in the Plot Results box, click on the percentage blue.
18. Under Options, select Collect Statistics. (At this point you may want to change the Run speed located in the upper left corner in the sampling box to "Fastest" by moving the indicator to the right.) A History of Results table will appear.

The figure shows a "History of Results" table. The table has a header row with "percent..." and "<new>". Below the header, there is a table with one row of data. The first column contains the number "1" and the second column contains the number "60".

	percent...	<new>
1	60	

Unit 5 Tinkerplot Instructions

19. Replace “1” times after Collect with “300” and then click Collect. 301 Percentages of Blue for each sample of 10 trials (or spins) will start appearing in the History box.
20. Drag a new plot from the upper toolbar once more and drag the percentblue variable from the History table into the plot. Notice that the circles are all colored different shades of blue.
21. Click a case icon (circle) and drag it to the right. As you do so, the cases will separate into percentage bins. Keep dragging the case icon to the right, and the cases will fully separate along a horizontal axis of percentages.
22. Click the **Stack cases vertically** button in the upper plot toolbar to stack the case icons
23. To show the median, click on to  from the upper toolbar above Averages. Click on to  for the mean. Click on the Hats, Percentile, to see the interquartile range.