Name of the Expert: Dr Arvind C Ranade
Name of the Activity: Understanding the Probability
Material, Tools required: Card Board Box, 100 blue and 25 red beads

Activity Steps:

1. We will try to find out - without looking in the box and counting - whether there are more blue or more red beads in the box.
2. Have four students draw five beads each from the box. (Make sure that the beads are put back into the box after each draw.)
3. Have every student record the numbers and colours of beads for each of the four draws.

Learning Outcome:
Questions to Ask and Answer:

1. On the basis of the first four draws how many beads of each colour are there in the box? Let each student in the rest of the class draw five beads each from the box. (Be sure to put the beads back in the box after each drawing.)
2. What are the totals for each colour of beads?
3. Do you think there were more beads of one colour than the other? Why?
4. If so, what do you think the ratio of one colour to the other might be? Open the box and count the number of beads of each colour.
5. What is the ratio of one colour to the other colour?

Conclusion:
The probability of drawing a blue beads is four times greater than drawing a red one.
Video of the activity (If available): Not Now

Name of the Expert: Dr Arvind C Ranade
Name of the Activity: Calculating the value of Pi
Material, Tools required: Meter scale, string, bangle, ring, dish, CD

Activity Steps:

1. On a sheet of paper make 4 columns labelled: object, diameter, circumference, and ratio. (See example below.)
2. Wrap the string around a CD. This measures the circumference of the object.
3. Measure the string using the meter scale. Write the value in the column labelled circumference.
4. Next, measure the distance straight across the CD. Put this value in the column labelled diameter.
5. Now take the circumference divided by the diameter. Put this in the column labeled ratio.
6. Is this close to pi? Make sure you take the ratio out to three or four decimal places.

Learning Outcome:
Measuring the value of Pi

Conclusion:
Every time the value of Pi for any circle comes around the same.
Video of the activity (If available): Not Now
