

## Script

### TEACHER GUIDE

Hi, thank you for watching and using this lesson. Next, I will give you some suggestions.

- 1) In this class, we used four methods to estimate pi value. The lesson is designed to stimulate the learning interests of the students by engaging them in the different activities. Also, this lesson can help the students understand the math knowledge involved in estimating pi value.
- 2) We don't require the students to get very accurate value of pi, especially by the method of dart throwing. The results from the dart throwing activity may have bigger errors. However the main purpose of this activity is to arouse the students' interest in learning. When throwing darts, you should be very careful. The darts I used in this lesson are magnetic darts, which is safer when throwing. Also, you can think of other similar games to replace this one, for example, you can throw marbles to a target on the floor.
- 3) The method of rolling a tire or using a computer can get more accurate pi value. By using computer, we can get numerous data and calculate an average. So it should be the best way to estimate pi among these four methods in terms of accuracy.
- 4) By doing experiments on their own, students will understand that many factors can affect pi value in the actual measurements and estimation. So after seeing the advantages and disadvantages of each method, they are encouraged to develop other better methods.
- 5) If computers are not available in the school, we can print out the appendix for students so that they can make the calculation using the data in it.
- 6) It is advisable to form an atmosphere of competition among different student groups, and make comparisons on the accuracy of their estimation, on the advantages and disadvantages of their methods or the materials they used in the experiment. This will help to cultivate their enthusiasm in this lesson.
- 7) The detailed instruction of using computer to simulate dart-throwing process and a short video of demonstration are attached. You can download from our website.

Thanks again and if you have any questions about this lesson, please feel free to contact me through the following email address: [fengrengy@163.com](mailto:fengrengy@163.com)