



Nothing feels better on a hot day than jumping into a pool! Many cities have swimming pools that people can go to for a small fee. Some people have swimming pools in their backyards that they can enjoy any time.

If neither of these options are available, you can always create your own beach paradise! Get a kiddie pool, a lawn chair, and a beach umbrella. Think about your beach paradise as during the Mathematical Modeling in 3 Acts lesson.

1. What is the first question that comes to mind after watching the video?
2. Write down the main question you will answer about what you saw in the video.
3. Make an initial conjecture that answers this main question.
4. Explain how you arrived at your conjecture.
5. Write a number that you know is too small.
6. Write a number that you know is too large.
7. What information will be useful to know to answer the main question? How can you get it? How will you use that information?

**ACT 2** Develop a Model

8. Use the math that you have learned in this Topic to refine your conjecture.

**ACT 3** Interpret the Results

9. Is your refined conjecture between the highs and lows you set up earlier?

10. Did your refined conjecture match the actual answer exactly? If not, what might explain the difference?