Estimating Fractional Parts

**Materials needed:**

* Images (pg. 73-79 from Boaler, J.)
* Chart paper/butcher paper
* Tape
* Resources that could be useful to solve:
  + Tiles
  + Grid paper
  + Centimeter cubes
  + Rulers

Within your group, complete the following:

1. Select a photo.
2. Create two questions that would allow you to estimate different fractional parts of your image.
3. Record each question on a separate sticky note.
4. After the allotted time, pass your picture and estimation questions to another group.
5. Solve the estimation questions with the new pictures using any of your resources.
6. After you have answered the questions, tape your image to the top of the chart paper. Record your estimated fractional amount underneath the image.
7. Write “OPTIC” vertically on the left-hand side of your poster and complete the following:
   * O: List any **Observations** your group has from the image.
   * P: Describe the **Process** used to determine your estimation.
   * T: Create a **Title.**
   * I: List the **Inferences**, or how the items in the photo relate to one another.
   * C: **Create** another estimation problem for your image.

**Resources**

Boaler, J., Munson, J., and Williams, C. (2018). *Mindset mathematics: Grade 5*. Jossey-Bass.