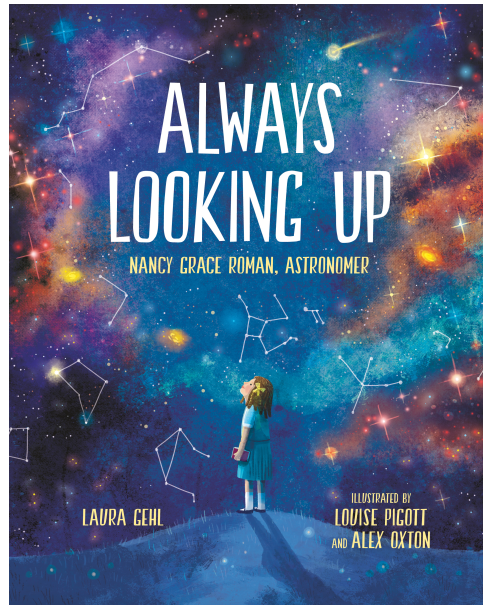# Always Looking Up: Nancy Grace Roman, Astronomer

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Curriculum Guide

<u>Science Activity</u>

Relative Planet Size
Kids know that some planets are bigger than others, but very few kids (or adults) understand just how <u>much</u> bigger some planets are. This activity will astonish them, as they see, for example, how tiny Earth is compared to Jupiter, and how much tinier Pluto is compared to Earth.

You will need a large ball—about 3 pounds—of soft modeling clay, Play-doh, or homemade playdough, and nine labeled paper plates for the nine plates to sit on.

1. Divide the dough into ten equal balls.
2. Squash six balls together. Place this on the plate labeled **Jupiter**.
3. Squash three more balls together. Place this on the plate labeled **Saturn** (but this is only part of Saturn).
4. Take the dough that is left and divide in half. Add one half to **Saturn**.
5. Divide the other half of the dough into five equal pieces.
6. Squash two pieces together. Place this on the plate labeled **Neptune**.
7. Take two more and squash them together. Place this on the plate labeled **Uranus**.
8. With that one little piece that is left, make ten equal pieces.
9. Put nine of those little pieces together and add to **Saturn.**
10. Divide the last little piece into two pieces. Put one of them on the plate labeled **Earth.**
11. Now divide the last piece into ten more pieces! Squish 9 of them together and place on the plate labeled **Venus.**
12. Now divide that last little piece into ten even smaller pieces! Squish 9 of them together and place on the plate labeled **Mars.**
13. Now divide that last tiny piece into ten even tinier pieces! Squish 9 together and place on the plate labeled **Mercury.**
14. Place the last piece on the paper labeled **Pluto.** *(Now that students see how small Pluto is they may understand better the continuing controversy over whether Pluto should be counted as a planet or not.)*