



## Building a Galaxy

Our galaxy, the Milky Way, is built of a vast collection of components that each serve a different purpose. For example, there are black holes, dark matter, comets, meteors, and stars, and investigators dedicate their lives to researching these elements so we can understand why they are important to the galaxy's life.

As technology improves, scientists constantly discover new components, characteristics of components, or ways the different elements interact. These discoveries are made not only because of technological advances but also because of scientific curiosity. Scientists can ask the right questions, work collaboratively, and build on peers' ideas to advance their field of study; otherwise, the discoveries won't happen.

Space science is a group effort. When countries share their technology, data, and discoveries, science advances. For example, the Webb Space Telescope was built through multinational partnerships. Collaboration takes place much more often than competition between countries. The importance of cooperation in this significant field of study echoes the values in the United Nations Sustainable Development Goal (SDG) 17, which refers to the importance of rebuilding global partnerships in implementing sustainable development.

In this Maker Zone Project, your group will create a model of one component of the galaxy and prepare a presentation describing it and its role in the functioning of the galaxy, providing the class an opportunity to work collaboratively on one part and then demonstrate how the components interact.



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In this Maker, you'll work with a group to create a physical model of a key element in our galaxy, the Milky Way. Then, you'll present your model and explain why this element is essential. Follow the instructions:

1. Choose an element.
2. Research its characteristics and importance in the galaxy.
3. Design a physical model.
4. Use the tools and materials in the Maker Zone to build your model.
5. Prepare and practice your presentation.

### 01 Present!

Once your Maker is done, present live or create a video explaining your chosen galaxy element and why it's important.

### 02 Discuss!

- › How did your group choose the element?
- › How did you choose the key points of your presentation?
- › Do the presentations from all the groups connect?
- › How would you change this project?

### 03 Get Informed!

Follow a space organization such as NASA on social media to learn more about the roles different elements play in the galaxy.

### 04 Take It on the Road!

With the help of your teacher, plan a presentation of your projects in an elementary school. Make any necessary adaptations to suit the new, younger audience.

