

Warm-up

First, start the session with a game: divide students into four groups and give them two minutes to list as many elements in the galaxy as possible. Next, each group gets a point for every element it lists that no other group has on its list. Finally, post the elements on the physical or digital whiteboard.

Teaching Tip

For Exercise 1

First, provide students with images of example models, such as balls for planets, metallic paper shapes for stars, etc. Encourage students to be creative with their models. Then, model the presentation by explaining why stars (or another element you remove from the students' options) are most important in the galaxy. Next, elicit or provide reasons such as: *Stars give light and heat. Travellers can follow them. They are involved in the creation of new elements and planets*, etc. Afterward, give groups time to create their models and persuasive presentations. Close the session by displaying the models around the room. Then, give each student several Post-it notes to write how each element interacts with the others and stick the notes to the wall. Next, have students read others' notes and add their own as they circulate the classroom. Finally, end with a report-back session, eliciting the interactions from volunteers.

Differentiation Strategy

For Exercise 2

Go to the Differentiation Strategies Bank and adapt this exercise using Strategy 2c.



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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.

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.

DO

Building a Galaxy



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:

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



Teaching Tip

For Exercise 2

First, review each topic and key learnings. Then, assign each corner of the classroom to one of the topics. Afterward, have students identify the most engaging issues in each topic. Next, have students move to a different corner. Afterward, have them discuss what they found most interesting about the topic.

Finally, end the exercise by sharing the experiences with the class and, if time allows, discussing what they learned from this experience.

Wrap-up

First, close the session with a mock debate about the most engaging topic of the week. Then, have groups from the warm-up form together again and identify five reasons their topic is the most interesting. Next, have groups take turns presenting their arguments to other groups. Finally, close the session with a show of hands for the most interesting topic—with students NOT voting for their own topic.



BE Aware of Your Progress



01 It's time for your assessment. First, ask a classmate to help you assess your performance during this week (Peer Assessment). Allow your classmate to provide you with some feedback. Later, assess yourself (Self-assessment) based on how you felt during this week.

VG – Very Good

G – Good

N – Need to Improve

I can...

Peer Assessment

Self-assessment



recognize what autonomy is.



explain the composition of galaxies.



mind-map the characteristics of WWI.



recognize the importance of female directors throughout the history of film making.



use other forms of **Conditionals** (unless, provided, providing, as long as, if so/not, if + were to, so long as, or, otherwise, supposing, and Inversions).



02 Reflect on a time when you made an important decision autonomously. Answer the following:

- › What was the decision?
- › How did you feel making the decision?
- › What did you consider when making the decision?

Answers will vary.

ASK A FRIEND ABOUT THEIR EXPERIENCE WITH AUTONOMY!

