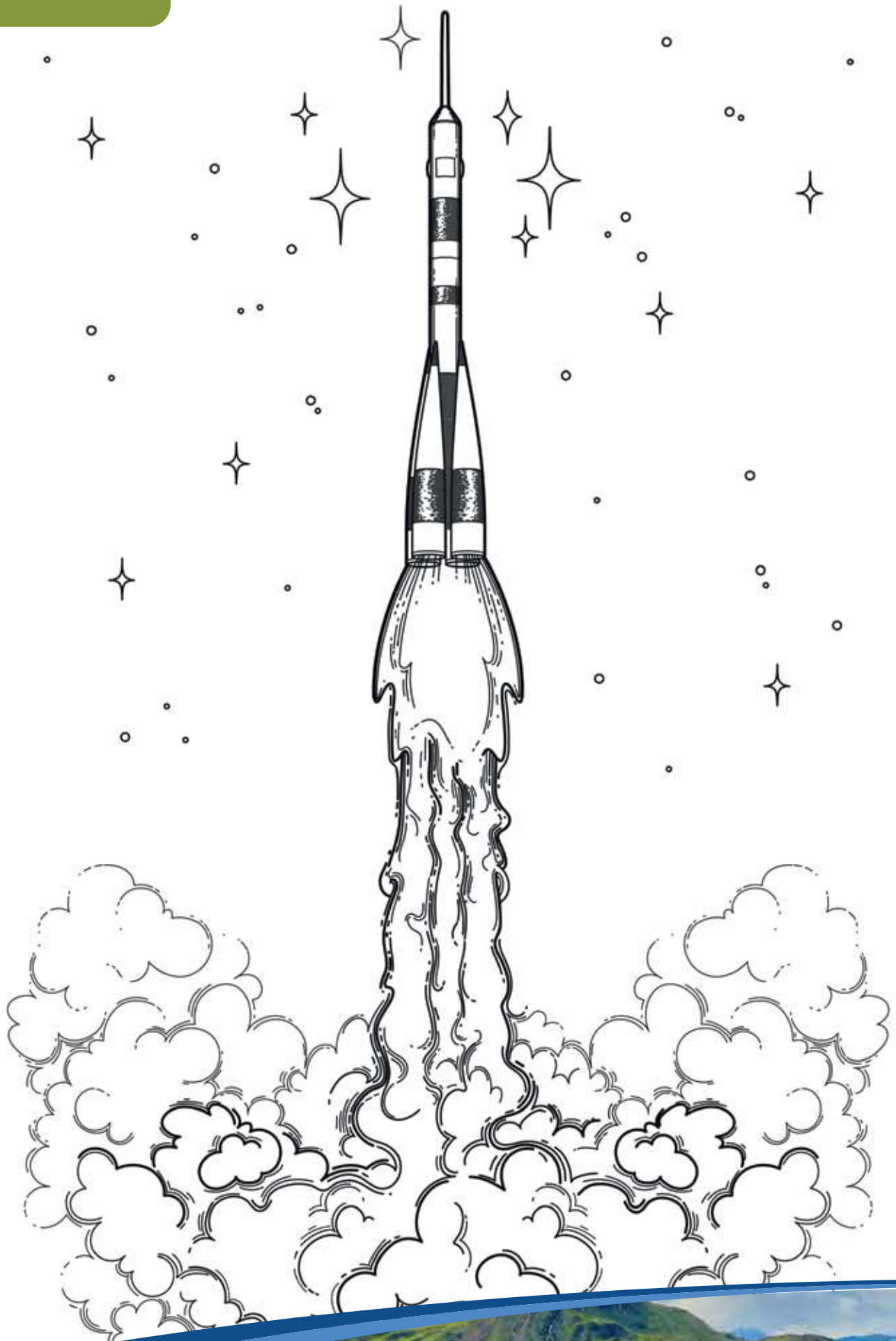


THIS IS THE START OF THE JUNIOR NOTEBOOKING JOURNAL

THIS IS A PREVIEW. THE NUMBER OF PAGES DISPLAYED IS LIMITED.





EARTH SCIENCE

FASCINATING FACTS AND PERSONAL REFLECTIONS



Handwriting practice lines consisting of a solid top line, a dashed middle line, and a solid bottom line. There are 10 sets of these lines stacked vertically.

Handwriting practice lines consisting of a solid top line, a dashed middle line, and a solid bottom line. There are 10 sets of these lines stacked vertically.



ACTIVITY 1.1

EXPANDING UNIVERSE PUTTY

1.

We will always see the lights we can see in tonight's sky. Light travels faster than the expansion. What might we never see in an expanding universe?

Attach #1 here.

Attach #2 here.

2.

How is the universe expanding?

Attach #3 here.

3.

Understanding frame of reference, is there a center of the universe?

INSTRUCTIONS:

1. Remove this page from your notebook.
2. Cut along the dotted lines.
3. Fold along the solid yellow lines.
4. Apply glue where indicated.
5. Attach to the top of your answer circles on page 26.

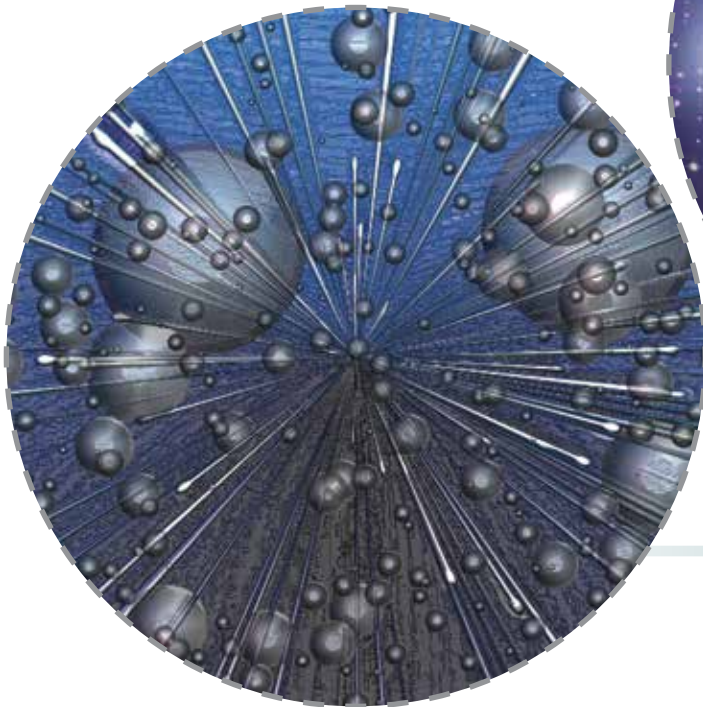
1.



2.



3.



Apply glue here.



Apply glue here.



Apply glue here.





ACTIVITY 1.2

UNDERSTANDING FRAME OF REFERENCE

Handwriting practice lines consisting of solid top and bottom lines and a dashed middle line. There are 10 sets of these lines provided for writing.



ACTIVITY 1.3

CREATE A GALAXY MOBILE

Label each type of galaxy.



what I did

what I learned

Attach a picture of your galaxy mobile below.

**EARTH****MILKY WAY GALAXY****OBSERVABLE UNIVERSE****INSTRUCTIONS:**

1. Remove this page from your notebook.
2. Cut along the dotted lines.
3. Fold along the bottom yellow fold line with the Milky Way Galaxy image touching the Observable Universe.
4. Fold along the top yellow fold line with the Earth visible.
5. Cut slot along dotted lines on page 33.
6. Insert the cutout through the envelope slot.
7. Tape the bottom tab in place on page 34.
8. Write your address on the lines of the envelope.



MY COSMIC ADDRESS



Planet Earth
Milky Way Galaxy
Observable Universe

THOUGHTS ON MY PLACE IN SPACE

Handwriting practice area with four sets of lines (top solid, middle dashed, bottom solid).

INSTRUCTIONS:

1. Remove this page from your notebook.
2. Cut along the dotted lines.
3. Apply glue on the back where indicated.
4. Attach to your journal page where indicated on page 37.



Apply glue here.

MY THOUGHTS ON THE OBSERVABLE UNIVERSE AND WHAT IS BEYOND WHAT WE CAN SEE

Attach here.

Handwriting practice area with multiple sets of three horizontal lines (top solid, middle dashed, bottom solid) for writing.



VOCABULARY

LIFT THE FLAP

Apply glue here.	Apply glue here.
a group of billions of stars, planets, dust, and gas moving together	consists of a star at the center and planets that orbit the star
Apply glue here.	Apply glue here.
a scientist who studies outer space	a galaxy shaped like an elongated sphere that is brightest in its center
Apply glue here.	Apply glue here.
the name of our galaxy	a galaxy with no regular shape
Apply glue here.	Apply glue here.
a galaxy that has arms spiraling out from its center	the parts of the universe that we can see

VOCABULARY

LIFT THE FLAP

INSTRUCTIONS:

1. Remove this page from your notebook.
2. Cut along the dotted lines.
3. Match each word to the correct definition on page 38.
4. Place glue above the line on each definition.
5. Once the glue is dry, fold back the word to reveal the definition.

**Observable
Universe**

Astronomer

Galaxy

**Elliptical
galaxy**

**Spiral
galaxy**

**Irregular
galaxy**

Milky Way

**Solar
System**



WHAT DO YOU REMEMBER?

Why do we talk about the observable universe instead of just saying the universe?

What is the name of the galaxy that we live in?

Can you name the 3 types of galaxies we discussed?

Do we know of any other planet that has life?

What was your favorite part of this lesson?

