

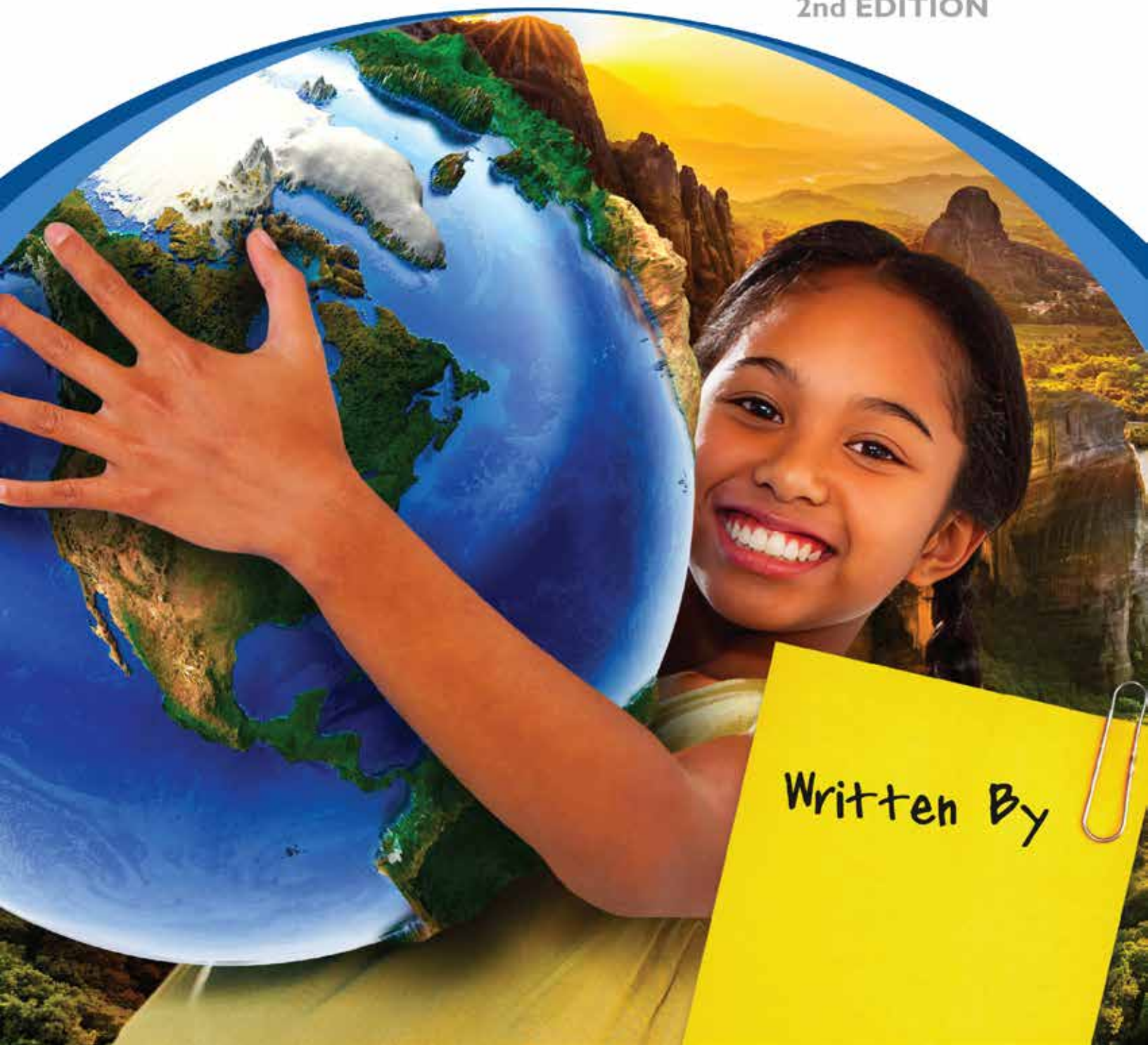


YOUNG EXPLORER SERIES

apologia.

EXPLORING CREATION WITH  
**EARTH SCIENCE**  
NOTEBOOKING JOURNAL

2nd EDITION



Written By

# TABLE OF CONTENTS

<b>Schedule</b> .....	vii
<b>Parent Guide</b> .....	xvii

## Lessons

Lesson 1:	The Observable Universe.....	23
Lesson 2:	Life in the Habitable Zone.....	43
Lesson 3:	Spheres of the Earth.....	55
Lesson 4:	Mapping Your World .....	69
Lesson 5:	The Geosphere .....	91
Lesson 6:	Making and Shaping the Land ...	119
Lesson 7:	The Hydrosphere .....	151
Lesson 8:	The Atmosphere.....	171
Lesson 9:	Climate and Weather .....	195
Lesson 10:	Weather Forecasting.....	225
Lesson 11:	The Biosphere .....	243
Lesson 12:	Cycles of Life .....	261
Lesson 13:	Unique Places on Earth.....	275
Lesson 14:	God in Creation.....	287

<b>MY SPECIAL SPOT</b> .....	300
<b>SOLUTIONS</b> .....	311

# EXPLORING CREATION WITH **EARTH SCIENCE** 2nd EDITION

## **Two Days a Week Suggested Schedule**

Please feel free to adjust this schedule to fit your family's needs.

### **BEFORE YOU BEGIN**

- Textbook Introduction p. 9–12
- Notebooking Journal (NJ) Parent Guide p. xvii–xviii
  - Coloring pages, Fascinating Facts & Personal Reflection pages, and Creativity pages are not included in the daily lessons. They are to be used as the parent/student decide.
  - Please review the My Special Spot pages found after lesson 14 in this Notebooking Journal and make plans to include them throughout your year of studying Earth Science.
- Creation Confirmation Bookmark NJ p. xix–xxii

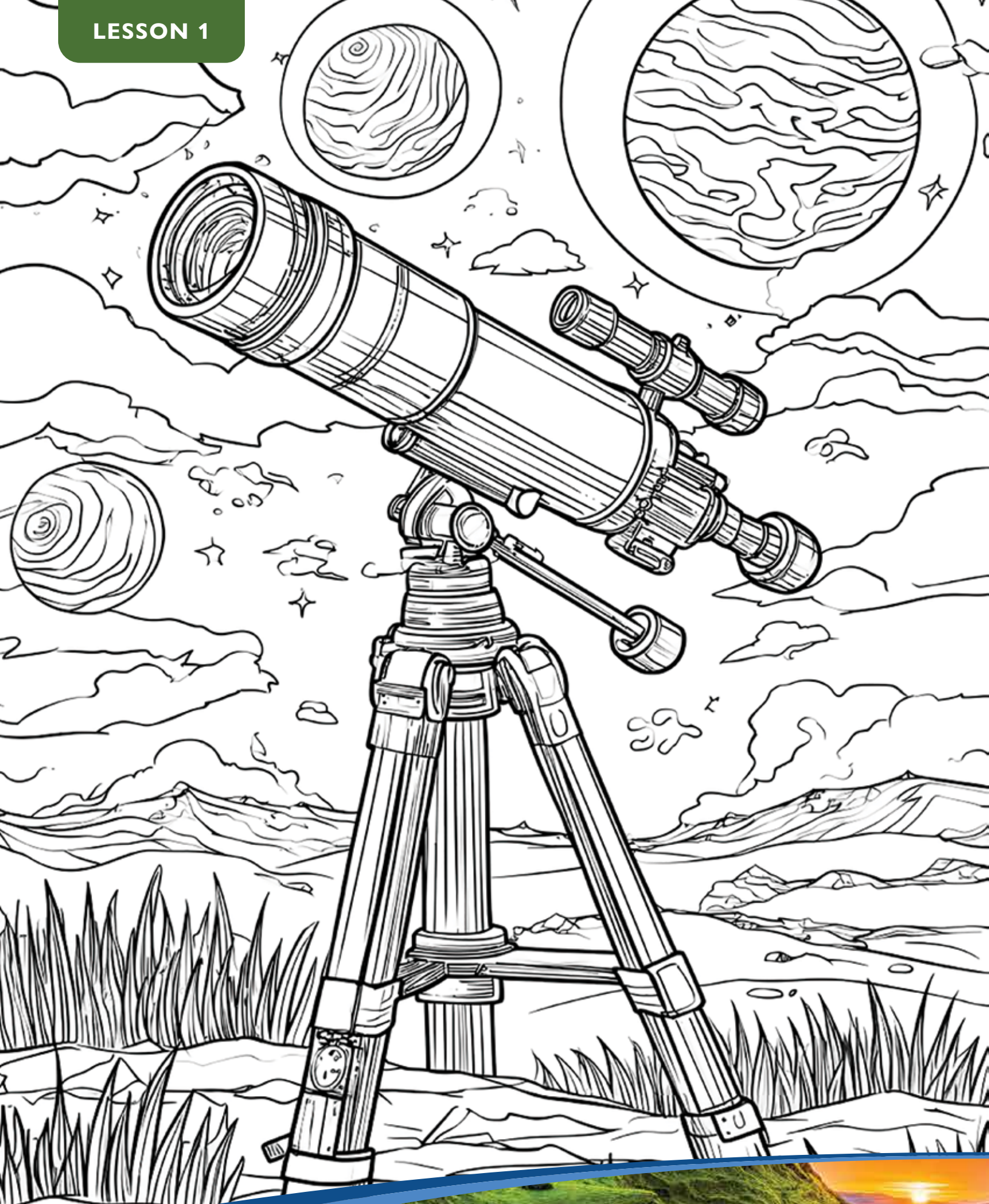
### **WEEK 1**

- LESSON 1 – THE OBSERVABLE UNIVERSE**  
Textbook p. 14–19  
Activities 1.1–1.2  
NJ p. 26–29
- LESSON 1 – THE OBSERVABLE UNIVERSE**  
Textbook p. 20–22  
Activity 1.3  
NJ p. 30–33

LESSON 1

# THE OBSERVABLE UNIVERSE





# EARTH SCIENCE

FASCINATING FACTS AND PERSONAL REFLECTIONS



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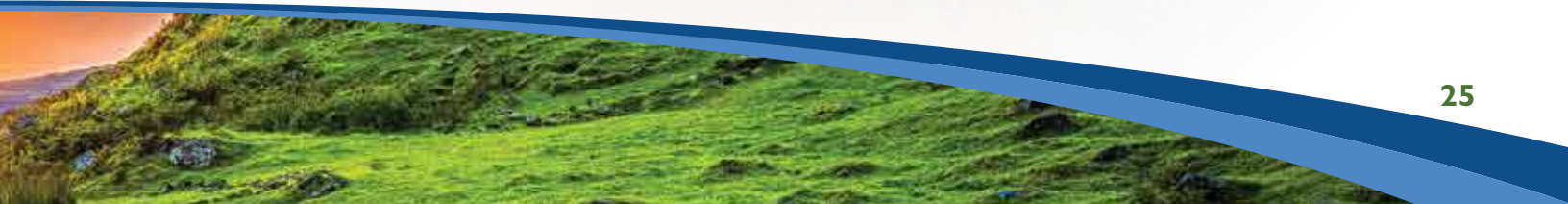
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# Activity 1.1

## 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 #2 here.

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Attach #1 here.

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2.

How is the universe expanding?

Attach #3 here.

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3.

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

**INSTRUCTIONS:**

1. Remove this page from your Notebooking Journal.
2. Cut along the dashed 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.

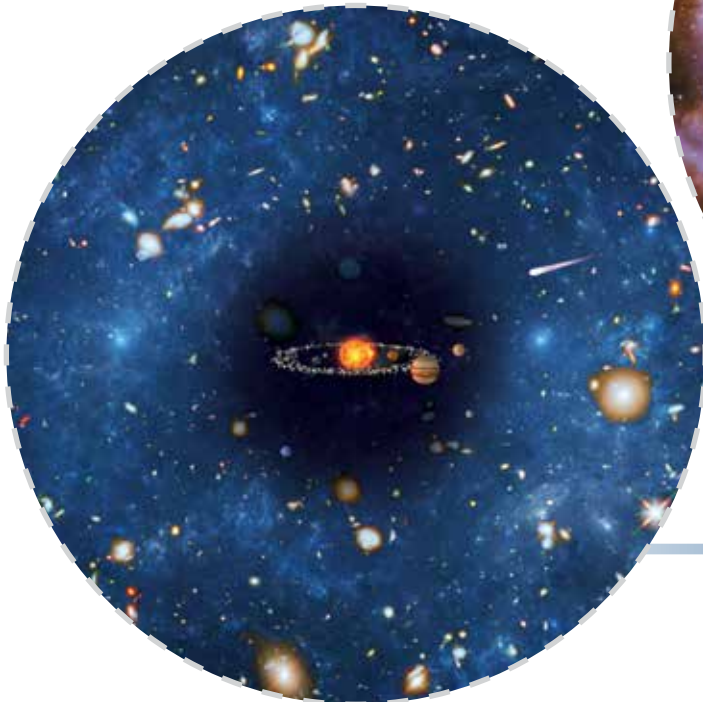
1.



2.



3.



Apply glue here.

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Apply glue here.

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Apply glue here.

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# Activity 1.2

## UNDERSTANDING FRAME OF REFERENCE

### *what I did*

Draw yourself in room 1, room 2, and room 3.



### *what I learned*

Are you ever the true center of everything?

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What does your frame of reference have to do with your concept of the center of the universe?

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# Activity 1.3

## CREATE A GALAXY MOBILE

### what I did

Label each type of galaxy.



Elliptical galaxy image by NASA, ESA, and the Hubble Heritage (STScI/AURA)-ESA/Hubble Collaboration; Acknowledgment: M. West (ESO, Chile), Spiral Galaxy by NASA, ESA, Benne Holwerda (University of Louisville), Irregular galaxy by NASA, ESA, and the Hubble Heritage (STScI/AURA)-ESA/Hubble Collaboration; Acknowledgment: R. O'Connell (University of Virginia) and the WFC3 Scientific Oversight Committee

### what I learned

There could be as many as \_\_\_\_\_ galaxies in the universe.

The galaxy where we live is called the

\_\_\_\_\_ galaxy.

It is a(n)

Elliptical/Spiral/Irregular galaxy.

(circle one)



EARTH



MILKY WAY GALAXY



OBSERVABLE UNIVERSE

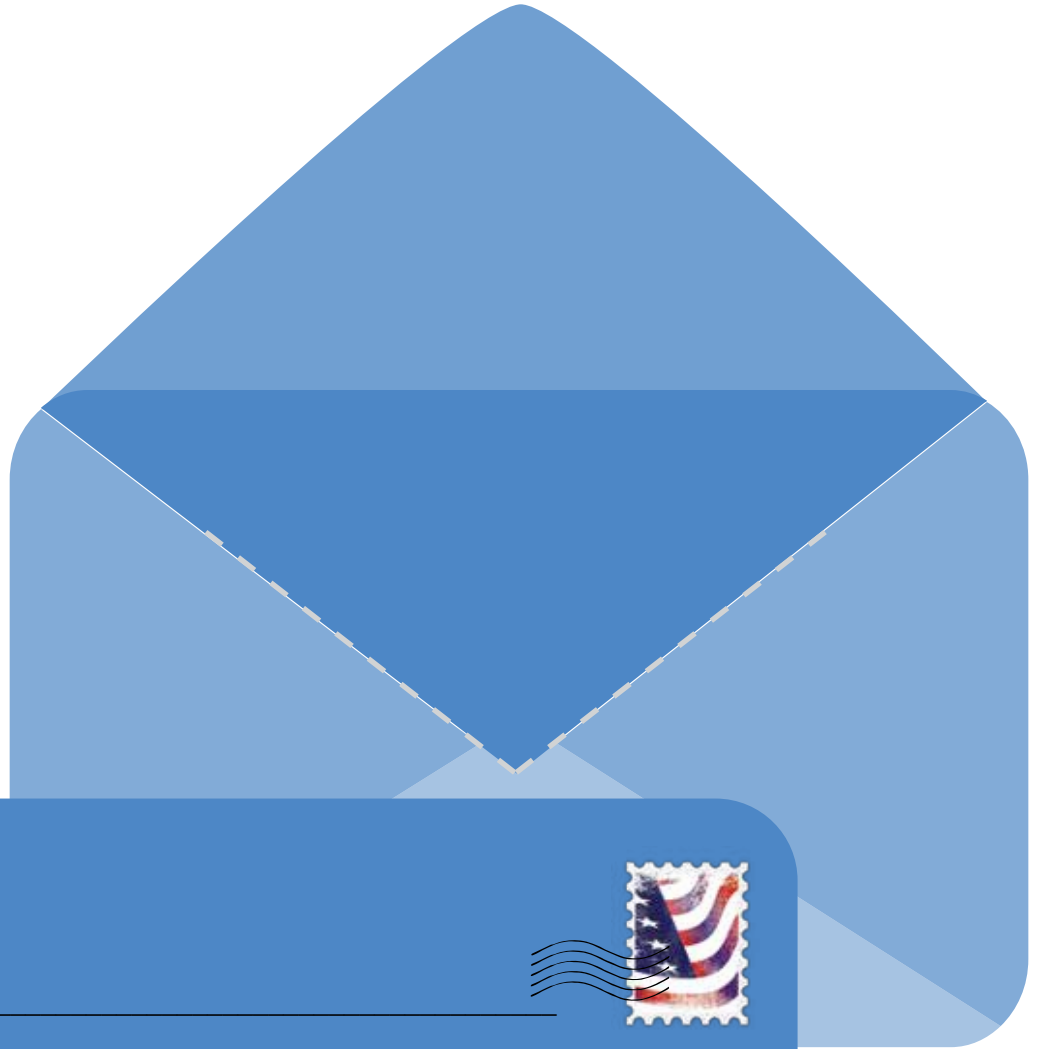
**INSTRUCTIONS:**

1. Remove this page from your Notebooking Journal.
2. Cut along the dashed lines.
3. Fold along the bottom yellow fold line with the Milky Way Galaxy image touching the Observable Universe image.
4. Fold along the top yellow fold line with the Earth visible.
5. Cut slot along dashed 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.

Milky Way Galaxy and observable universe stars by NASA/JPL-Caltech



# *my cosmic* **ADDRESS**



\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Planet Earth  
Milky Way Galaxy  
Observable Universe

THOUGHTS ON MY PLACE IN THE UNIVERSE

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# *my thoughts* MINIBOOK

**INSTRUCTIONS:**

1. Remove this page from your Notebooking Journal.
2. Cut along the dashed lines.
3. Apply glue on the back where indicated.
4. Attach to your journal page where indicated on page 37 and write your thoughts on what you believe is beyond what we can see.



Apply glue here.





# Vocabulary

## LIFT THE FLAP

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

# Vocabulary

## LIFT THE FLAP

**INSTRUCTIONS:**

1. Remove this page from your Notebooking Journal.
2. Cut along the dashed 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.

**Irregular  
galaxy**

**Spiral  
galaxy**

**Galaxy**

**Cosmos/  
Universe**

**Observable  
Universe**

**Elliptical  
galaxy**

**Milky Way**

**Astronomer**

**Astronomy**

**Solar  
System**





# WHAT DO YOU REMEMBER?

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

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

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Can you name the 3 types of galaxies we discussed?

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Do we know of any other planet that has life?

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What was your favorite part of this lesson?

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