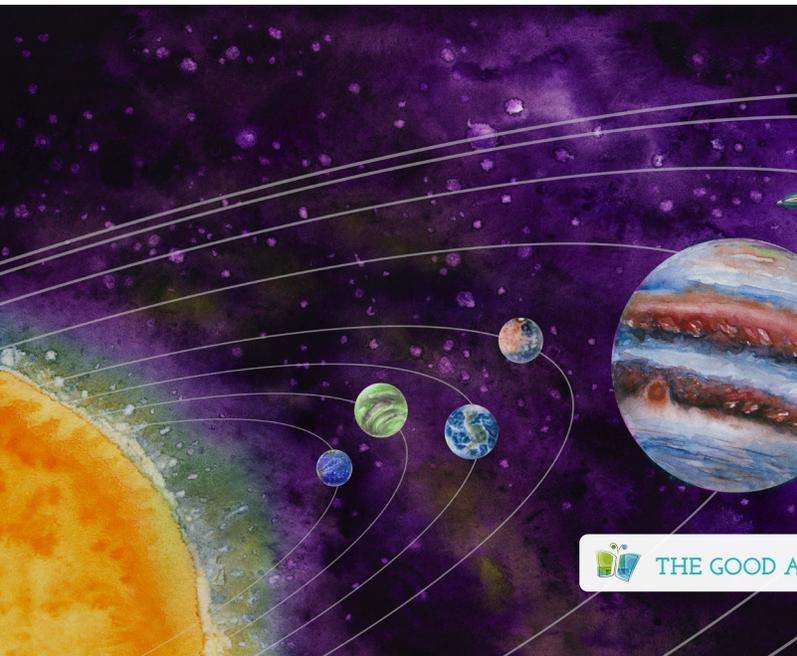
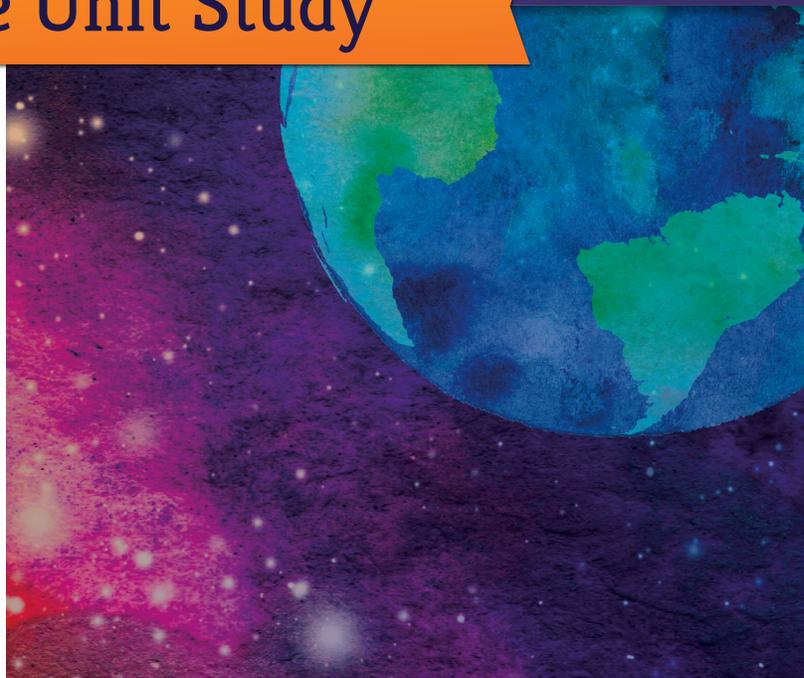


# SPACE SCIENCE

K - 8 Science Unit Study



# SPACE SCIENCE

CREATED BY THE GOOD AND THE BEAUTIFUL TEAM

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# UNIT INFORMATION



## Science Journal

All The Good and the Beautiful science units include activities for a science journal. For each child, prepare a 1–2-in. 3-ring binder to function as his or her science journal. Tabbed divider pages can be used to separate the different units. Also, have wide-ruled paper and blank white paper on hand for journal activities. All completed journal activities are to be kept in the science binder. If desired, have the child create a cover and insert it under the clear cover of the binder.



## Science Wall

All science units include vocabulary words to be placed on your science wall, which is a wall or three-fold presentation board in your learning area to which you can attach the vocabulary words and other images. **Cut out the vocabulary word cards at the beginning of the unit.** The course will indicate when to place them on the wall.



## Lesson Preparation

All science units include easy-to-follow lesson preparation directions at the beginning of each lesson.



## Lesson Mini Books

Some lessons in this unit incorporate science mini books. If you bought the PDF download only, print the pages single-sided. To assemble the mini books, cut them in half along the dotted lines, stack the pages together with the page numbers in the correct order, and staple twice along the left side.



## Video Recordings

Go to [goodandbeautiful.com/sciencevideos](http://goodandbeautiful.com/sciencevideos) and scroll down to the *Space Science* section to see videos that are integrated with the course.



## Activities and Experiments

Many of The Good and the Beautiful science lessons involve hands-on activities. The *Space Science* unit features activities that involve potentially messy and/or harmful materials.

**An adult should always closely supervise children as they participate in the activities to ensure they are following all necessary safety procedures.**

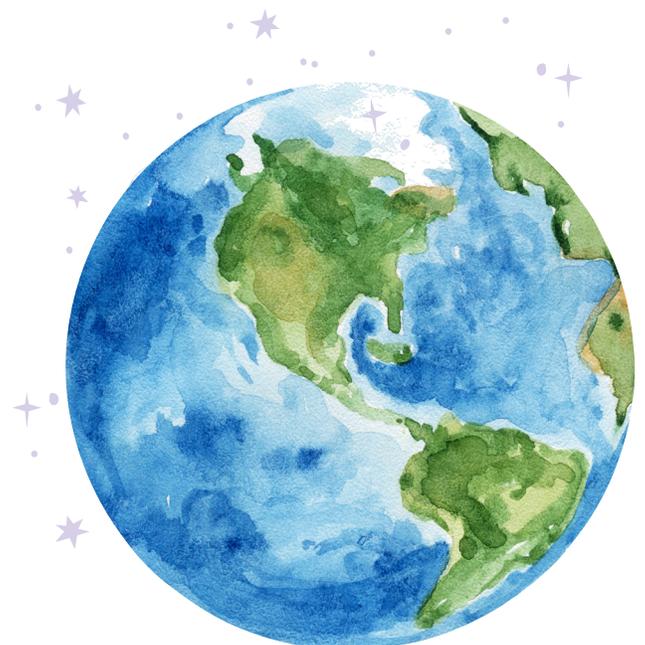


## Older Children and Younger Children

Some lessons include extra content that is more applicable for older children (grades 5–8). Parents or teachers may choose to skip this content if instructing only younger children.

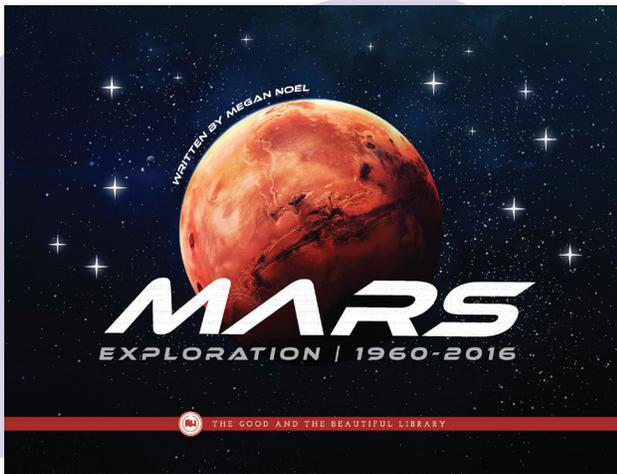
## Worldview

The unit takes a general Christian worldview that supports Creationism. The unit does not attempt to define how long it took God to make items in the universe, thus allowing for use by both those who believe in a young earth theory and those who believe in an old earth theory. If parents want to get into more detail on dates and time periods of the universe, they can include the doctrines specific to their own beliefs.



# READ-ALOUD BOOK PACK

The two books below are optional read-aloud books that complement this unit. These books can be purchased as a book pack by going to [goodandbeautiful.com/science](http://goodandbeautiful.com/science) and clicking on the *Space Science* unit link.



***Mars Exploration: 1960–2016***  
by Megan Noel



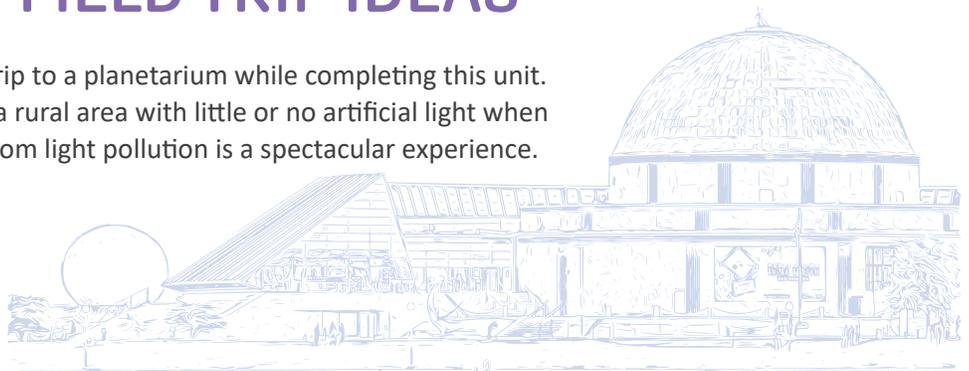
***The Story of Mae Jemison***  
by Amy Drorbaugh

## CORRELATED BOOKS

The Good and the Beautiful Library has several books that correlate well with the *Space Science* unit. It can be a wonderful experience for children to read books on their levels related to the subjects they are learning in science. The library includes both fiction and nonfiction books that are organized according to reading level. Find these correlated books by going to [goodandbeautiful.com/science](http://goodandbeautiful.com/science) and clicking on the *Space Science* science unit product page.

## FIELD TRIP IDEAS

If possible, consider taking a field trip to a planetarium while completing this unit. Also, consider taking a field trip to a rural area with little or no artificial light when it is dark. Seeing the night sky far from light pollution is a spectacular experience.



# GRADES 7–8 LESSON EXTENSIONS

## How the Extensions Work

Each lesson has an optional lesson extension for children in grades 7–8. Complete the lesson with all the children, and then have the older children complete the self-directed lesson extension. These extensions are generally located at the end of the lesson, though some are combined on a page, and you will need to turn back to them.

## Answer Key

The answer key for the lesson extensions can be found by going to [goodandbeautiful.com/science](http://goodandbeautiful.com/science) and clicking on the *Space Science* unit link.

## Flexibility

The amount of time it will take to complete each lesson extension will vary for each child. The average time is about 10–15 minutes per extension. Parents/teachers and children may choose to omit parts of the lesson extension if desired. Encourage the children to stretch their capabilities, but also reduce work if needed.

## Science Journal

The extension pages are nonconsumable. The children will do their work on separate sheets of paper and insert them into their science journal binders along with any science journal pages done during the lessons.

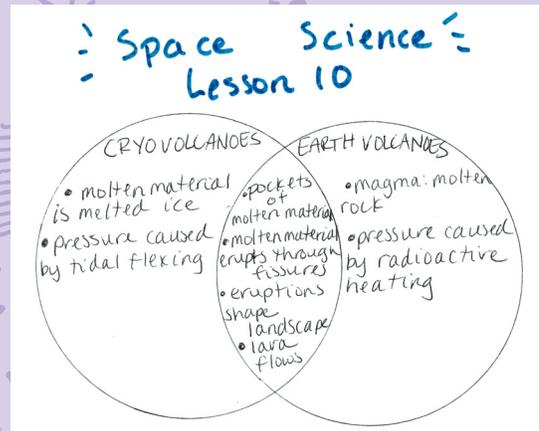
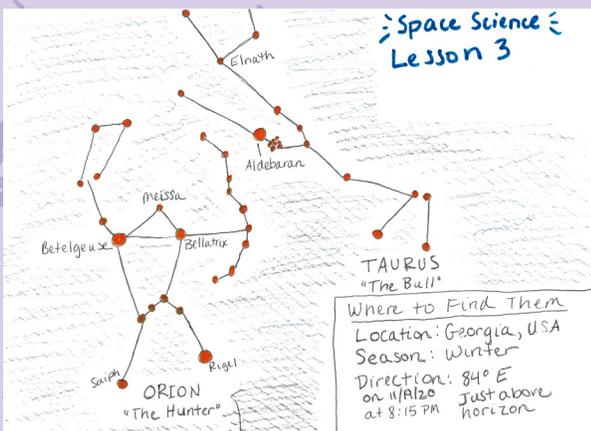
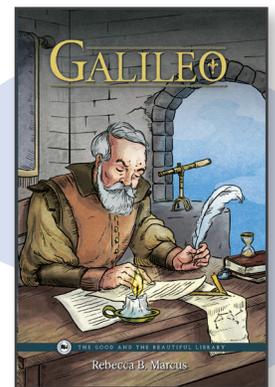
Children are encouraged to take ownership of their science journals and put forth effort to make the journals visually appealing. The journals will be something the children can treasure. The children should use color and illustrations where possible. Have the children view the sample pages below.

## Taking Notes

Some of the grades 7–8 lesson extensions have the children summarize the material they have read. Teach the children to look for key information and summarize the most important points. Students can also add notes with their thoughts and the facts that are most interesting to them.

## Optional Grades 7–8 Reading Book

We recommend *Galileo* by Rebecca B. Marcus as extra reading for students in grades 7–8. This book can be purchased by going to [goodandbeautiful.com/science](http://goodandbeautiful.com/science) and clicking on the *Space Science* unit link.



# SUPPLIES NEEDED

You will need the following supplies for activities. There are no experiments in this unit.

## Lesson 1

- MILKY WAY® bar for each child (optional)
- Standard dice

## Lesson 2

- 1 piece of chalk
- Stopwatch or timer
- 1 roll of toilet paper (optional)
- 9 small objects such as pebbles (optional)
- 1 medium object (tennis ball-sized rock) (optional)

## Lesson 3

- 8 marshmallows for each child (regular- or mini-sized) or substitute small balls of play dough
- 7 toothpicks for each child
- 1 empty paper towel tube for each child (or 2 toilet paper tubes taped together) (optional)
- 1 piece of black tissue paper for each child (optional)
- 1 safety pin or pushpin (optional)
- Black or dark blue paint
- Paintbrush (optional)
- 1 rubber band for each child (optional)
- Small star stickers (optional)

## Lesson 4

- 1 foam or paper cup for each child
- 1 blank sheet of paper for each child
- 1 pencil for each child
- 1 sheet of cardstock or construction paper for each child

## Lesson 5

- None

## Lesson 6

- 2 c Kinetic Sand® or 2 balls of play dough (same color)
- Small pebbles or rocks
- A round metal cake pan or pie tin

## Lesson 7

- 8 OREO® cookies or generic brand chocolate cookies with white cream filling for each child (or substitute black and white play dough) (optional)

## Lesson 8

- A pillow (any size)
- Basketball (extension)
- Tennis ball (extension)
- Lamp (extension)

## Lesson 9

- None

## Lesson 10

- ½ c milk (any kind)
- Red and yellow food coloring
- Dish soap
- Small bowl

## Lesson 11

- 64 dried beans (any kind)
- Red, blue, and green food coloring
- 2 c shaving cream (foam, not gel)
- 1 c white glue

## Lesson 12

- Plastic sheet protector for each child (optional)
- Dry-erase marker for each child (optional)
- An orange or other similar-sized piece of fruit or small ball

## Lesson 13

- Medium or large ball (basketballs or soccer balls work best)
- 90–150 cm (35–59 in) of rope
- Plastic grocery bag with handles
- 1 small coin or pebble

## Lessons 14 & 15

- None