Family Literacy First

Activity Book

Module 8: Astronaut Dreams

Welcome to *Family Literacy First*, a program created to bring together parents and children to have fun while learning as a family. Developed by ABC Life Literacy Canada with the understanding that parents are a child's first and most important teacher, each Module takes the entire family on an exciting journey to learning.

FamilyLiteracyFirst.ca

ABC LifeLiteracyCanada

Story

Astronaut Dreams

"I can lift you into the air without even touching you," Farah said.

Aida's big sister was always saying she could do things that seemed impossible.

"You don't believe me? That I can lift you up without touching you?"

"Prove it," Aida said.

"I will," Farah answered.

Farah sat Aida on one end of the seesaw.

"Hang on!" she said.

And then Farah climbed on the other end.

Aida flew up into the air.

She felt like a shooting star!

Up and down, up and down, up and down, Aida went on the seesaw.

Aida always wanted to go into space. She pretended she was an astronaut.

5, 4, 3, 2, 1. Blast off!

She blasted through the five layers of Earth's atmosphere.

She blasted by the moon.

She blasted by Mars.

She blasted out of our solar system and through the Milky Way.

Finally Farah stopped and Aida returned to solid ground.

“I wish I could be an astronaut,” Aida said sadly.

“You can be!”

“But I’m a girl.”

“Girls can be astronauts,” Farah told her.

“Prove it,” Aida said.

“Julie Payette is an astronaut. She spent 25 days in space. She went to the Space Station. Not once, but twice. And she lives in Canada, too.”

“Oh,” said Aida, and then she smiled.

Farah’s name meant joy in Arabic. It was a good name for Farah.

Aida’s name meant the one who returns.

Aida is the perfect name for me, Aida thought.

Someday she would be an astronaut. She would go into space and come back again.

Just like Julie Payette.

Glossary *(Definitions of Story Words)*

Astronaut: : A woman or man whose job is to work in space.

Atmosphere: The layers of gases that surround a planet.

Mars: The fourth planet from the sun, and next to our planet, Earth.

Milky Way: A big group of stars and their planets. Our sun and planet are part of the Milky Way.

Seesaw: Playground equipment made out of a long board. When one end of the board goes up, the other end goes down. A seesaw is also called a teeter totter.

Space Station: A place where astronauts live and work. The Space Station orbits the Earth. Orbit means to go around or circle something.

Elements of a Story

Elements of a Story: The pieces of a story that come together to make it complete. Story elements include character, setting and plot.

Character: The people or animals in the story.

Conflict: The problem in the story that needs to be addressed or fixed.

Plot: What happens in the story.

Setting: Where and when the story takes place.

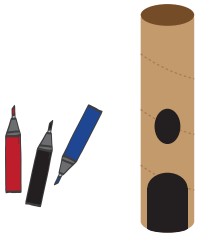
Theme: A story's main idea.

Blast Off!

Make a rocket ship out of cardboard

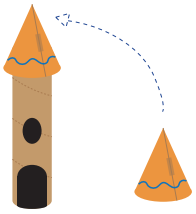
Step 1

Use the paper towel roll as the body of the rocket ship. Colour and decorate it any way you want. Here are some ideas: Draw windows, a door and a flag of your country on it.



Step 2

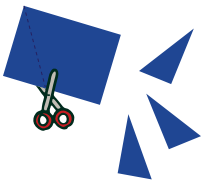
Colour and decorate the cone.
Tape the cone to the top of the paper towel roll.

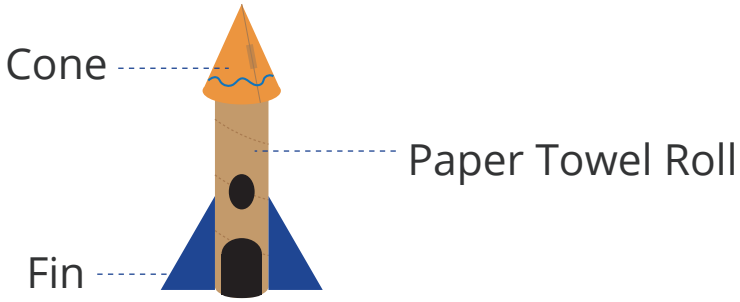


Step 3

Cut out 2 or 3 fins from the cardboard. Tape them to the side of the rocket ship.

Make sure the fins line up with the bottom of the paper roll so your rocket ship can stand up.





Rocket Ship Geometry

Question: What shape is a paper towel roll?

Answer: It's a cylinder.

What other shapes do you see in the paper towel roll?

What You'll Need:

Paper towel roll

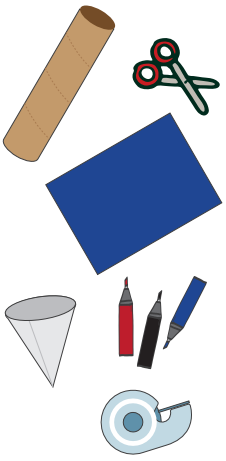
A paper cup in the shape of a cone (or make your own cone out of paper — see how on the next page.)

A thin piece of cardboard

Markers or crayons for drawing

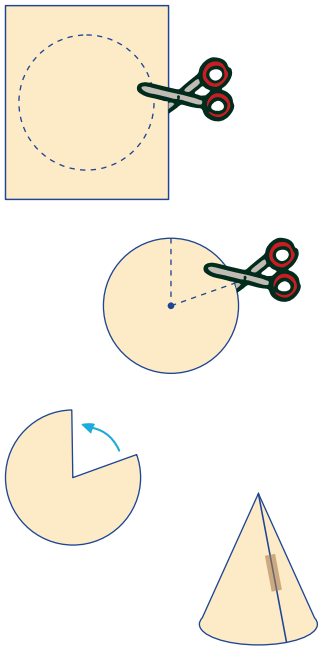
Tape

Children's safety scissors



Try This

If you don't have a paper cup in the shape of a cone for the top of your rocket ship make one out of paper.



1. Cut out a circle from a piece of paper.
2. Put a dot in the centre of the circle.
3. Cut a piece (in the shape of a slice of pie) from the side of the circle to the dot.
4. Now make a cone shape. Here's how: Join the two sides where you've cut out the piece. Tape them together.

Let's Play

Riddle: What cone is good to eat?

Answer: An ice cream cone.

Circle the cone part of the ice cream treat.

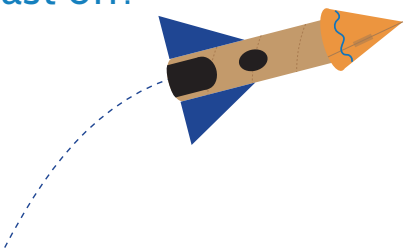
Countdown

Can you count backwards from 10? Try it!

After you reach one, launch your rocket ship!

Can you count backwards from 20? 50? 100?

10, 9, 8, 7, 6, 5, 4, 3, 2, 1
Blast off!



Take It Further

Learn more about astronaut Julie Payette. Visit the Canadian Space Agency website: http://www.asc-csa.gc.ca/eng/astronauts/biopayette.asp

Download colouring sheets for children about space and space exploration from rom National Aeronautics and Space Administration (NASA): http://www.nasa.gov/exploration/systems/sls/outreach/books.html

Watch a real countdown and launch of a rocket ship. Check out NASA videos on www.YouTube.com

Space Alien Comic Strip

Let's pretend a space ship lands in a park near where you live. The door opens, and out walks a family of space aliens and their space pet. They are friendly and have travelled many light years through space to visit Earth.

What To Do

Make a comic strip of your **first encounter** or first meeting with the space aliens.

How To Make the Comic Strip

Step 1

The boxes where you draw the pictures are called the **panels.**

1	2
Draw the space ship landing in the park in Panel 1.	Draw yourself greeting the space alien family and space pet in Panel 2.

Step 2

Take the space family on a tour of your neighbourhood. This is the first time they have visited the planet Earth, and you are the first Earthling they have seen. What would you show or tell them? Make another comic strip.

Here are some ideas to put in the panels.

- Your house and family
- Your pet
- Your favourite things to do
- Your favourite food
- Your friends
- Your school

3

4

Step 3

It is now time for the space family to go home. Make one last comic. Draw you and the space family saying goodbye.

What would you give the space family to remember their time on Earth? What might they give you? What message would you ask them to tell others on their home planet?

Draw the pictures for your comic. In the last panel, show the space ship blasting off into space.

5

6

More Fun Things to Do

Create a travel brochure or advertisement for space aliens to encourage them to visit the planet Earth. What are the attractions? Why should they come?

How might human beings communicate with space aliens if a meeting ever happened? With pictures? Music? Math? Dance? Art? Sound waves? Sign language? What way would you choose to communicate with them?

Take It Further

Scientists have sent a message into space to make contact with extraterrestrial life. Extraterrestrial means not from the planet Earth. Find out more about the **Arecibo Message** here: http://www.kidzsearch.com/wiki/Arecibo_message

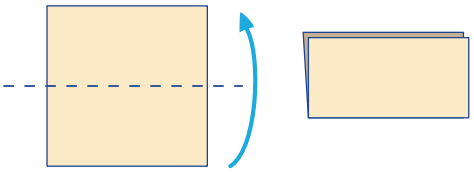
To The Stars

Make a folded star out of paper.

What To Do

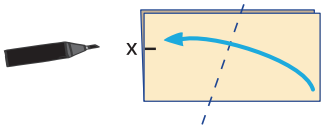
Step 1

Fold the paper in half.



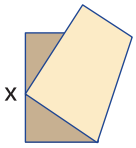
Step 2

Mark a small X about a third of the way down the left side of the paper from the top.



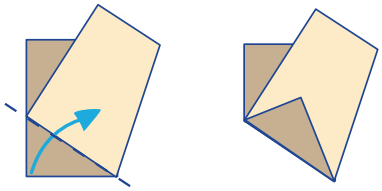
Step 3

Make a fold by taking the right bottom corner to the X.



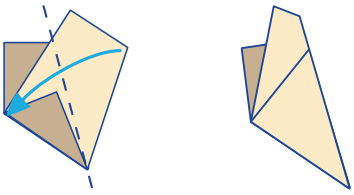
Step 4

Take the bottom left corner and fold it over the right edge.



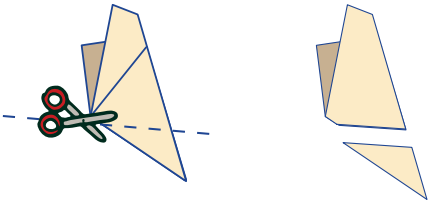
Step 5

Take the top right corner and fold it to the left edge.



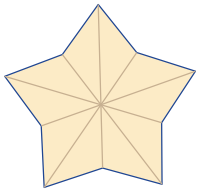
Step 6

Cut the bottom. Make a diagonal cut from left to right.



Step 7

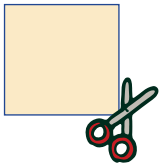
Open up the bottom part. That's your star!



What You'll Need:

A square piece of paper. A square means all four sides of the paper are the same length.

Children's safety scissors.



Take it Further:

Is the sun a star?

Yes. The sun is a star. It looks different from the other stars in the sky because it is so much closer to us.

Is the moon a star?

No. The moon is made mainly of rock. Stars are made of very hot gas.

Hanging Out

Use your folded stars to make a mobile to hang in your house.

What To Do

Step 1

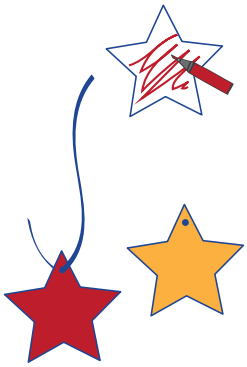
Fold and decorate stars, or cut out star shapes. Here is a pattern of two stars for you to trace and cut out.

Step 2

Colour or decorate your stars.

Step 3

Cut or punch a small hole at the top of each star. Tie a piece of string (or ribbon or thread) to each star through the hole. Make the strings different lengths.



Step 4

Tie the other end of the string to the hanger so your stars hang down. Hang your star mobile from a hook.

What You'll Need:

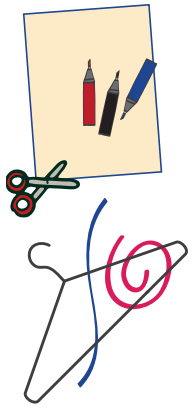
A hanger

Paper to make folded stars or star cut-outs

String, ribbon or thread

Children's safety scissors

Crayons or markers to colour or decorate your stars.



Take it Further:

Is a comet a star?

No. A comet is a big space ball made mainly of ice and rock. Stars are made of very hot gas.

A comet's tail is made of gas and dust.

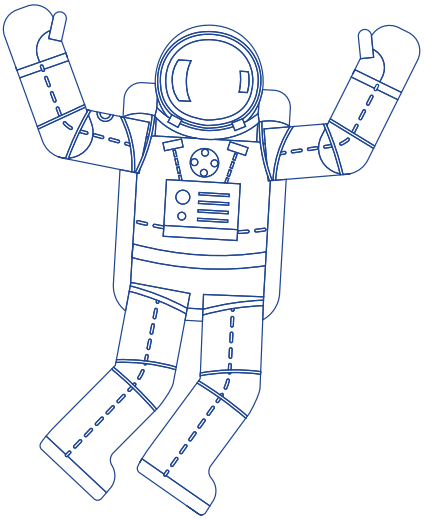
More Mobile Ideas

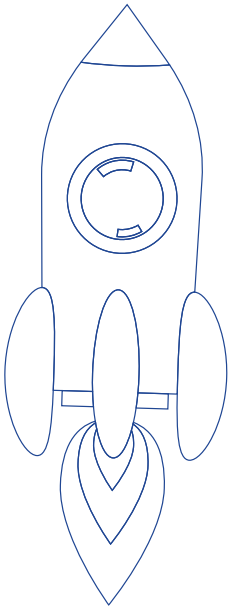
What else is in space?

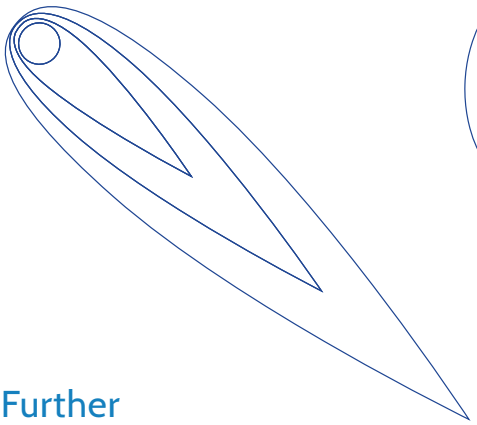
Draw, cut out, and add these things to your star mobile.

Here are some ideas:

- Earth
- moon
- comet
- astronaut
- rocket ship







Take It Further

Looking for more information on space? Check out the Canadian Space Agency website to learn more: http://www.asc-csa.gc.ca/eng

Try other kinds of paper-folding making stars, or even rocket ships and space ships. Search online for step-by-step instructions and ideas.

Take it Further:

Is a planet a star?

No. Some planets are made mainly of rock. Some planets are made mainly of gases. Some planets have lots of water.

All planets circle or orbit a star. Planet Earth circles the Sun.

Milky Way Experiment

Science is a big part of space exploration. It is a big part of understanding space.

Astronauts are scientists. They do science experiments to learn more about space.

Have you ever done a science experiment? Let's do one now!

Words You Need To Know First

Galaxy: A group of stars (and gas and dust) and their solar system.

Milky Way: The name of our galaxy. Our sun and 200 billion other stars are part of the Milky Way. That's a lot of stars!

Experiment: A way to study and learn about things. A scientist asks a question, and then sets up a test to watch or observe what happens.

You can learn about science by doing experiments. Follow the steps of an experiment and watch what happens. What you see are called your observations.

What You'll Need:

Milk

Dinner plate

Food colouring —3 or 4 different colours get the best effect!

Cotton swab

Dish soap

Small plate or bowl

Our Experiment

Step 1

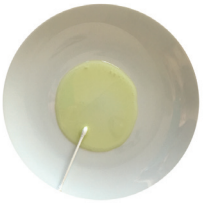
Get a dinner plate and slowly pour some milk to cover the bottom of the plate. You don't need to use a lot of milk.

Step 2

Add one or two drops of each colour of food colouring to the milk. Try not to let the drops touch.

Step 3

In the small plate or bowl, add the dish soap and dip the end of the cotton swab in the dish soap.



Do all experiments with an adult to help you, and to make sure the experiment is safe.

Step 4

Dip the end of the swab that has the dish soap on it into the middle of the plate of milk.

What do you see? What happens?

Step 5

Write down your observations. That's one way to record what happens.

Another way to record what you see is to draw a picture or take a photo.

Draw inside the circle what you saw happen during the experiment.

If you have a camera, take a photo!

What I saw:

_____

_____

_____

_____

More About the Milky Way

The Milky Way is a spiral galaxy. It spins or swirls.

The experiment gives you a bit of an idea of what a galaxy looks like.

Our galaxy is called the Milky Way because from Earth, the stars look like a milky or cloudy trail in the sky.

Take It Further

Try other experiments at home. Ask questions about how things work, or what happens around you in everyday life. Together, make a list of questions. Help children to develop a natural curiosity about the world.

Use the questions to set up simple and safe experiments to do together. For example, why does an ice cube melt? Will it melt faster in a bowl of warm water or a bowl of cold water? Will it melt faster indoors or outside in the snow? Create an experiment. Find out!