







QUESTIONS TO CONSIDER WHILE READING SCIENCE FICTION

Setting

- Do you think that the author accurately describes scientific principles? Why or why not?
- How can the setting of this text be compared to our world and time?

Characters

- Explain the characters' involvement in the plot and storyline.
- How are the characters important to the action of the text?
- Are there any types of characters in the story who are not found in other literary genres?

Plot

- Does the plot focus on a particular area of science or scientific principle? Explain.
- Do the characters participate in a documented or controversial area of science? Explain.
- What is the conflict in the story?
 Do you think it is real or fictional?
 Provide examples to illustrate your choice.

Summary

- Did you learn something about science concepts by reading this text? Explain.
- Did this text help you gain an understanding of the present and future? Explain.

Source: ReadWriteThink.org

SCIENCE FICTION?

Science Fiction is the literature of imagination and change. A science fiction story may be set on another planet; thousands of years in the future; in a universe with different physical laws; within a society with more, less or different races or genders; or in a world similar to our own but with a different past.

Science fiction author Brian W. Aldiss once called science fiction "a mirror to the present," which, set up 50 years into the future, serves to illuminate what seems like chaos from our vantage point in the present.

Setting a story in an unfamiliar environment allows authors to explore the potential consequences of political, social, technological and ecological change; of issues such as war, terrorism, climate change, pandemics and overpopulation; and the possible effects of these on individuals and society.

Chris McKitterick, director of the Gunn Center for the Study of Science Fiction at the University of Kansas, writes: "Science fiction is the literature of the human species encountering change, whether it arrives via scientific discoveries, technological innovations, natural events or societal shifts.

"Science fiction provides an approach to understanding the universe we live in."

Why is science fiction important?

Of course, science fiction can be used to illustrate various aspects of science, technology, engineering and math. As scientist and science fiction author Gregory Benford notes, "Illuminating physical law through science fictional thought experiments can awaken students' inventive, playful side."

However, science fiction also can be used to illuminate and examine history, philosophy, religion and morality; to improve literacy and critical thinking skills; and, perhaps most importantly, to examine the consequences of scientific and technological development on our society.

In computing, a virtual space in which new or untested software can be run securely without impacting existing systems is called a "sandbox."

In the same way, science fiction is a literary sandbox in which authors and readers can explore many possible futures "without," as astronomer and educator Martin Griffiths notes, "having to experience the horrors of the reality."

As the pace of social and technological change continues to accelerate, the sandbox quality of science fiction will only increase in importance and relevance. In an interview in The Atlantic magazine, MIT researcher Sophia Brueckner bemoans Silicon Valley's "frenzied culture of building and launching projects as quickly as possible without considering their social impact." Reading science fiction is "like an ethics class for inventors," she says, and engineers and designers should think more like science fiction authors by reflecting on the potential consequences of their work before building it.

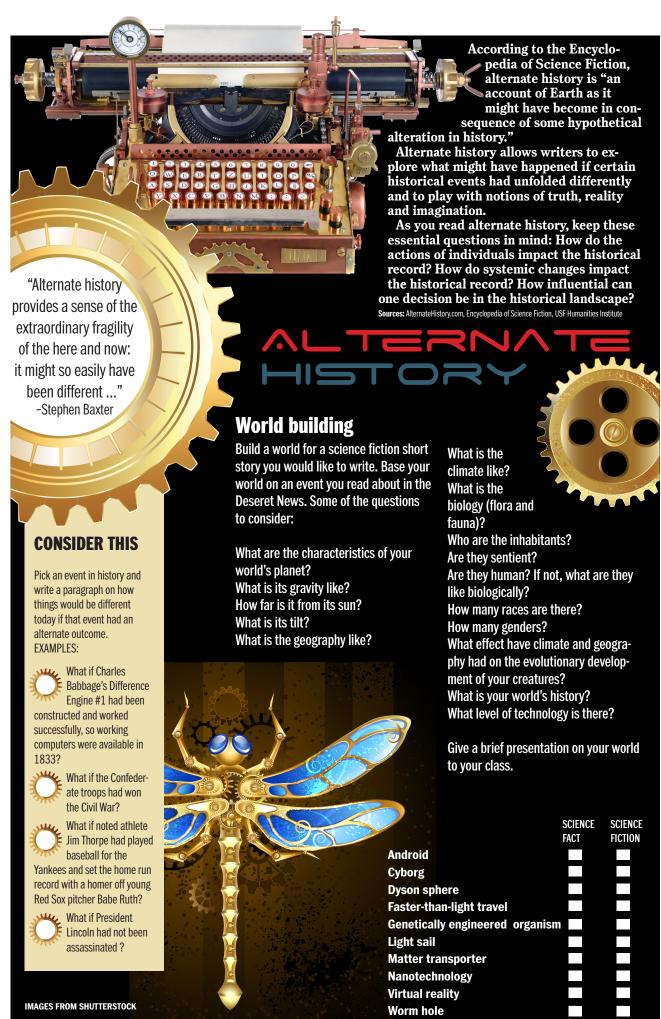
Sources: The Independent Gunn Center for the Study of Science Fiction

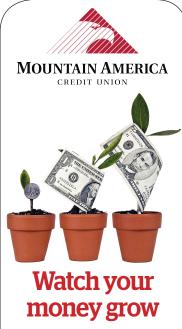
gregorybenford.com, davidbrin.com, LabLit.com, The Atlantic

SCIENCE FICTION SUBGENRES

- There are many
- subgenres within
- the world of science
- fiction. Below is a
- list of a few of the popular subgenres:
 - Alien invasion
 - Alternate History
 - Biopunk
 - Cyberpunk
 - Dystopian
 - Lost worlds
 - Military
 - Parallel worlds
 - Robot fiction
 - Sci-fi comedy
 - Sci-fi horror
 - Social science
 - Space western
 - Steampunk
 - Time travel
 - Zombie fiction







Did you know the money you earn can make more money? When you put money into a savings account, it's called investing. The financial institution then pays you to use this money to provide loans to other people.

How does your money grow in a savings account?

The first time you invest, you are paid a dividend on the amount deposited. Dividend and interest are essentially the same thing — earnings you receive by allowing others to use your money.

Compound interest, then, is the dividends you receive from the money in your account and the money you've earned in interest. The higher the dividend rate, the more money you will earn. As you develop a regular habit of saving, you will be surprised at how quickly things add up.

Want to see how quickly your money can grow?

Say you decide to deposit \$5 every week into your savings account with an interest rate of .5 percent.

\$5 x 52 weeks = \$260 In three years, you'll have \$787.83. If you increase your weekly deposits to \$7, in three years, you'll have \$1,102.96.

If you consistently put money into your savings account — and don't take it out — you'll soon have enough to pay for something really special.





As you have learned from reading this supplement, twisting history and the future are common elements of science fiction writing, but altering the present can be fun, too. With a partner, read through the articles in this week's Deseret News, choose 10 articles and alter them just a bit to turn them from news to science fiction. On a piece of paper, briefly summarize each article. Then write a paragraph showing an alternate view. In order to create an alternate view, you will need to change some factual

LEARNING WITH

THE NEWS

Pretend you are living 200 years from now. What has happened to the world because of pollution? Write a news story telling about this future world.

Using the newspaper, collect ads for products and services that were not available 20 or 30 years ago. Discuss the scientific advancements that have made these new products and services available to the public. Think about what services will be needed in the future and imagine a product that will service that need. Create a newspaper ad to advertise your product.

Find articles in your newspaper that discuss water and/or air pollution. Discuss the causes and possible remedies. Write a science fiction story telling how life could be in another 100 years if the pollution problem isn't solved soon.

SOURCE: Tampa Bay Times, www.okpress.com

Jargon

"Jargon" is defined as "special words or expressions that are used by a particular profession or group and are difficult for others to understand." For example, the fields of law, medicine and sports are full of jargon.

When you read science fiction, you often come up against scientific, technical or science-fictional jargon. As the Encyclopedia of Science Fiction notes, certain concepts have become so common in science fiction that they tend to be used without explanation by genre authors. This can be challenging for readers new to the genre!

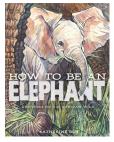
Most new vocabulary words are learned from context clues or good old-fashioned dictionary work. While you read this publication, be sure to highlight or circle words you don't know. Try to figure out the words' meanings by looking for clues in the sentences around them. Write down your best guess, and then look up the words in a dictionary. As a group activity, make a list of the words your classmates identified and see which ones stumped the class. Next, use these words for a news scavenger hunt and see if you can find these words in the Deseret News. The group that finds the most words wins the game.

> Science fiction has contributed hundreds of words to the English language that have now passed into everyday use. Terms such as robotics, zero-g, computer virus and cyberspace were all coined by science fiction writers.

For a fascinating look at the vocabulary that has come from science fiction, visit the Oxford English Dictionary's Science Fiction Citations page at jessesword.com/sf.



This month the librarians at Salt Lake City Public Library have chosen the theme: "Books with beautiful artwork." Check out their picks and start reading.



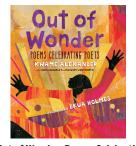
"How to be an Elephant," by Katherine Roy



"Snow White." by Matt Phelan



"Grand Canyon," by Jason Chin



"Out of Wonder: Poems Celebrating Poets," by Kwame Alexander, Chris Corderely, and Marjorie Wentworth; illustrated by Ekua Holmes



"Wishtree," by Katherine Applegate; illustrated by Charles Santoso



If you would like to receive FREE copies of Connect 1.2.3 for your classroom, order on the Web at deseretnews.com/nie.

Connect 1•2•3 is a FREE monthly educational section available only to schools through the Deseret News. Published by the Deseret News Newspapers in Education.

Connect 1 • 2 • 3 **NIE Deseret News** 55 N. 300 West Salt Lake City, UT 84101 801-237-2172

NIE director: Cindy Richards

Art director: Heather Tuttle SPONSORED BY





Constitution Day

Why do we have a Constitution?



In 1776, the 13 colonies declared independence from England. They won the Revolutionary War and became the United States of America.

In the summer of 1787, 55 people from 12 of the 13 states met in Philadelphia to write a new plan of government for the young nation. This meeting was called the Constitutional Convention. The delegates' goal was to keep the spirit of 1776 alive and make sure that future generations would live in liberty.

The delegates had trouble agreeing on things at first. What powers should the national government have? How long should the president serve? How should states be represented in Congress? Weeks went by, and they could not see eye to eye.

Then, what George Washington called "little short of a miracle" happened. The Convention came up with a plan that was acceptable to just about all of the delegates. On Sept. 17, 1787, the Constitution of the United States of America was completed and signed by 39 of the delegates. (Some had left as the Convention went on, but three others refused to sign the Constitution in protest.)

The Constitution was sent to the states for approval (called ratification.) Once nine states had ratified it in 1789, the Constitution became the law of the land for those states. The rest of the states soon followed. The Constitution has been in force longer than any written constitution in the world today.





Save for your dreams

Most teenagers dream of owning a car, traveling or starting a business. Many plan on attending college. All those dreams require cash. So, how can you make those dreams become reality?

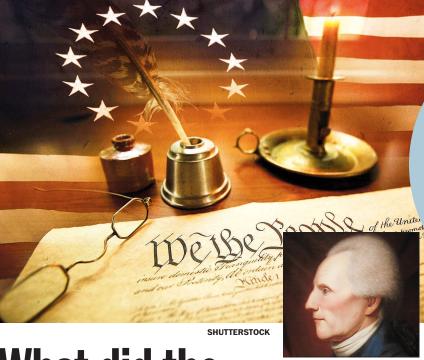
Think: \$1.67 a day. If you're 13 years old and save \$50 every month until you're 18, you'll save \$3,000. You might think, "I can't save that much each month!" But, if you take it in smaller amounts, the goal is achievable.

Save your allowance, birthday or holiday money. Do odd jobs during your free time. Skip the cafeteria and pack your own lunch for school. If \$50 a month is too much to manage, set a smaller goal that you can increase later.

Keep these tips in mind to reach your goal:

- Keep your eye on the prize. Stay motivated with a picture that illustrates your dream.
- Drop your spare coins into a special container. Coins can add up quickly.
- Control impulse spending. Before a purchase, ask yourself if it's more urgent or important than your dream.
- Leave your money at home. Carry only the cash you'll need for the day.
- **Open a savings account.** Earn interest while you save.

You can make your savings goal happen if you break it into smaller amounts. Just stick to your plan and save a \$1.67 each day.



What did the founders want?

The American colonists were on another continent now. But they believed they still had the "rights of Englishmen." Long before the Revolution, the colonists had made their rights a part of colonial law.

Then they saw British officials search their homes and business at any time, for any reason. They watched their friends thrown in jail, sometimes without a jury trial, and with sentences that were way too long for the crime. Their weapons were taken away. Newspapers were restricted. It became too much. The colonists protested and petitioned the British government. The conflict reached a breaking point in 1776. Americans realized they needed self-government and issued a Declaration of Independence.

After the Revolution, the states united under the Articles of Confederation. This system of government did not work out for the new nation. The Founders decided to write a new constitution. They called a convention for the summer of 1787. They wanted the United States Constitution to be a national system for self-government that protected rights.

© The Bill of Rights Institute

Founders match game

Here are pictures of some of the Founders. See if you can match each quote with the Founder who said it, and write the name on the line provided. You can check your answers at the bottom of the page.

Politicians in cartoons

about the person?

Go to the editorial page of the Deseret News and find a political cartoon depicting someone in government. How does the car-

toonist represent the person's features? What do you think the cartoonist is trying to say

1. Guard with jealous attention the public liberty. Suspect everyone who approaches that jewel.

Founder: ____

2. If men were angels, no government would be necessary.

Founder: _

3. The will of the people is the only legitimate foundation of any government.

Founder: _

4. Your love of liberty — your respect for the laws — your habits of industry — and your practice of the moral and religious obligations, are the strongest claims to national and individual happiness.

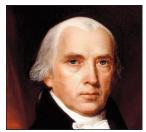
Founder:

5. It must never be forgotten that the liberties of the people are not so safe under the gracious manner of government as by the limitation of power.

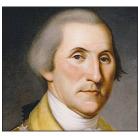
Founder: _____



Thomas Jefferson



James Madison



George Washington



Patrick Henry



Did you know?

James Madison was the only delegate to attend every session of the convention.

Answers: 1. Patrick Henry, 2. James Madison, 3. Thomas Jefferson, 4. George Washington, 5. Richard Henry Lee

DESERETNEWS

What does the Constitution say?

These quotes are all from the Constitution. Each one shows you how the Constitution reflects the following principles.



Federalism

Congress shall have the power ... To regulate commerce with foreign nations, and among the several states, and with the Indian tribes. ... (Article I)

This Constitution ... shall be the supreme law of the land; and the judges in every state shall be bound thereby, anything in the Constitution or laws of any State to the contrary not withstanding. (Article VI)



Individual rights

The citizens of each state shall be entitled to all privileges and immunities of citizens in the several states. (Article IV)

The trial of all crimes, except in cases of impeachment, shall be by jury. ... (Article III)





Popular sovereignty

The House of Representatives shall be composed of members chosen every second year by the people of the several states. ... (Article I)

No title of nobility shall be granted by the United States. ... (Article I)



Separation of powers/ checks and balances

All legislative powers herein granted shall be vested in a Congress of the United States,

which shall consist of a Senate and House of Representatives. (Article I)

Every bill which shall have passed the House of Representatives and the Senate, shall, before it become a law, be presented to the President of the United States. ... (Article I)

The executive power shall be vested in a President of the United States of America. (Article II)

The judicial power shall extend to all cases, in law and equity, arising un under this Constitution. ... (Article III)



Limited Government

The privilege of the writ of habeas corpus shall not be suspended, unless when in cases of rebellion or invasion the public safety may require it. ... No bill of attainder or ex post facto Law shall be passed. (Article I)

The powers not delegated to the United States by the Constitution, nor prohibited by it to the states, are reserved to the states respectively, or to the people. (The 10th Amendment, 1791).



Republican government

The United States shall guarantee to every state in this union a republican form of government. ...

Each state shall appoint, in such manner as the Legislature thereof may direct, a number of electors, equal to the whole number of Senators and Representatives to which the State may be entitled in the Congress. ... (Article I)



Did you know?

The Constitution has been in force longer than any other written constitution in the world today.

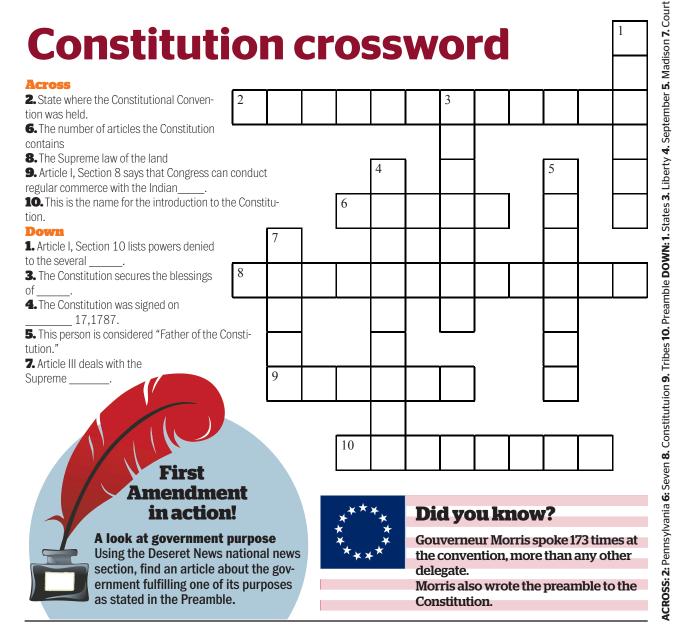


Why do we have a national government?

At the Constitutional Convention, the Committee of Style had the job of coming up with the final wording of the Constitution. A member of that committee from New York, Gouverneur Morris, wrote an introduction called the preamble. This introduction explains why the Constitution was written, and explains the purposes of government.



"We the people of the United States, in order to form a more perfect union, establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity, do ordain and establish this Constitution for the United States of America."







A BIG thank you to all our readers who particpated in our Summer Reading Program. We appreciate all the time you dedicated to staying on track with your reading goals over the summer break. The Read Today team had so much fun getting to meet so many readers and their families. This year we had more readers than ever at the ballpark! We want to thank our partners who helped make the program a success this year; The Deseret News, KSL, Seagull Book, McDonalds, the Bees and the Governor's Office. We also want to thank Mrs. Utah, Anne Forester for helping us at our events this summer. We are excited about the new school year and the adventures it brings. We're working on some exciting stuff and can't wait to tell you about it. So keep reading, let you imagination wander and exercise that brain!

Happy Reading!

The Read Today Team



If you would like to receive FREE copies of Connect 1•2•3 for your classroom, order on the Web at deseretnews.com/nie.

Connect 1•2•3 is a FREE monthly educational section available only to schools through the Deseret News. Published by the Deseret News Newspapers in Education.

Connect 1-2-3 NIE Deseret News 55 N. 300 West Salt Lake City, UT 84101 801-237-2172

NIE director: Cindy Richards Art director: Heather Tuttle







about four times Jupiter's mass.

Glowing a dark magenta, the newly discovered exoplanet GJ

504b -- illustrated here with an artist's depiction -- weighs in with

NASA'S GODDARD SPACE FLIGHT CENTER/S. WIESSINGER





Think twice before you meme

Earlier this year, a Facebook meme went around called "10 bands I've seen, and one is a lie." People then listed off 10 bands, and their friends guessed which one was the lie. The person sharing the list often included a note about the first band he or she had ever seen live. Sharing that information created a security risk, according to experts, because the first-band question is commonly used to verify a person's identity

According to an April 2017 New York Times story about the 10 bands trend, security experts warned that memes which encourage the sharing of personal details can be used to unlock accounts. Even if your Facebook account is set to private, it's possible to access.

What can you do? You can still participate in fun trends online, but be cautious, especially with activities that reveal personal information.

Here are some ways to stay safe:

- Think twice about what you share. Sharing personal information makes data about yourself accessible to the world.
- Don't share information to common security questions. The name of your first pet, the street where you grew up or your mother's maiden name should never be shared online.
- Consider making up answers to your security questions. Questions like, "The name of your high school?" could be changed to something random (but memorable) for added security.

What about planets in other places?

This definition is very much focused on our own solar system. But there are also planets in places that are not in our solar system. These planets are called exoplanets. They can be found circling around stars, just like the planets here in our own solar system. Does that mean that all planets form the same way? Are all planets made from a star's leftovers?

That depends on who you talk to. What happens if a small cloud of gas floating out in the middle of nowhere forms a sphere because of its gravity? Is that a planet, too? After all, Jupiter is a big sphere of gas. And both are just a mass of stuff that wasn't quite big enough to form a bright, fiery star.

Big planet or tiny star?

Clouds of gas that don't have enough material to form a bright star collect into spheres all the time. Most of the time these clouds form a type of star called a brown dwarf. They are pretty big compared to most planets, but they are not big enough to turn into the kind of star that makes lots of energy and gives off light.

But scientists recently discovered an even smaller gassy object in the middle of nowhere. It appears redder than most brown dwarfs, and is likely much younger than most, too. This object could have formed just like a brown dwarf

How big is the Sun?

Our Sun has a diameter

of 864.938 miles and

Earth a diameter of

7.926 miles

— from a small cloud of gas. Or maybe it was created around a star and it somehow got flung off into space.

Some scientists are calling this object a planet. Others think that it can only be a planet if it formed around a star. They think that if it just formed from a cloud of gas, then it's nothing more than a not-quite-star.

Science is full of arguments like this. That's what makes it so interesting. What do you think? Do all planets, even exoplanets, need to form around stars?

If the Sun were the size of an official league

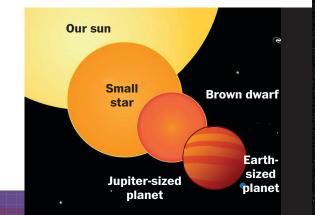
basketball, Earth would be a little dot no

more than 2.2 millimeters



SEPTEMBER 2017

This cosmic cloud, called Sharpless 2-106, is an area where stars (and planets) form.



See how our Solar System's planets would look like in

the same scale

Earth

Mercury

The lone planet

Searching the sky

For years, a group of scientists had been looking through the night sky for a special kind of murky, dim star. These stars don't emit much light, so they are pretty hard to find.

What they did find was even more unlikely. They came across a planet. There are planets zipping around many stars in our galaxy. This one was different. It was hanging out all by its lonesome – drifting aimlessly in space without a star to warm it or keep it company.

A planet without a sun?

When most people think of planets, they think of large spheres of rock (like Earth), ice (like Neptune) or gas (like Jupiter) circling around a bright, warming star. That makes sense. Planets form from the material left over from when a star is born.

But this object has everything else you might expect from a

planet. In fact, it appears to be a lot like Jupiter, only much bigger.
So what is this super-Jupiter doing way out in the middle of
nowhere? Gravitational forces might have flung it away from a
star, leaving it to fly off into space. Or perhaps this planet formed
in an entirely different and unknown way. Scientists don't know

A Big Discovery

This is an exciting find. It is the first really good evidence that planets without suns actually exist. It's also exciting because this planet is very young. It could help scientists figure out what planets like Jupiter were like when they first formed.

But there is something even more exciting about this planet. Without the blinding light of a star next to it, scientists are actually able to see this strange and faraway world with powerful telescopes. How cool is that?

"If we could travel to this giant planet, we would see a world still glowing from the heat of its formation with a color reminiscent of a dark cherry blossom, a dull magenta. Our near-infrared camera reveals that its color is much more blue than other imaged planets, which may indicate that its atmosphere has fewer clouds."

— Michael McElwain member of the discover team at NASA's Goddard Space Flight Center

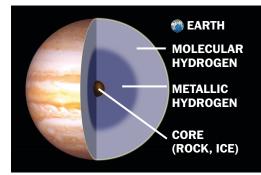
Jupiter

Giant Jupiter is one of our favorite planets here at The Space Place. For one thing, it's magnificent. At times it is so big and bright in our night sky that you might imagine it is a friendly alien space ship coming to say hello.

Photographic images of about one-quarter of Jupiter and full Earth side by side, to scale. Earth is tiny. Jupiter is our solar system's largest planet. See how tiny Earth is compared to Jupiter. The raging storm known as the "Great Red Spot" on Jupiter could swallow up the whole Earth.

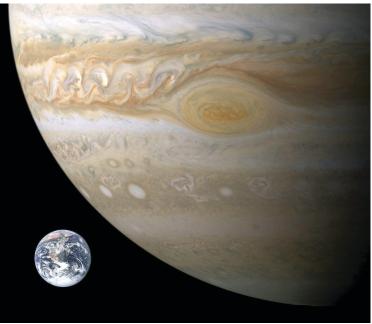
Jupiter is called a gas giant planet. It is made of mostly hydrogen and helium, the same materials as the sun. If Jupiter were bigger, could it have become our solar system's second sun? Imagine seeing two suns in the sky!

There is a lot about Jupiter we don't know. Scientists want to study Jupiter. They want to find clues to how Jupiter formed and has changed over the 4.6 billion years of our solar system's life. That will also help them to understand the formation of our solar system and other planetary systems around other stars.



What NASA thinks the inside of Jupiter looks like. Earth is shown to scale.





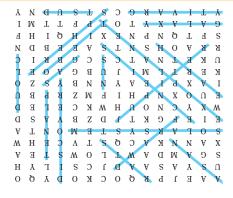
NSASA

PLANETS WORD SEARCH

GALAXY

CLOUD

DISCOVERY DUST DWARF EARTH EXOPLANET						GAS GRAVITY JUPITER NASA ORBIT				SCIENCE SOLAR SYSTEM SPHERE STAR SUN					
	A	A	E	J	P	R	Q	O	С	K	0	D	Y	Q	O
	U	S	Y	A	S	A	A	D	J	C	S	I	L	Y	Н
	S	G	A	M	D	A	W	T	L	0	W	S	T	E	A
	X	A	N	N	K	A	C	Q	S	T	V	C	E	Н	W
	S	O	L	A	R	S	Y	S	T	E	M	O	N	T	A
	Е	I	E	F	G	K	T	J	D	Z	В	V	A	S	D
	W	X	Y	C	N	0	U	Н	W	K	C	E	L	E	D
	Е	U	0	X	N	P	Н	I	F	M	Z	R	P	В	U
	I	A	X	P	I	E	A	Y	N	N	В	Y	S	Z	0
	K	E	R	T	L	M	I	J	U	В	G	A	0	E	L
	U	K	E	T	N	A	T	C	S	C	G	В	R	I	С
	R	R	A	0	Н	S	N	T	S	A	E	E	В	D	N
	S	F	T	Q	N	P	N	E	X	I	Н	Q	I	Н	F
	G	A	L	A	X	Y	T	O	T	P	F	T	T	M	I
	Y	T	I	V	A	R	G	С	S	T	S	U	D	N	Y







Deseret News



Welcome back students!

When I interviewed Governor Herbert recently, he told me that he hoped Utah could improve our student achievement. And the key to doing that, he said, is READING! At Read Today and KSL, we spent the summer talking about the importance of reading at home and planning events to make it fun. And now we want to keep that momentum.

Reading as a family is the most important thing you can do to ensure success in school. So try to find time in your busy schedules to make that happen-in the car, while mom is making dinner, whenever you can squeeze it in. Reading is the fundamental skill that boosts all learning. And we're going to be looking for schools and communities that do great things around family reading, so we can spotlight them on the news.

Make it a great year!

Deanie Wimmer



If you would like to receive FREE copies of Connect 1.2.3 for your classroom, order on the Web at deseretnews.com/nie.

Connect 1.2.3 is a FREE monthly educational section available only to schools through the Deseret News. Published by the Deseret News Newspapers in Education.

Connect 1.2.3 NIE Deseret News 55 N. 300 West Salt Lake City, UT 84101 801-237-2172

NIE director: Cindy Richards Art director: Heather Tuttle