

Catalog of the Solar System

(from *Journey Through the Universe*, a NASA MESSENGER lesson plan)

Materials

- Scissors
- Pencils
- Paper
- Crayons or markers
- Research materials
- Construction paper
- Glue

Safety Concerns: Scissors. Discuss safe and proper use of scissors.

Procedure

1. Start by making a "Gatefold Science Report."
2. Write your name in the upper right hand corner of the cover.
3. You will need to create a cover. It must contain a ***creative*** title for your catalog.
4. Using the information in your text book, write a brief explanation about how the Solar System was formed. Write it on the ***inside*** of the left-hand "gate."
5. On the inside of the right-hand "gate", write three paragraphs explaining which planet is your "favorite" and list five interesting facts about that planet.
5. You will need to research the different parts of the Solar System:

Sun

Mercury

Venus

Earth

Mars

Asteroids (including the dwarf planet Ceres)

Jupiter

Saturn

Uranus
Neptune
Plutoids (Pluto & Eris)
Comets
Meteoroids/Meteors/Meteorites

6. One page in your catalog should be dedicated to each part. Each page should contain the following:

Name
Description
Diameter
Composition
General location in the Solar System
Distance from Sun
Ranking (if planet) (largest - 1, smallest - 8, etc.)
Information about the planet's or plutoid's moon(s)
A picture (your picture *must* be hand drawn and appropriately colored)
Can a person live on the part (how much would they weigh, can they breathe the atmosphere, is it too hot or cold, etc.)
Spacecraft that have visited the planet, dwarf planet, comets, etc.

7. Using your information, create a catalog that is full of accurate information, as well as neat and creative.



A Gatefold Science Report

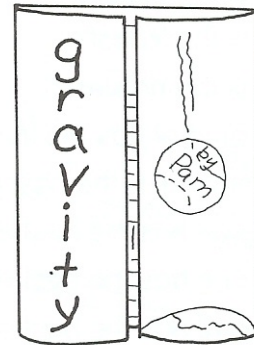
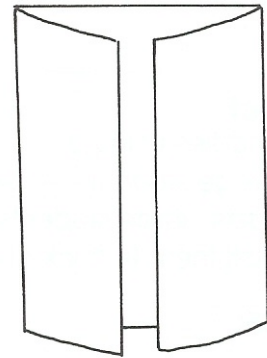
Materials

- ❖ Sheet of construction paper
- ❖ Stapler
- ❖ Pencil
- ❖ Marker, crayons, and colored pencils

Procedure

1. Illustrate the examples on the form based on your instructions.
2. Fold both ends of the construction paper into the center. This is called the gatefold.
3. Staple the report form to the inside of the folder in the center area. If you need more room, add a second sheet of paper below the first one. Paste the picture forms on the inside two flaps.
4. Create a frond cover the lists the author and title. Decorate it with a picture that illustrates the topic.

NOTE: The illustration is an example. Follow your instructions.



Catalog of the Solar System Rubric

<i>Task</i>	<i>4 Points</i>	<i>3 Points</i>	<i>2 Points</i>	<i>1 Point</i>	<i>0 Points</i>
Catalog Pages	Pages in the catalog contain more information than required.	Each page in the catalog contains all of the required information.	Each page in the catalog contains some of the required information.	Each page in the catalog is missing much of the required information.	The required information is missing from the catalog.
Catalog Facts	More facts than required are presented and are accurate.	All facts in the catalog are accurate	Most facts in the catalog are accurate and/or present.	Less than half the facts in the catalog are accurate and/or missing.	Most facts in the catalog are inaccurate and/or missing.
Appearance	The catalog is attractive, formatted correctly, well-organized, and has no errors.	The catalog has very attractive formatting and well-organized information.	The catalog has minor formatting and organization problems.	The catalog has major formatting, organization, and appearance problems.	The catalog is sloppy, formatted incorrectly, and has no organization.
Required Pictures	More than the required pictures were included.	All required pictures are present.	No more than two pictures are missing or inaccurate.	More than half of the pictures requires are missing and/or inaccurate.	The pictures are missing and/or inaccurate.

Catalog of the Solar System Research Worksheet

Sun's diameter -	Surface temperature -
Interior temperature -	Gravity - Earth weight x
Surface features -	Length of "day" -
Spacecraft that have visited the Sun	

Planet	# from the Sun
Distance from Sun	Length of "day" -
Length of "year" -	Diameter
Gravity - Earth weight x	Number of moons
Have rings?	Atmosphere
Temperature (average or range) -	Rocky or gas giant
Spacecraft that have visited the planet	

Planet	# from the Sun
Distance from Sun	Length of "day" -
Length of "year" -	Diameter
Gravity - Earth weight x	Number of moons

Have rings?	Atmosphere
Temperature (average or range) -	Rocky or gas giant
Spacecraft that have visited the planet	

Planet	# from the Sun
Distance from Sun	Length of "day" -
Length of "year" -	Diameter
Gravity - Earth weight x	Number of moons
Have rings?	Atmosphere
Temperature (average or range) -	Rocky or gas giant
Information about moon(s)	
Spacecraft that have visited the planet	

Planet	# from the Sun
Distance from Sun	Length of "day" -
Length of "year" -	Diameter
Gravity - Earth weight x	Number of moons

Have rings?	Atmosphere
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Temperature (average or range) -	Rocky or gas giant
Information about moon(s)	
Spacecraft that have visited the planet	

Dwarf Planet	Distance from Sun
Length of "day" -	Length of "year" -
Diameter	Gravity - Earth weight x
Number of moons	Have rings
Atmosphere	Temperature (average)
Rocky or gas giant	When discovered & by who
Spacecraft that will visit dwarf planet	

Asteroid Belt	Location of most asteroids
Average Distance from Sun	Diameter range (largest to smallest)
Number	Rocky, gas giant, or icy
Spacecraft that have visited the Asteroid Belt	

Planet	# from the Sun
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Distance from Sun	Length of "day" -
Length of "year" -	Diameter
Gravity - Earth weight x	Number of moons
Have rings?	Atmosphere
Temperature (average or range) -	Rocky or gas giant
Information about moon(s)	
Spacecraft that have visited the planet	

Planet	# from the Sun
Distance from Sun	Length of "day" -
Length of "year" -	Diameter
Gravity - Earth weight x	Number of moons
Have rings?	Atmosphere
Temperature (average or range) -	Rocky or gas giant
Information about moon(s)	
Spacecraft that have visited the planet	
Planet	# from the Sun
Distance from Sun	Length of "day" -

Length of "year" -	Diameter
Gravity - Earth weight x	Number of moons
Have rings?	Atmosphere
Temperature (average or range) -	Rocky or gas giant
Information about moon(s)	
Spacecraft that have visited the planet	

Planet	# from the Sun
Distance from Sun	Length of "day" -
Length of "year" -	Diameter
Gravity - Earth weight x	Number of moons
Have rings?	Atmosphere
Temperature (average or range) -	Rocky or gas giant
Information about moon(s)	
Spacecraft that have visited the planet	
Plutoid	Distance from Sun
Length of "day" -	Length of "year" -

Diameter	Gravity - Earth weight x
Number of moons	Have rings
Atmosphere	Temperature (average)
Rocky or gas giant	When discovered & by who
Spacecraft that will visit dwarf planet	

Plutoid	Distance from Sun
Length of "day" -	Length of "year" -
Diameter	Gravity - Earth weight x
Number of moons	Have rings
Atmosphere	Temperature (average)
Rocky, gas giant, or icy	When discovered & by who

Kuiper Belt Objects	Location
Distance from Sun (range - closest to farthest)	Estimated Number
Rocky, gas giant, or icy	Named after

Comets	Composition (what are they made of)
Parts of a comet	

Comets	Composition (what are they made of)
Main parts of a comet	
Spacecraft that have visited comets	

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