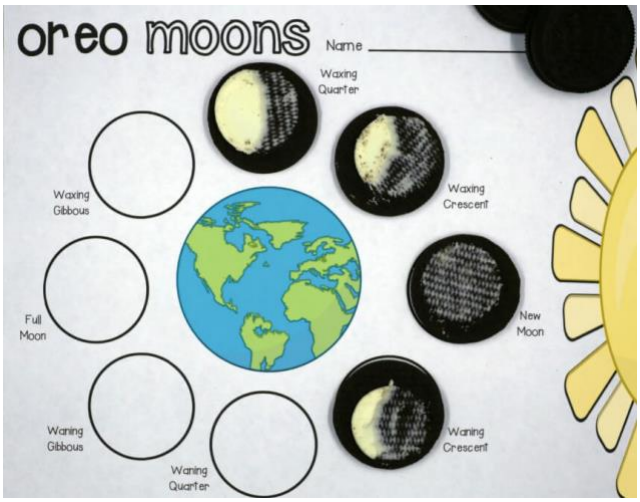
SPACE (VIRTUAL) CAMP - ACTIVITY PACK.

The Phases of the Moon

The moon orbits the Earth and the moon's position between the sun and the Earth changes. This movement changes how much of the sun's light reflects of the moon, which affects how much of the moon we see at night.

There are 8 phases of the moon. It takes the moon about a month to go through all of the phases.
Fun Fact: **Waxing** means growing and **Waning** means getting smaller



Challenge: Phases of the Moon

Can you show the 8 phases of the moon?

You could do this by either:

Use Oreo biscuits, Jaffa cakes or a different cream filled biscuit to sow the phases. For those who do not like cream filled biscuits, any ordinary round biscuit will work! See photo to the right.

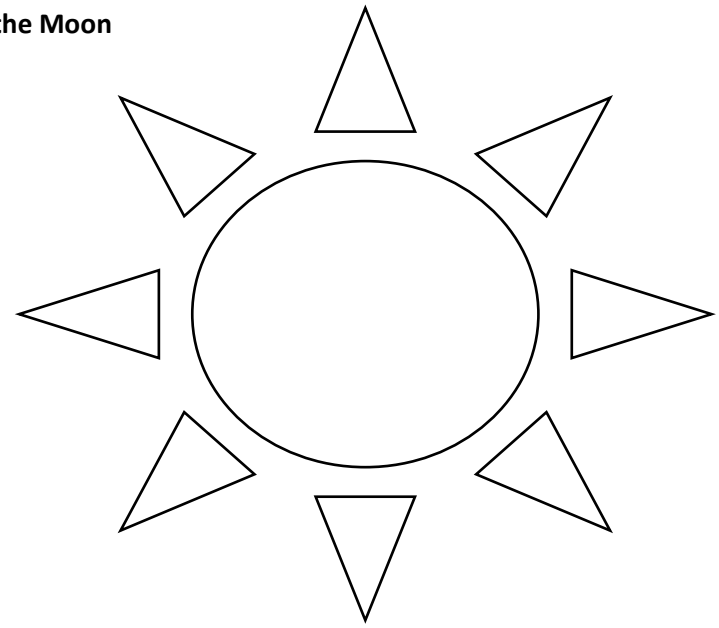
OR

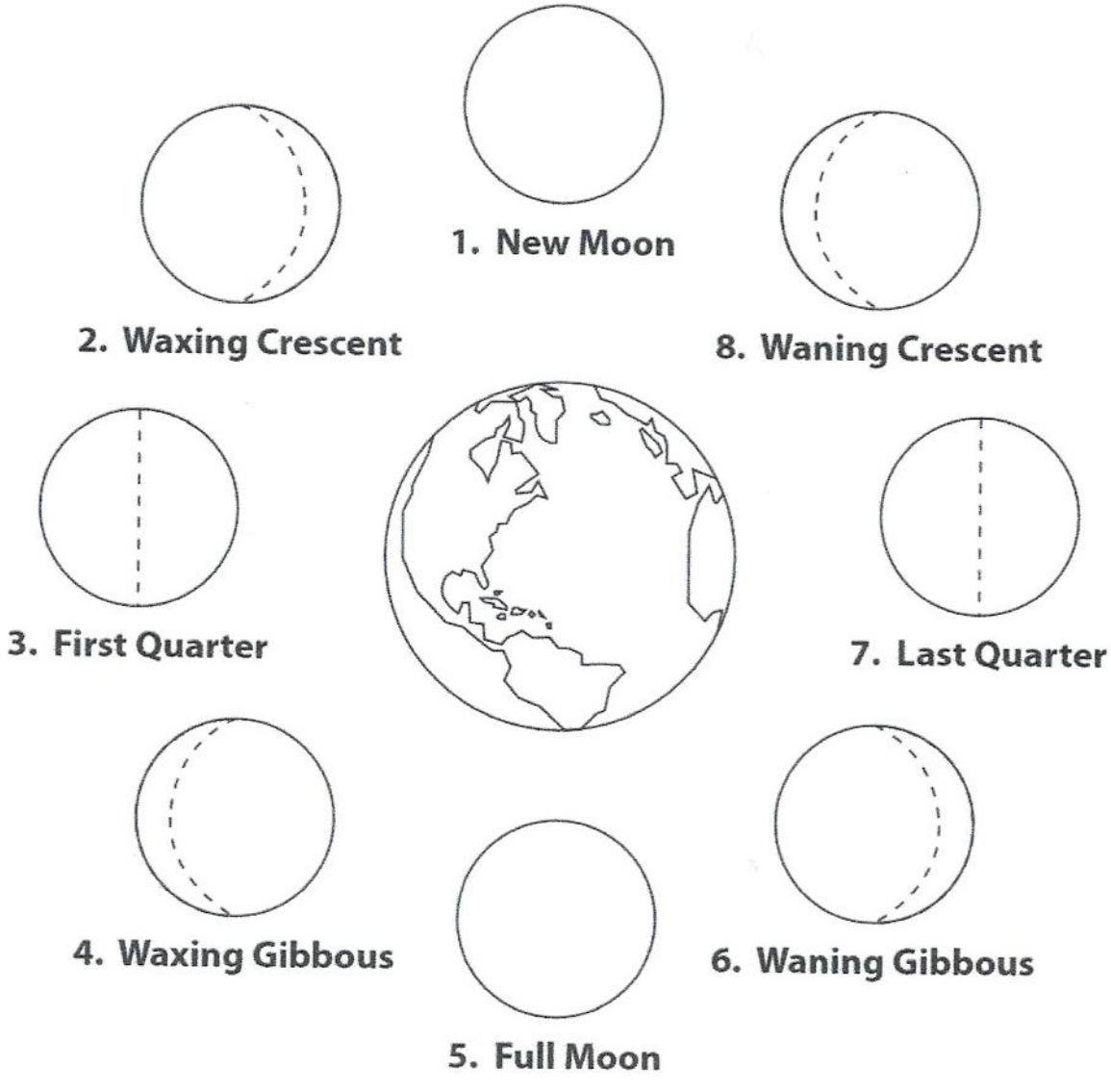
Drawing them on paper and colouring them in. There is a template to help.

Instructions for the template:

1. **New Moon -** The moon is between the Earth and sun. We can not see it at night. Shade the entire moon.
2. **Waxing Crescent -** The moon is becoming visible at night. We can only see a small piece of it, so shade everything except the crescent shape on the right.
3. **First Quarter -** The moon is a quarter of the way around the Earth. Half the moon is visible. Shade the left half.
4. **Waxing Gibbous -** The moon appears almost full. Shade all except the crescent on the right.
5. **Full Moon -** The Earth is between the moon and sun. The moon looks like its glowing. The moon does not need to be coloured.
6. **Waning Gibbous -** The moon begins shrinking. Shade in the crescent of the right.
7. **Last Quarter**
   We see half the moon again. Shade in the right side.
8. **Waning Crescent -** The moon appears a small crescent shape again. Shade all except the crescent of the left**.**

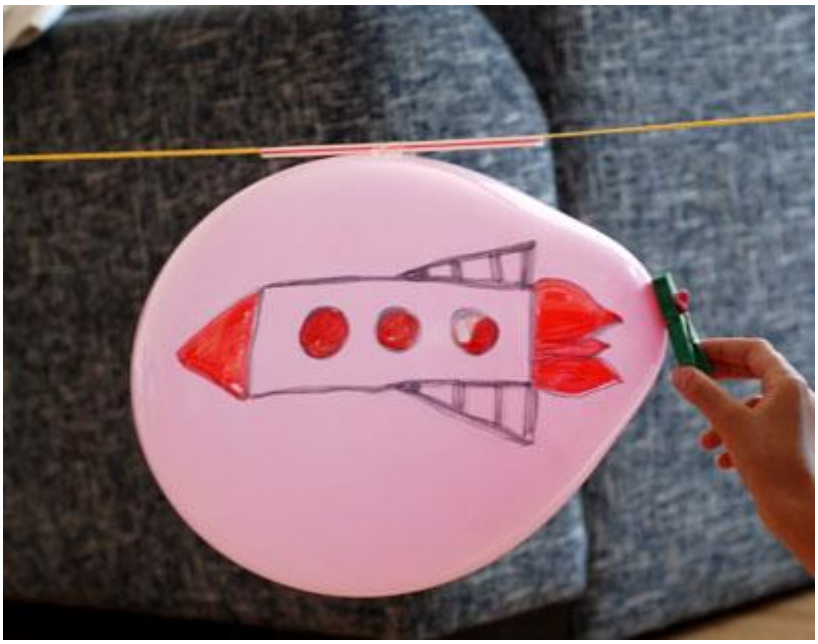
9. Phases of the Moon





Rockets

Challenge: Make a Balloon Rocket?



You will need:

- 1 balloon (round ones will work, but the longer “airship” balloons work best)
- 1 long piece of kite string (about 10-15 feet long)
- 1 plastic straw (a toilet roll tube could be used)
- Tape
- 1 clothes peg

What to do:

- Tie one end of the string to a chair, door-knob, or other support.
- Put the other end of the string through the straw.
- Pull the string tight and tie it to another support in the room or outside between trees.
- Blow up the balloon (but don’t tie it.) Pinch the end of the balloon and tape the balloon to the straw as shown above. You’re ready for launch.
- Let go and watch the rocket fly!

How does it work?
It’s all about the air…and thrust.
As the air rushes out of the balloon, it creates a forward motion called THRUST.
Thrust is a pushing force created by energy.
In the balloon experiment, our thrust comes from the energy of the balloon forcing the air out. Different sizes and shapes of balloon will create more or less thrust. In a real rocket, thrust is created by the force of burning rocket fuel as it blasts from the rockets engine – as the engines blast down, the rocket goes up!

Challenge: Junk Box Modelling – Moon Base or Rockets

Can you make a rocket or moon base out of the empty boxes, bottles and containers around your home? (make sure you ask if its ok for items to be used first)

Items you could use include: 2 litre drinks bottle, kitchen roll tube, toilet roll tube, coloured paper, colouring pens, tin foil, bottle lids and so much more….

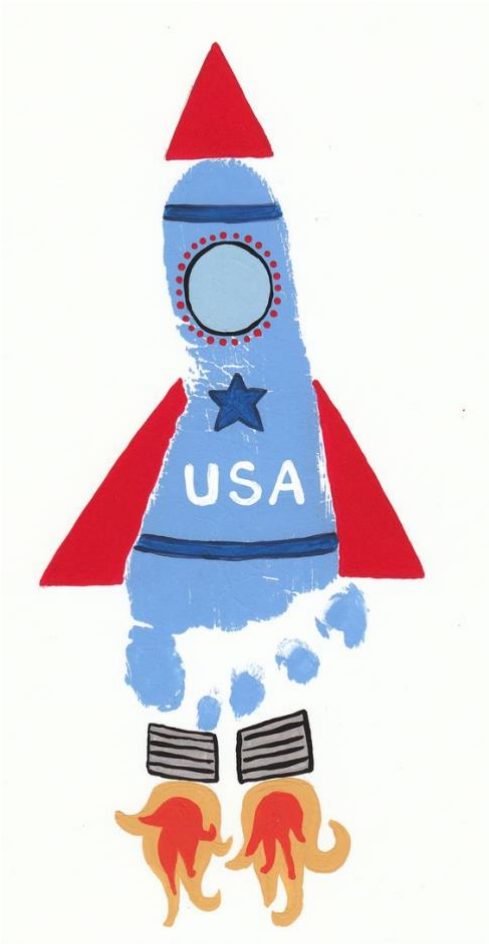
Or you could even use Lego bricks…

Challenge: Design Your Foot Rocket

Can you design a rocket based on your foot? Probably best to do the foot print outside.

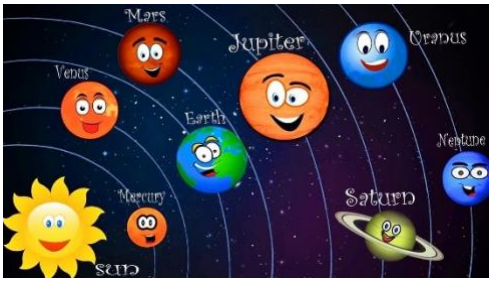
You will need:

- An adult helper for the messy part
- Coloured washable paint
- A paintbrush
- Somewhere to wash off the coloured paint (so you don't walk it through the house)
- A piece of paper larger than your foot
- Coloured pens, paper or decorations



What to do:

- Paint the bottom of your foot using a paintbrush
- Once your foot is entirely covered, place your foot on a piece of paper.
- Carefully lift your foot of the paper
- WASH THE PAINT OFF YOUR FOOT!
- Once dried, decorate your footprint to look like a rocket ship.

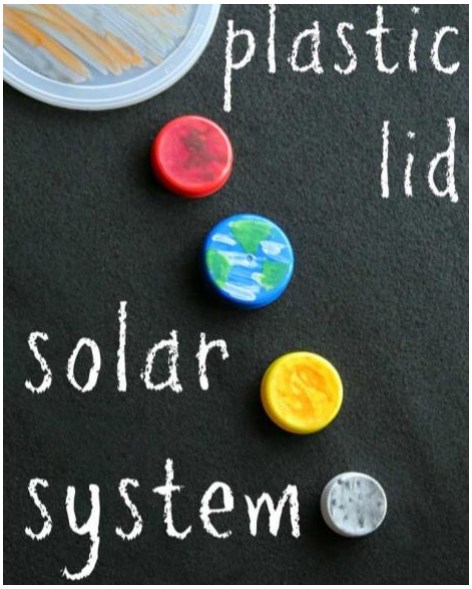


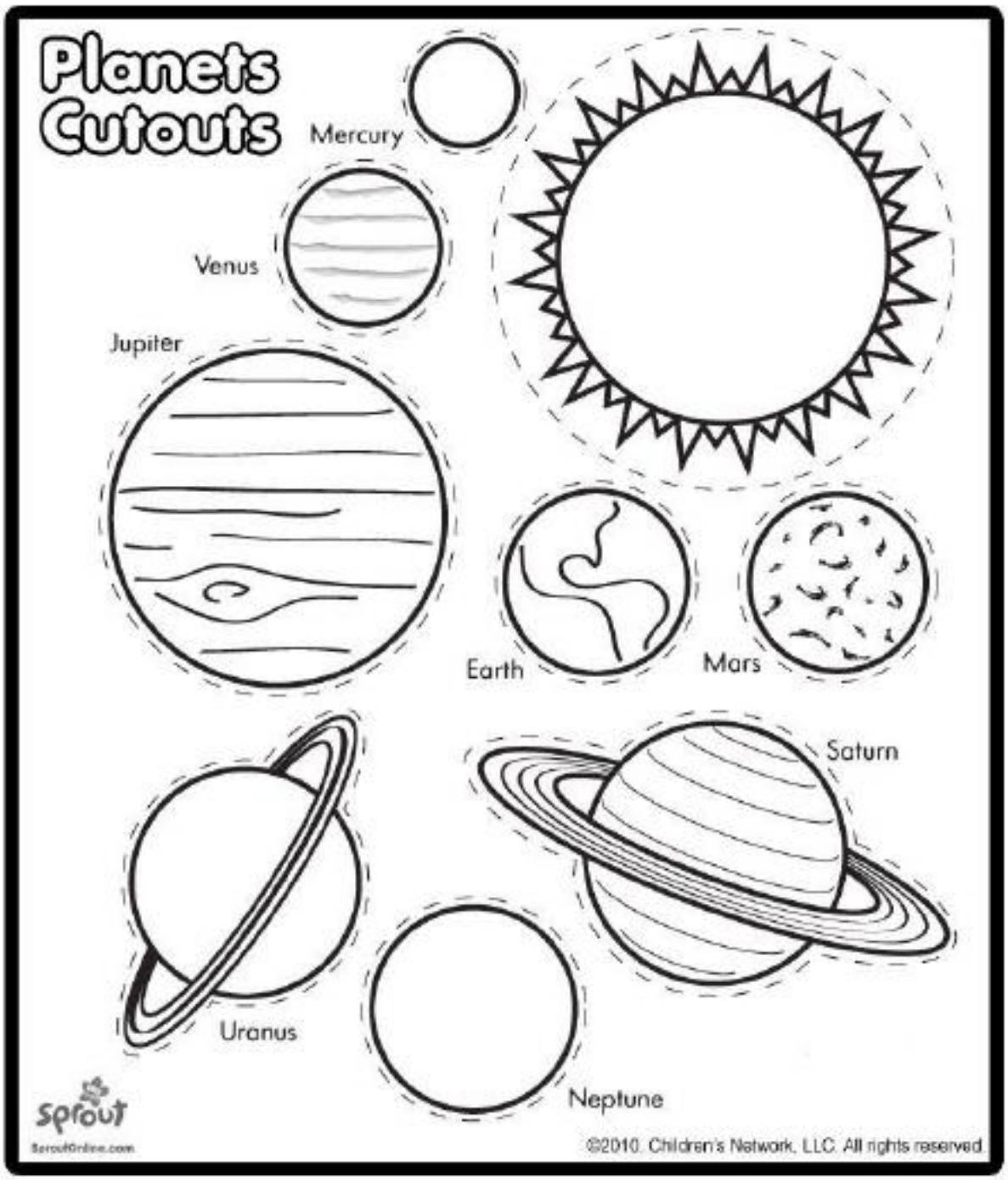
The Solar System

Challenge: Make a model Solar System

Can you make a model of our solar system?

Ideas: This could be made from a wide variety of things from around the home for example: lids off bottles or cans, paper, cardboard, wool, papier mache etc.




Planets Cutouts
Mercury
Venus
Jupiter
Earth
Mars
Saturn
Uranus
Neptune
sprout
SproutOnline.com
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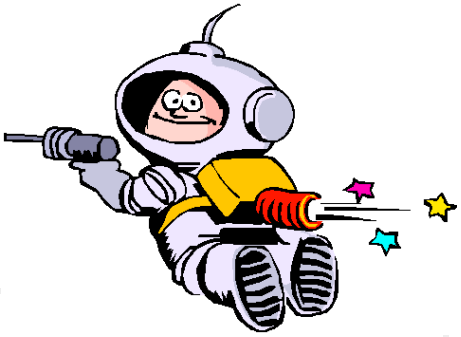
Space Quiz



1. What is the closest planet to the Sun?
2. What is the name of the 2nd biggest planet in our solar system?
3. What is the hottest planet in our solar system?
4. What planet is famous for its big red spot on it?
5. What planet is famous for the beautiful rings that surround it?
6. Can humans breathe normally in space as they can on Earth?
7. Is the sun a star or a planet?
8. Who was the first person to walk on the moon?
9. What planet is known as the red planet?
10. What is the name of the force holding us to the Earth?
11. Have human beings ever set foot on Mars?
12. What is the name of a place that uses telescopes and other scientific equipment to research space and astronomy?
13. What is the name of NASA's most famous space telescope?
14. Earth is located in which galaxy?
15. What is the name of the first satellite sent into space?
16. Ganymede is a moon of which planet?
17. What is the name of Saturn's largest moon?
18. Olympus Mons is a large volcanic mountain on which planet?
19. Does the sun orbit the Earth?
20. Is the planet Neptune bigger than Earth

Hubble Bubble

Challenge: Hubble Telescope Challenge

Can you find 10 facts out about the Hubble telescope and present those facts in an interesting way. It could be on a poster, news article, power point or in a word document.

NASA is celebrating the Hubble Space Telescope's 30 years of unlocking the beauty and mystery of space.

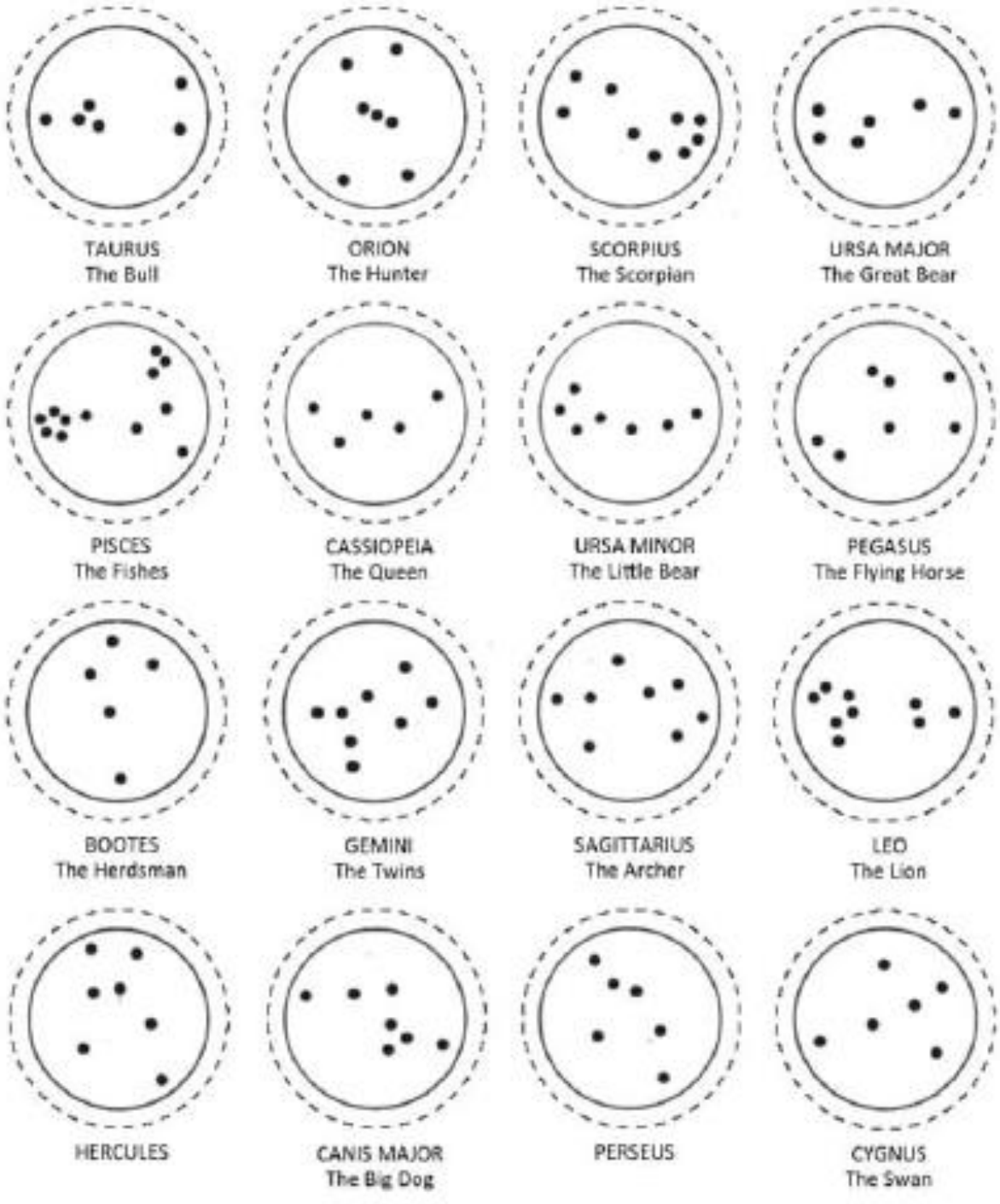
This image was taken by the Hubble telescope, why not go to the NASA website (https://www.nasa.gov/mission_pages/hubble/main/index.html) and find out some more…..

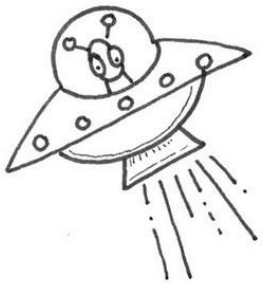
On April 24, 2020, the Hubble Space Telescope celebrates its 30th year in orbit by premiering a never-before-seen view of two beautiful nebulas named NGC 2020 and NGC 2014. Hubble's senior project scientist, Dr. Jennifer Wiseman, takes us on a tour of this stunning new image, describes the telescope's current health, and summarizes some of Hubble's contributions to astronomy during its 30-year career.
Credits: NASA's Goddard Space Flight Center

Star Constellations

Challenge: Make a Star Constellation

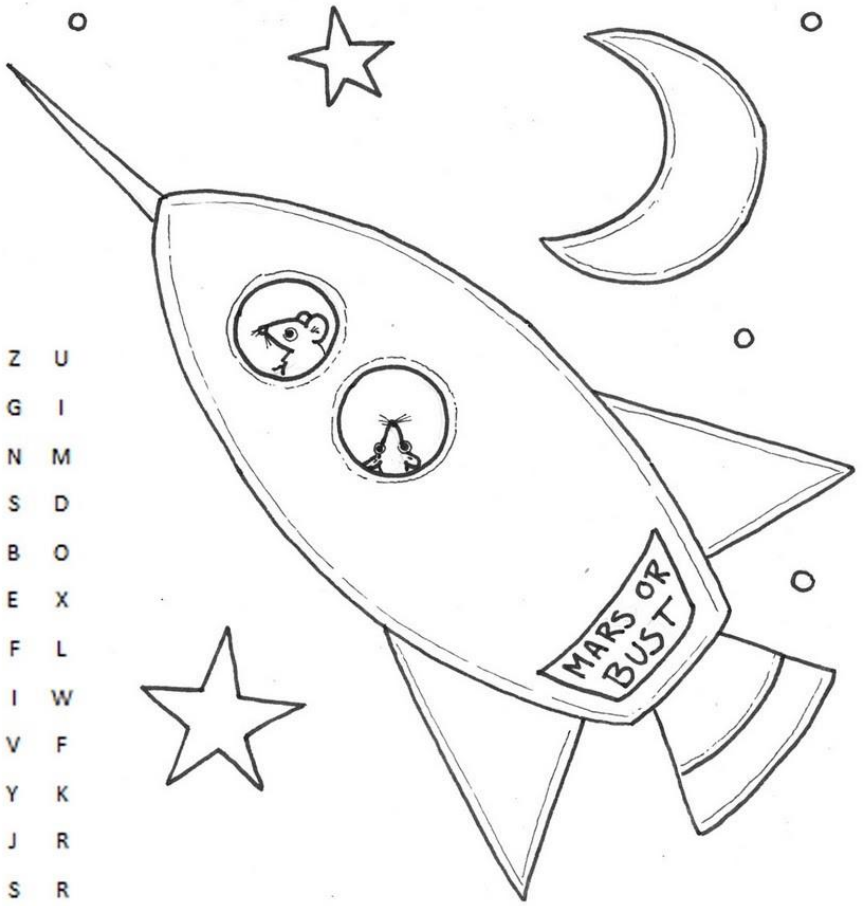
You could drill holes in a tin (with parents help) then add a tealight or you could prick holes in a piece of card and shine a torch from behind. Both versions work better at night.





MARS ROCKET
SPACE ASTEROID
ALIEN STAR
MOON PLUTO
NEBULA LUNAR

K	L	T	U	V	W	E	E	A	L	U	N	A	R	Z	U
K	A	P	E	S	V	B	M	A	Q	J	G	C	L	G	I
M	S	K	E	G	O	W	D	K	O	S	E	U	R	N	M
L	T	N	M	L	J	K	X	I	M	S	Y	P	H	S	D
S	E	R	S	D	A	H	N	W	A	H	I	C	L	B	O
V	R	H	S	I	G	V	X	D	R	D	E	V	R	E	X
R	O	H	R	B	R	B	Q	U	S	P	A	C	E	F	L
F	I	P	A	F	M	T	A	R	I	P	O	A	S	I	W
Q	D	L	O	R	O	C	K	E	T	A	I	G	K	V	F
K	K	O	S	L	O	N	S	T	L	H	Q	A	O	Y	K
N	B	Y	E	I	N	H	H	U	S	W	E	D	H	J	R
J	F	C	Z	M	V	O	B	B	O	L	R	P	T	S	R
E	U	H	A	S	D	E	Q	R	C	B	P	L	U	T	O
W	K	Z	R	X	N	E	I	L	A	L	S	G	E	A	K
O	C	F	E	S	G	W	I	K	J	H	U	D	S	R	M
J	Q	S	O	H	K	A	G	F	V	Z	A	M	E	X	R



Space

T Y V U F A Y X N I T P U Q W N J P O P U O P F H A I I W M
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B L Z U Q M B F G O O E E O M A X I D E P E E N W U W I E G
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H G Z O N K L M E I L Y A U A S H M C N T J E S Y W L M Q V
S J O V T X L A T I L R N T F I Y S H R W C E C U E O R C E
K H E K K V R E X G S E S M T L D R Q S I N D T N Y G T X U
S S L E E O B F V Y V E U P V L H B J T B U E S I T X Y V C
V R Z W P N S D R B C N D P B A N T U L E K M A V Q S Y F Y
C D F D C T Z E K A U Q R A L C N D R A C L Y T E K Z X N M
G N H W Y V A U P R L C D H E B Z C R O D O N P R G M Z R H
V M E N L G E S A I F C D I C E X T R M H D A H S Q K F H J
G V Q O G S E U J M V Z I K C J H W T V A Z G Z E H X X W O

ALIEN
ASTEROID
ASTRONAUGHT
BLACKHOLE
CALLISTO
COMET
CONSTELLATIONS
COSMONAUT
COSMOS
DARKMATTER
EARTH
EUROPA
GALAXY
GANYMEDE
JUPITER
LIGHTYEAR
LO
MARS
MERCURY
METEOR
MILKYWAY
MOON
NEBULAR
NEPTUNE
PLANET
PLUTO
ROCKET
ROVER
SATELLITE
SATURN
SHOOTINGSTAR
SHUTTLE
SOLARSYSTEM
SPACESTATION
STARS
SUN
UFO
UNIVERSE
URANUS
VENUS
VOID

Packing for Virtual Scout Camp

Samir the Scout has packed his Virtual Rucksack for Virtual Camp!

The nice thing about a Virtual Camp is that you can take anything you like with you…your Virtual Rucksack is as big as you want it to be!

He has looked at the Kit List and, like all Scouts, has added a few extra things in his rucksack!

Can you work out what he has added?

I think some things he shouldn't have at camp!

Kit List of things to pack for Virtual Camp

- ☐ alarm clock
- ☐ binoculars
- ☐ book
- ☐ boots
- ☐ camera
- ☐ coffee cup
- ☐ comb
- ☐ compass
- ☐ cuddly toy
- ☐ eating utensils
- ☐ first aid kit
- ☐ flippers
- ☐ hat
- ☐ lantern
- ☐ life jacket
- ☐ map
- ☐ penknife (this will be carefully supervised!)
- ☐ shorts
- ☐ sleeping bag
- ☐ snorkel and mask
- ☐ stopwatch
- ☐ teapot
- ☐ tee shirt
- ☐ thermometer
- ☐ toilet roll
- ☐ torch
- ☐ underpants
- ☐ walkie talkies
- ☐ watch
- ☐ water bottle

Space Moon Rock Sweet Recipes – Take Your Pick !

Peppermint Creams

250g Icing Sugar	1 Egg White
Peppermint Essence	Dark chocolate (to dip if required)

Sieve the icing sugar into a large bowl. Add a few drops of peppermint essence and add the egg white slowly a bit at a time because you may not need it all. It will become a soft dough like consistency and at this point it is advisable to taste it to see if you have added enough flavouring, you can then add a little more to taste.
Divide into 20 balls and press onto a sheet of baking paper or tray to make disks.
Allow this to dry and if desired, melt the dark chocolate in a small pot to allow you to dip the disks into. Lay them back on the baking parchment and allow to dry and go solid for 2 hours.

Moon Rocks (Chocolate Truffles)

100g chocolate	50g marge
2 Egg Yolks	6 tablespoon of icing sugar, sieved

Sprinkles/desiccated coconut/drinking chocolate to decorate your Moon Rocks

Melt the chocolate in a bowl either in the microwave or over a pan of water.
Cream together the icing sugar, egg yolks and marge, then stir in the melted chocolate.
Leave to cool allowing the mixture to thicken and set.
Form into balls and roll in either sprinkles, desiccated coconut or drinking chocolate.

Orange Creams

400g Icing Sugar	1 Orange zest finely grated and juice
1teaspoon lemon juice	Plus additional icing sugar for dusting

Sieve the icing sugar into a large bowl, mix with the orange zest and then add the lemon juice. Add the orange juice bit by bit and work it into a firm dough if you want to cut using cutters dust the surface with icing sugar to stop it sticking.
If you want to make balls and then press into disks you can make a slightly softer dough. Place them onto a baking sheet or tray and allow them to dry.

Coconut ice

250g sweetened condensed milk	250g icing sugar, sifted, plus extra for dusting
200g desiccated coconut	Pink edible food colouring (optional)

Using a wooden spoon, mix together the condensed milk and the icing sugar in a large bowl. It will get very stiff. Work the coconut into the mix until its well combined.
Split the mix into two and knead a very small amount of food colouring into one half.
Dust a board with icing sugar, then shape each half into a smooth rectangle and place on top of one another. Roll with a rolling pin, re-shaping with your hands every couple of rolls, until you have a rectangle of two-tone coconut ice about 3cm thick.
Transfer to a plate or board and leave uncovered for at least 3 hours or overnight to set.
Cut into squares with a sharp knife and pack into bags or boxes.