

Dr. Mad Scientist

Post-Visit Activities

Grades K-2



Activities

These activities are intended for use after your visit to the Virginia Air and Space Center. Your students should recall the information, demonstration and activities from the Jr. Mad Scientist program in order to do these activities. All of the activities can be tailored to your specific classroom needs, and the procedures listed are suggestions for teaching.

Activity 1: Mystery Box

The Mystery Box activity was done in the Jr. Mad Scientist demonstration. It is an activity that can be done by the students or the teacher. Mystery Boxes can be made from any size box and any kind of object can be placed inside. Students can create a Mystery Box at home and bring it in to school to share with the whole class or small groups. Doing the activity this way gives all of the students the opportunity to be creative in their choices of box size and items for the boxes. Students will also get many opportunities to use their senses of hearing and touch as they try to guess the objects in all of their classmates' Mystery Boxes.

Activity 2: Units of Measurement Worksheet

The attached worksheet can be used for this activity. Use pennies and paperclips to see how many equal the weight of some common objects found in your classroom. Use a balance scale for this activity. Place the first object on one side of the balance. Place pennies on the other side one at a time until both sides are balanced. Record the number on the correct line. Take the pennies off and place paper clips on one at a time until the sides are balanced. Record the number on the correct line on the worksheet. Continue doing this for each of the objects listed. Then, answer the questions at the bottom of the page.

The final item on the worksheet asks for students to think of at least two more items that could be used as a non-standard unit of measurement. The students must remember that each item must be uniform in size, shape and weight. If time allows, let students try out the items that they chose as non-standard units of measurement with the balance scale. They can write their results on the back of the worksheet.

Activity 3: Solid, Liquid and Gas Graphing Worksheet

The Solid, Liquid and Gas Graphing worksheets are to help reinforce for students a graphing activity that was done in the Jr. Mad Scientist program. The students cut and paste the various objects into the correct places on the graphing page.


Activity 4: Crossword Worksheet

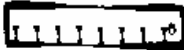
The attached crossword worksheet gives students a review of twelve vocabulary words that are used frequently throughout the program and the pre and post activities.


Units of Measurement


For this activity, please use pennies and paperclips to see how many equal the weight of some common objects found in your classroom. Use a balance scale for this activity. Place the first object on one side of the balance. Place pennies on the other side one at a time until both sides are balanced. Record the number on the correct line. Take the pennies off and place paper clips on one at a time until the sides are balanced. Record the number on the correct line. Continue doing this for each of the objects listed. Then, answer the questions at the bottom of the page.


NAME _____


How many pennies  equal:

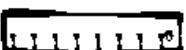
_____ a 6 inch ruler 


_____ a rectangular pencil eraser 


_____ a chalkboard or dry erase eraser 


_____ a pair of scissors 

How many paperclips  equal:

_____ a 6 inch ruler 

_____ a rectangular pencil eraser 

_____ a chalkboard or dry erase eraser 

_____ a pair of scissors 

Which item is heavier, a penny or a paperclip? _____

Did you use more pennies or more paper clips to weigh the different items?

Did any of the objects use the same amount of pennies and paper clips to equal them? _____

Please think of at least two more items we could use as a non-standard unit of measurement. Remember that each must be uniform in size, shape and weight.

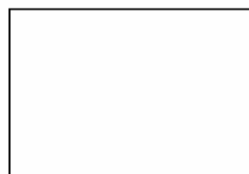
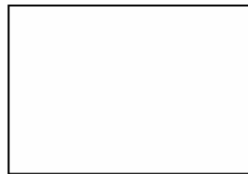
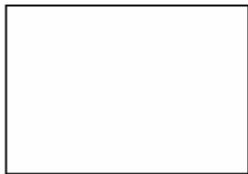
Name _____

Please cut out the pictures on the Graphing Sheet 2. Look at each picture carefully and decide whether it is a liquid, solid or gas. Paste the picture in the column above the correct state of matter to form a graph. Remember to place one picture in each box.

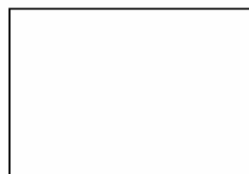
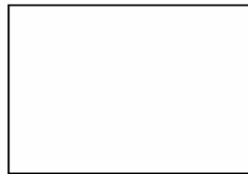
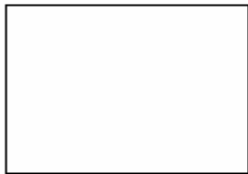
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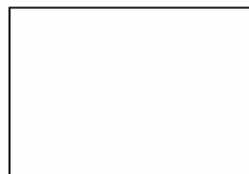
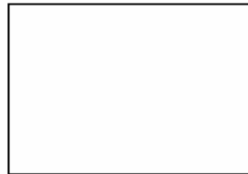
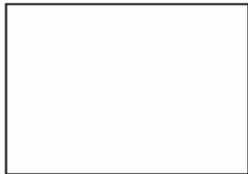
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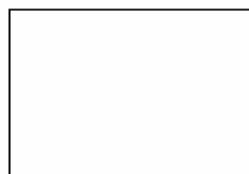
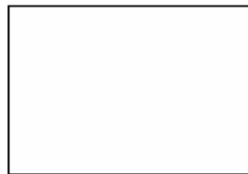
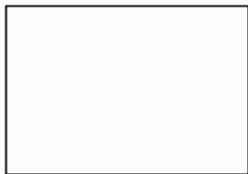
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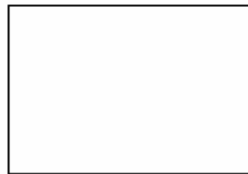
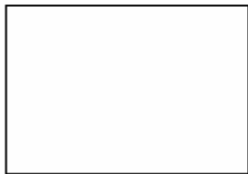
3



2



1



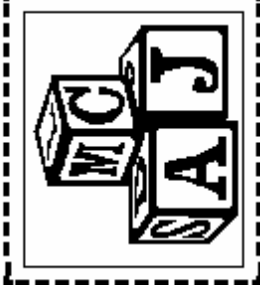
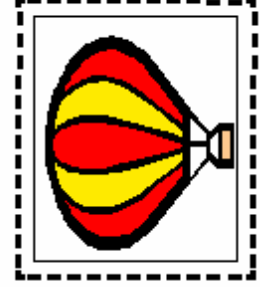
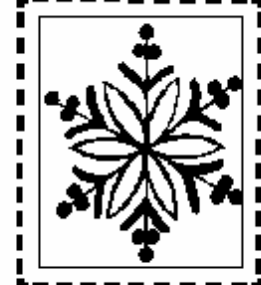
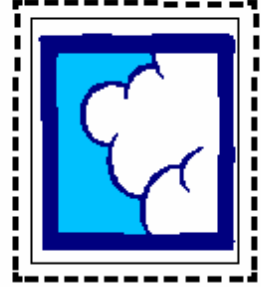
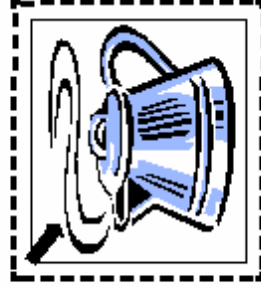
liquid

solid

gas

Graph sheet 2

Please cut out the following pictures. Decide if each picture is a solid, liquid or gas and glue onto the graph in the correct state of matter.



Virginia Air and Space Center
Jr. Mad Scientist Post-Visit Activities

Seek and Find

Please look for the terms listed below. You will find them across, down or diagonally.

SCIENTIST
GRAPH
EXPERIMENT

SOLID
HYPOTHESIS
BALANCE

LIQUID
PREDICT
PRESSURE

GAS
OBSERVE
VACUUM

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