

Save the Solar System!

(Beginner Breakout)

Story:

Help! An evil scientist has discovered a way to remove the Earth's magnetic field. Without a magnetic field, the moon will go out of orbit and in 40 minutes it is scheduled to crash into the Earth, ending life as we know it. We have found the evil scientist's device but we need to open the box containing it and stop the evil scientist's program to save our earth and the solar system. We need your help! We have already delivered instructions to your instructor.

Please save the earth and our solar system.

We are counting on you!

To

AI All Instructors x

Bcc

Cc

Important Announcement- PLEASE READ NOW!

Help! An evil scientist has discovered a way to remove the Earth's magnetic field. Without a magnetic field, the moon will go out of orbit and in 40 minutes it is scheduled to crash into the Earth, ending life as we know it. We have found the evil scientist's device but we need to open the box containing it and stop the evil scientist's program to save our earth and the solar system. We need your help! We have already delivered instructions to your instructor.







**Please save the earth and our solar system.
We are counting on you!**

AA A B I U A A : : ← → ≡ ≡ ≡ ☰ ☱ x² v

Secrets for Success:

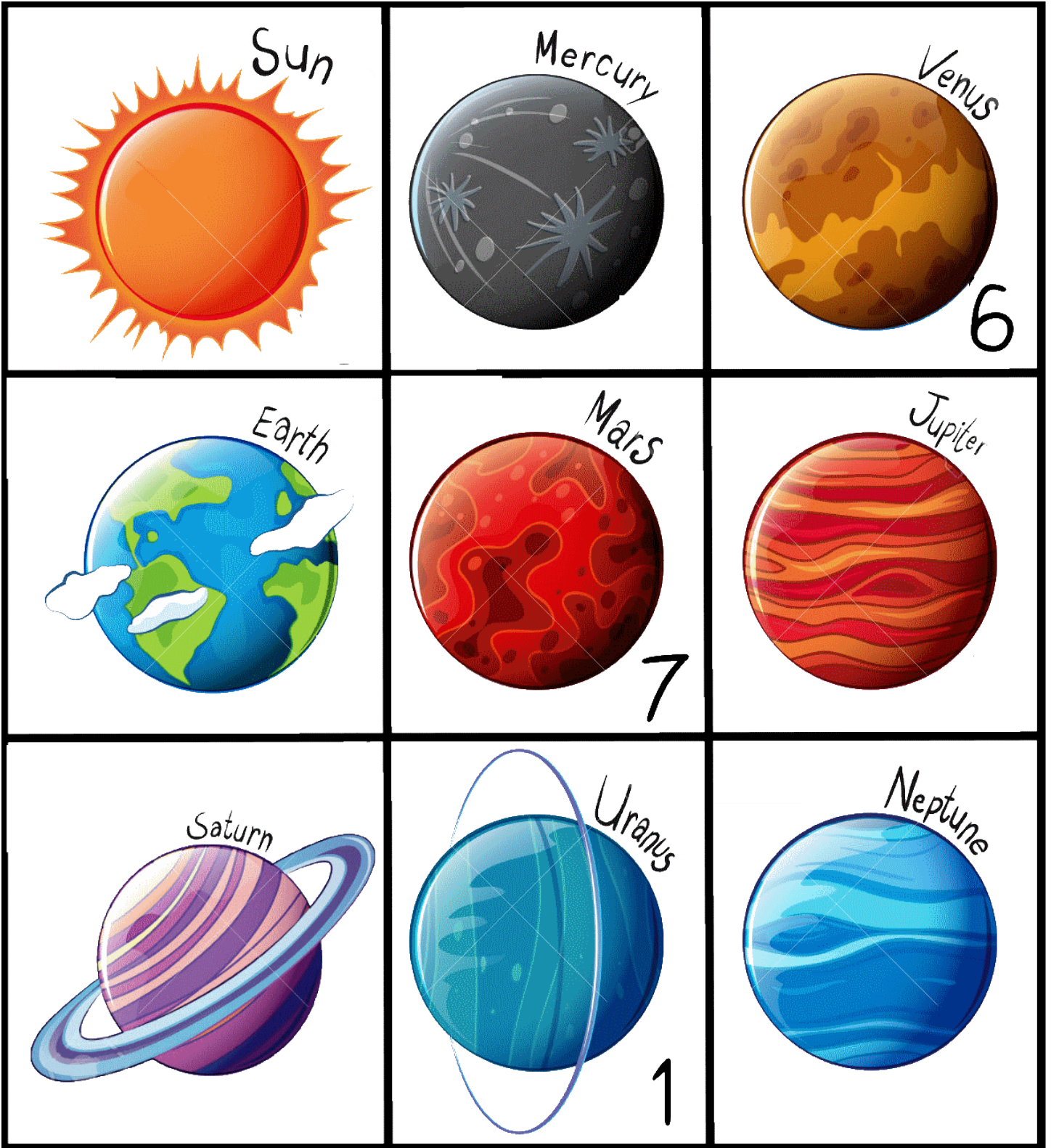
- Teamwork is important! Work together!
- Answers may not be as simple as they seem. Continue to look for clues to solve the problems. In some cases, information you receive early in the problem may not be used until later.
- Trying random codes on locks will not work- there are thousands of combinations. The combinations and codes will be apparent if you follow directions and think about everything you see.
- Give the instructor all locks as soon as they have been opened.
- Come together as a team to discuss problems, items that have been discovered, and when or if to use a hint card.
 - Have fun!

Game Setup:

					
<p style="text-align: center;">1st</p>	<p style="text-align: center;">2nd</p>	<p style="text-align: center;">3rd</p>	<p style="text-align: center;">4th</p>	<p style="text-align: center;">5th</p>	<p style="text-align: center;">6th</p>
<p>Students/ participants will receive a folder that includes:</p> <ul style="list-style-type: none"> -Planets cards (cut and ready for use) -Planets Card Question #1 -Seasons questions. -Planets Card Question #2 	<p>The zippered pouch will be locked with a 3 digit lock (set to 674). The code will be revealed with question #1 of the planets questions.</p> <p>The pouch includes:</p> <ul style="list-style-type: none"> -Seasons Question Page -Red reveal message. 	<p>The locked box will be closed with word lock (set to SOLAR)</p> <ul style="list-style-type: none"> -The word lock can be opened with the planets question #2. <p>The box includes: -</p> <ul style="list-style-type: none"> Notebook (locked with a key lock- key under TAPE on the FLOOR) -Red decoder tool (glasses). 	<p>The notebook is locked with a key lock (key is hidden under tape on the floor). The key will be found after decoding the seasons questions (answer in invisible ink).</p> <p>The notebook includes:</p> <ul style="list-style-type: none"> -Phases of the Moon questions cut out and adhered to random pages. 	<p>This final box will have a hasp with (4) 3 or 4 digit locks on it. Each team will have the code/clue to open ONE of the locks. The lock will be opened by correctly naming the phases of the moon and matching the phase names to the corresponding numbers to reveal a 3 or 4 digit code.</p>	<p>Inside the final box will be an iPad with the Breakout EDU Locks App running. It will be set to a color lock. The answer is revealed on the Secrets of the Season question page. There is an image that is colored green, yellow, red, blue.</p> <p>Student teams should come to a consensus on what combination to try.</p>

The Planets Cards (In Folder)

Cut out the planets cards. Laminate if you wish.



Planets Copyright 123RF

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Planet Cards Question #1 (In Folder):

Use the planet image cards to complete the following:

Put the sun and planet images in order, according to their orbit around the sun.

Answers (For Instructor):

Put the planet images in order, according to their orbit around the sun.

(This will reveal the number 671 from the numbers on the planet cards.)

Planets Question #2

Name the **P** L₃ A N E T S, in order of orbit from the sun to reveal the secret code:

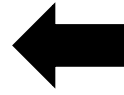
M

V 1

E

M

These 4 planets are made mostly of 2 K



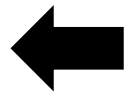
J 5

S 4

U

N

These 4 planets are made mostly of G



Answer:

 L
 1 2 3 4 5

Planets Question #2 (Answers 5 Letter Lock)

Name the P , in order of orbit from the sun to reveal the secret code:

M

V

E

M

These 4 planets are made mostly of K

J

S

U

N

These 4 planets are made mostly of G

Answer:

1 2 3 4 5

Planets Question #2 Answers (4 Letter Lock)

Name the planets in order of orbit from the

sun to reveal the secret C D E:

M

V

E

A

These 4 planets are made mostly of

K

J

S

U

N

These 4 planets are made mostly of

G

Answer:

1 2 3 4 5

Planets Question #2

Name the planets in order of orbit from the sun to reveal the secret C ₃ D E :

M

V

E

₁ A

These 4 planets are made mostly of ₂ K

J

S ₄

U

N

These 4 planets are made mostly of G

Answer:

BLANK
1 2 3 4 5

The Secret of Our Seasons



1. The earth has a 23.5 degree .
2. What word means to spin on an axis?
3. Earth is one of the 8 in our solar system.
4. There are two seasons when the sun's rays shine almost equally on the Northern and Southern hemispheres. The seasons are spring and .
5. The earth moves
(or) around the sun.
6. The sun shines more directly on the hemisphere in June, giving us and the sun shines more directly on the southern hemisphere in January, giving us winter.

The Secret of Our Seasons (Answers)

1. The earth has a 23.5 degree (TILT).
2. What word means to spin on an axis?
 (ROTATE)
3. Earth is one of the 8 (PLANETS) in our solar system.
4. There are two seasons when the sun's rays shine almost equally on the Northern and Southern hemispheres. The seasons are spring and (FALL).
5. The earth moves
(or REVOLVES) around the sun.
6. The sun shines more directly on the (NORTHERN) hemisphere in June, giving us (SUMMER) and the sun shines more directly on the southern hemisphere in January, giving us winter.

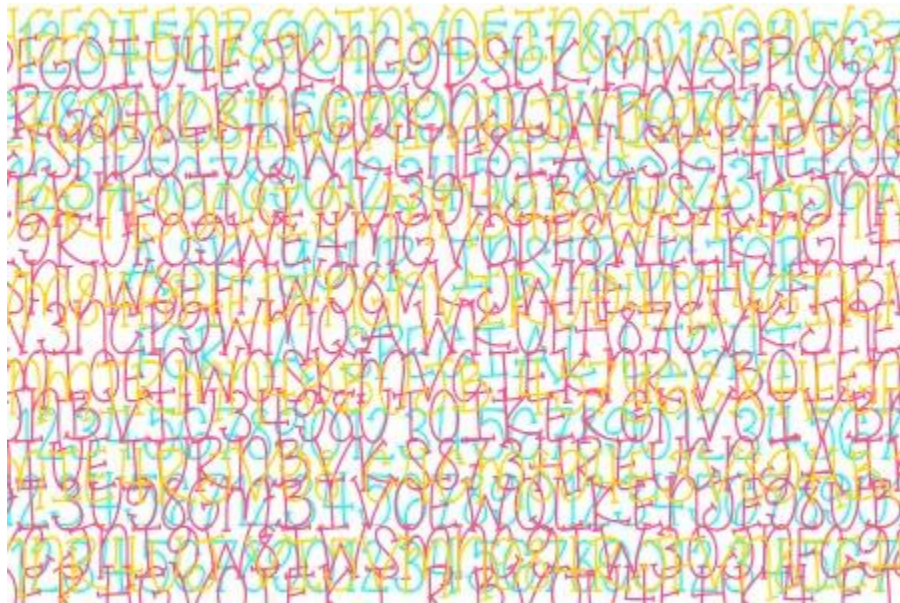
Use invisible ink to highlight the boxes indicated above on the student answer sheet. The highlighted letters (which will be selected in invisible ink and revealed with the black light spell: TAPE FLOOR. Hide the key to open the locked book under a piece of tape on the floor.

Print this secret message:

FOR RED GLASSES:



FOR RED GLASSES:



Phases of the Moon

Cut out and adhere to random pages in the notebook:



Which phase is this moon?

_____ **1st Number =** _____

New Moon=1
Waxing Crescent=2
First Quarter Half Moon=3
Waxing Gibbous=4
Full Moon=5
Waning Gibbous=6
Third Quarter Half Moon=7
Waning Crescent=8



Which phase is this moon?

_____ **2nd Number =** _____

New Moon=1
Waxing Crescent=2
First Quarter Half Moon=3
Waxing Gibbous=4
Full Moon=5
Waning Gibbous=6
Third Quarter Half Moon=7
Waning Crescent=8



Which phase is this moon?

_____ **3rd Number =** _____

New Moon=1
Waxing Crescent=2
First Quarter Half Moon=3
Waxing Gibbous=4
Full Moon=5
Waning Gibbous=6
Third Quarter Half Moon=7
Waning Crescent=8



Which phase is this moon?

_____ **4th Number =** _____

New Moon=1
Waxing Crescent=2
First Quarter Half Moon=3
Waxing Gibbous=4
Full Moon=5
Waning Gibbous=6
Third Quarter Half Moon=7
Waning Crescent=8

Phases of the Moon (Answers)



Which phase
is this moon?

Full Moon

1st Number = 5

New Moon=1
Waxing Crescent=2
First Quarter Half
Moon=3
Waxing Gibbous=4
Full Moon=5
Waning Gibbous=6
Third Quarter Half
Moon=7
Waning Crescent=8



Which phase
is this moon?

Waning
Crescent

2nd Number = 8

New Moon=1
Waxing Crescent=2
First Quarter Half
Moon=3
Waxing Gibbous=4
Full Moon=5
Waning Gibbous=6
Third Quarter Half
Moon=7
Waning Crescent=8

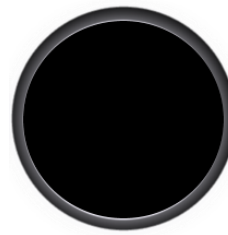


Which phase
is this moon?

Waxing
Gibbous

3rd Number = 4

New Moon=1
Waxing Crescent=2
First Quarter Half
Moon=3
Waxing Gibbous=4
Full Moon=5
Waning Gibbous=6
Third Quarter Half
Moon=7
Waning Crescent=8



Which phase
is this moon?

New Moon

4th Number = 1

New Moon=1
Waxing Crescent=2
First Quarter Half
Moon=3
Waxing Gibbous=4
Full Moon=5
Waning Gibbous=6
Third Quarter Half
Moon=7
Waning Crescent=8

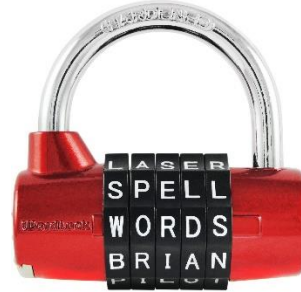
Exit Tickets (Print as many as needed):

To BREAKOUT of this class, write a 4 or 5 letter word that describes your BREAKOUT experience today:



Explain why you chose this word:

To BREAKOUT of this class, write a 4 or 5 letter word that describes your BREAKOUT experience today:



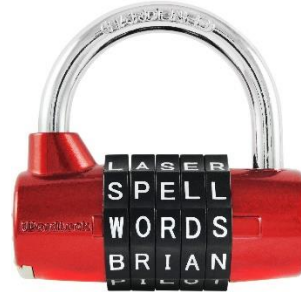
Explain why you chose this word:

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Explain why you chose this word:

