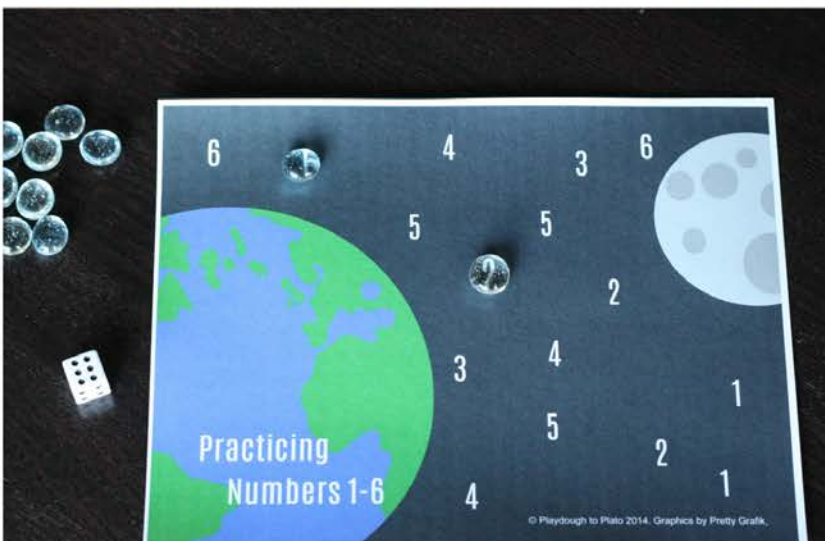
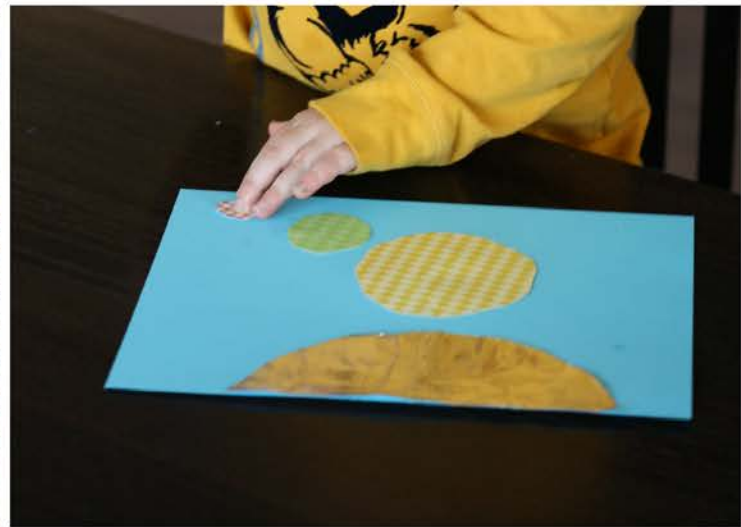




SPACE

By Malia Hollowell





Out of This World Artwork

About -

Blast into space with this solar system art project. It's out of this world. Literally.

Supplies -

- Blue card stock
- A sheet of aluminum foil
- 3 different sheets of scrapbook paper
- Scissors
- 3 different sizes of small circular stencils {little round storage containers works well}
- Pencil
- Glitter
- Glue stick



Prep Work -

Before your kids join you, cut a half circle moon from the aluminum foil. {The foil rips easily but older children may be able to cut it on their own without tearing it.}



Directions -

1. Explain that you climbed into a rocket ship and blasted into space. Now that you've cleared Earth's atmosphere, you can see the solar system more clearly. The moon is off to your left. It's the biggest object you can see because it's closest to you. Lay the moon on the left side of the blue card stock.
2. Ask the kids to use the circular stencil and a pencil to trace the other planets they see through the windshield. They'll need a scrapbook circle for Mars, Jupiter and Saturn.



3. Help children position the circles on their paper. The order from left to right will be: aluminum foil moon, largest circle for Mars, medium circle for Jupiter because it's far away and smallest circle for Saturn because it's very far away. When the order is correct, have kids glue down the Moon and planets.



Directions {cont}

4. Invite children rub their glue stick on random parts of the picture and then sprinkle glitter on top to make cosmic dust. Shake off the excess glitter.
5. Let the project dry before hanging.

Extensions –

Glue short pieces of yarn around the belly of Saturn to create rings.

Use scrapbook paper that more closely matches the colors of the planets: red for Mars, brown and white for Jupiter and pale yellow for Saturn.

Use a red crayon to draw Jupiter's large spot.



The Asteroid Experiment

About –

Most of the time, Earth's atmosphere burns up asteroids. But sometimes one manages to make it through and hit land, making a crater. This hands-on experiment will teach kids how the size and speed of those asteroids affects whether the crater will be small or supersized.

Supplies –

- Large baking pan
- 2 cups of flour
- 2 cups of salt
- Pencil
- Sturdy chair to stand on
- Ruler
- Record sheet {attached}
- A small, medium and large circular object {a soccer ball, an orange and a golf ball, for example}
- {Optional} Tarp for easier clean up



Prep Work –

Place the baking pan on the floor and pour in the flour and salt. Mix the ingredients together and spread them flat to make the Earth's surface. {Optional} Place a tarp underneath the baking pan for easier clean up.



Directions –

1. Explain that you are going to launch asteroids onto the Earth's surface to test whether size and speed makes a difference in the size of craters created. Show kids the three different sized objects and have them write down a prediction about the object that will create the biggest crater.
2. Have one child stand in front of the baking pan and hold the largest object over their head. Let her drop the object onto "the Earth's surface".
3. Carefully lift off the object and place it to the side. Measure the crater that was formed and write the measurement on the record sheet.
4. Repeat the same process for the two other objects.



5. Talk about the results. Were the predictions correct? What size made the biggest crater? Why?



Directions {cont}

6. Have a child pick one of the objects to test for speed. Explain that when things fall through the air on Earth, they move faster and faster. The farther they fall, the faster they move. Help a kid stand on a chair. Then ask whether the object will fall quickly or slowly when she's standing that high. {Answer: It will be moving quickly.}
6. Have her hold the object high in the air, and drop it on the Earth. Measure the crater made.
7. Now ask the child to squat down next to the baking pan, hold the same object just a few inches above the surface and drop it. Measure the crater.
8. Talk about the results. Were the predictions correct? What distance made the biggest crater? Why?

Extensions -

Test if the size of craters changes when you use different Earth dust {sand, coffee beans, just salt, just flour, cornmeal, etc.}

Experiment with different shaped asteroids. Does a Lego make a rectangular crater? Does a shoe make a footprint?

Name _____

MAKING CRATERS

What do you think will make the biggest crater? Circle your guess:

small asteroid

medium asteroid

large asteroid

What do you think will make the biggest crater? Circle your guess:

kneeling

standing on a chair

How large are the craters? Record your results below:

	Kneeling	Standing on a Chair
Small Asteroid		
Medium Asteroid		
Large Asteroid		

Were your predictions correct? What made the largest craters?

Space Cover Up



About -

Whether your kids are learning numbers, addition or multiplication, they'll love this fun game practicing math facts.



Supplies -

- Space Cover Up sheet {attached}
- Counters {pennies, glass rocks, pom poms, etc.}
- 1 die if you're working on numbers
- 2 dice if you're practicing addition or multiplication.

Directions -

Version One: Learning Numbers

Have your child roll one die and count the number of dots that lands on top. Ask her to cover up the number she rolled on her cover up sheet. Play continues until all numbers are covered.

Version Two: Practicing Addition

Invite your child to roll two dice and add together the numbers that land on top. Have her cover up the sum on her cover sheet. Play continues until all numbers have been covered.



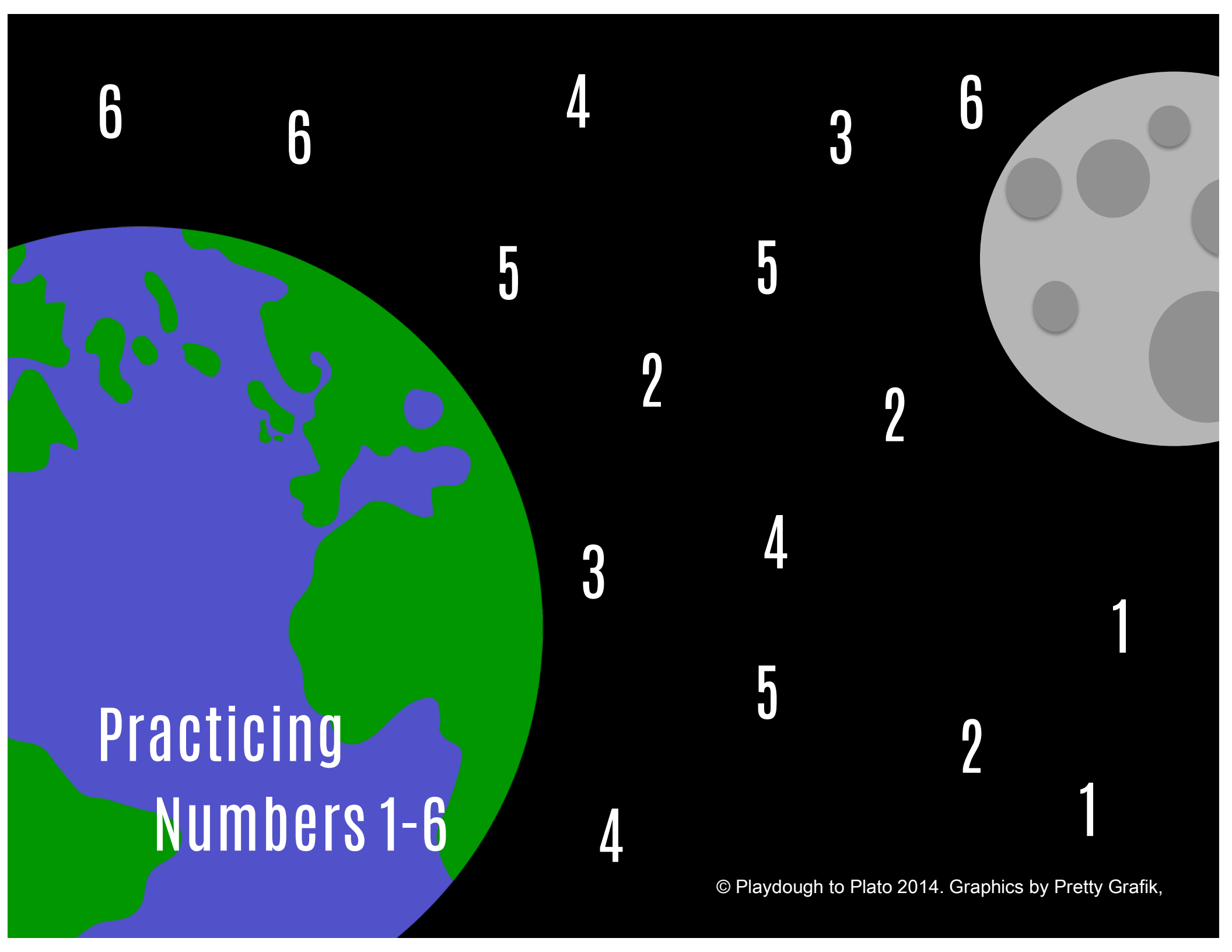
Directions {cont}

Version Three: Working On Multiplication

Ask your child to roll two dice and multiply the numbers that land on top. For instance, if she rolled a 3 and 4, she would multiply $3 \times 4 = 12$. Have your child cover up the product on her cover sheet. In our example, she would cover the number 12. Play continues until all numbers have been covered.

Extensions -

Turn it into a game by having campers race to be the first to cover up all of the numbers on their sheets.



6

6

4

3

6

5

5

2

2

3

4

1

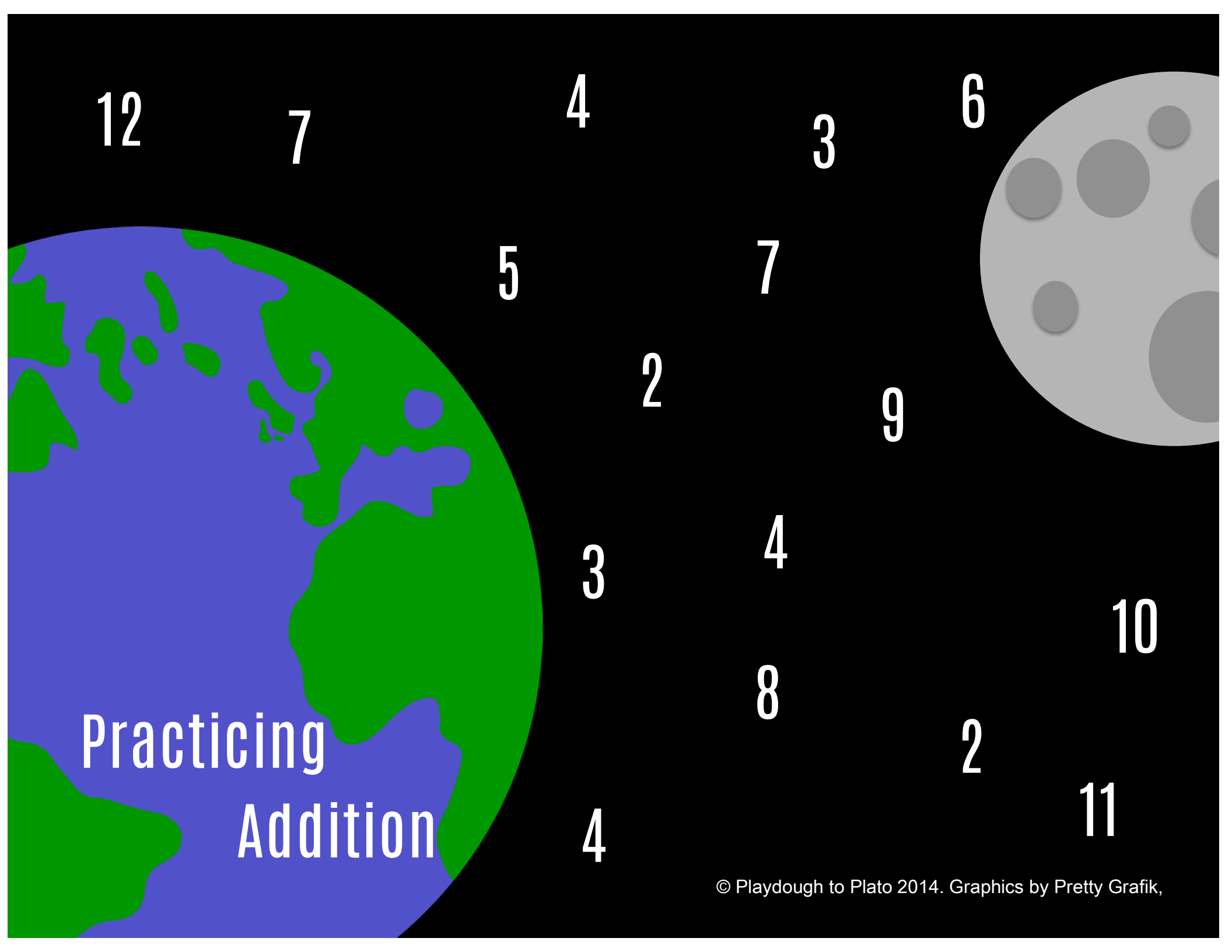
Practicing
Numbers 1-6

5

2

4

1



Practicing
Addition

12

7

4

3

6

5

7

2

9

3

4

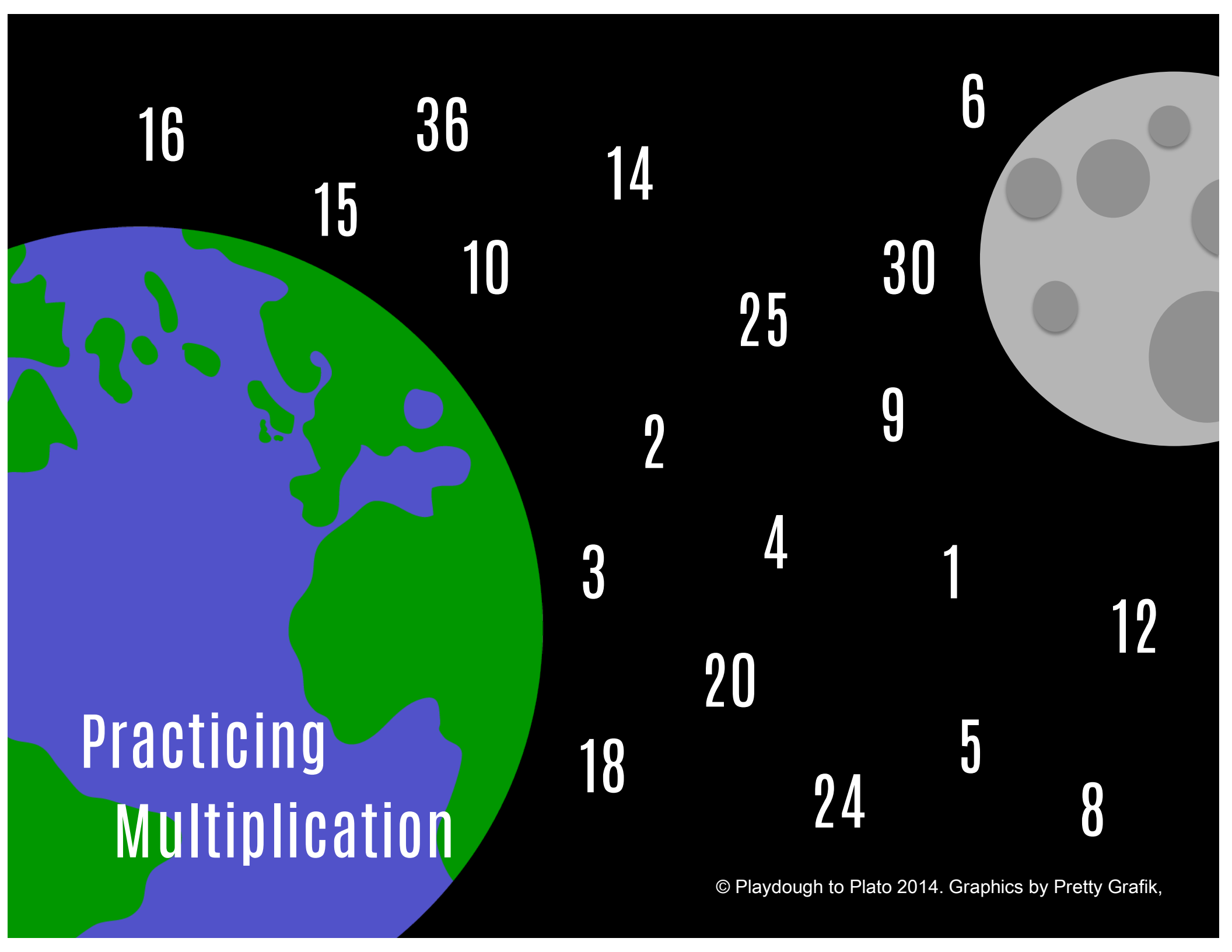
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8

2

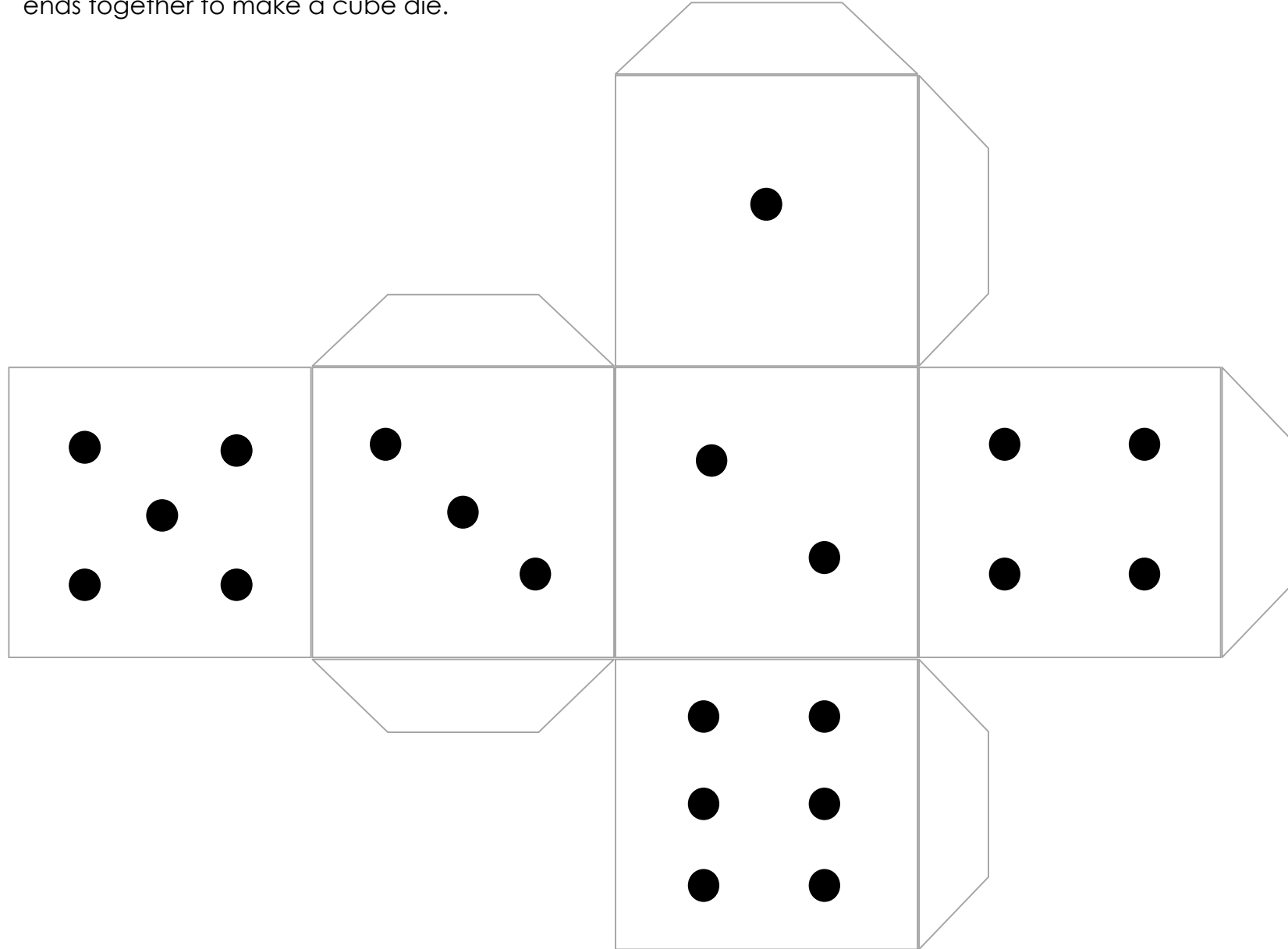
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4

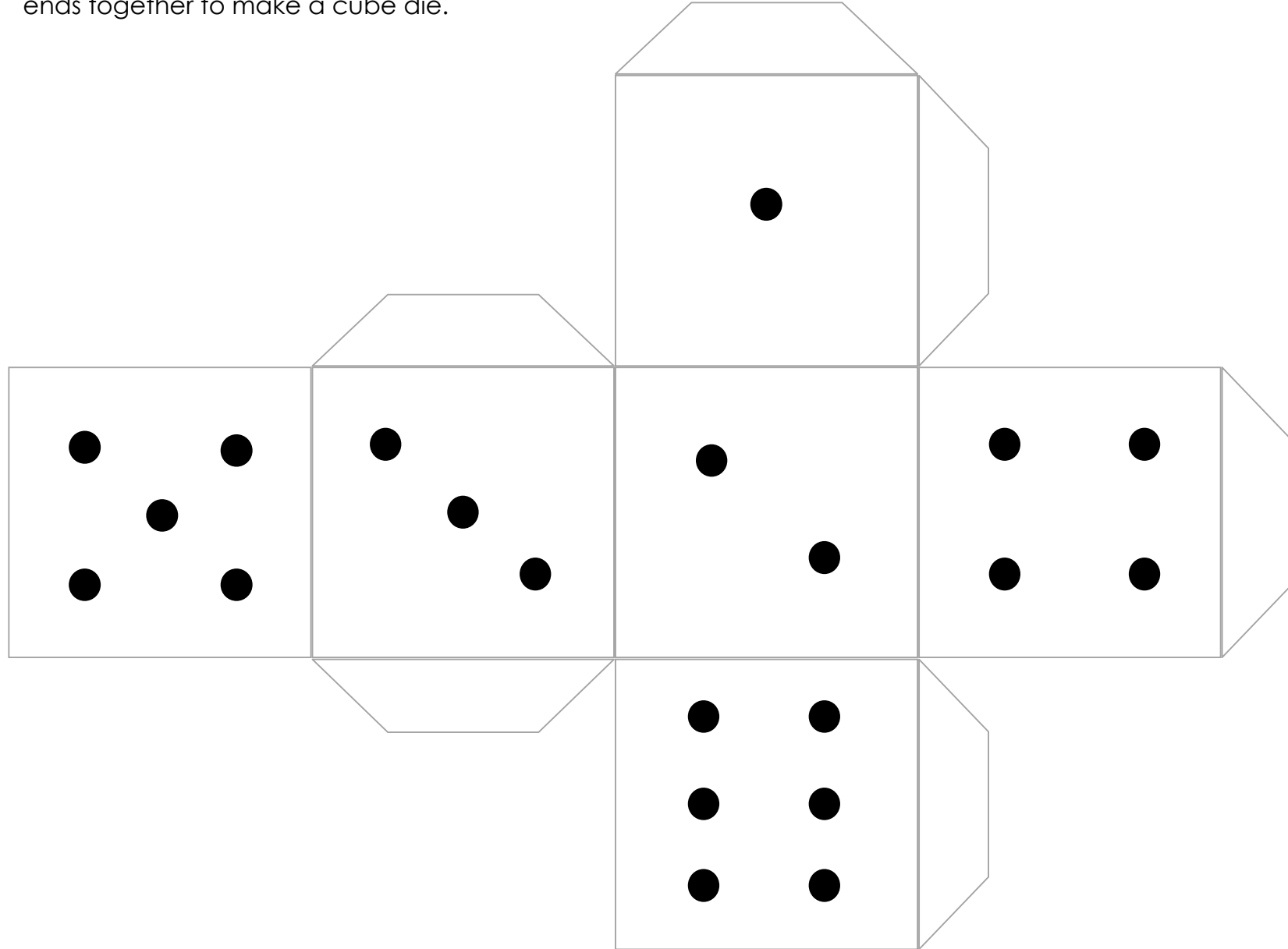


Practicing
Multiplication

Directions: Cut along the outside border of the die below. Then fold along the inner lines and tape or glue the ends together to make a cube die.



Directions: Cut along the outside border of the die below. Then fold along the inner lines and tape or glue the ends together to make a cube die.





Aluminum Foil UFOs

About -

Every astronaut needs a speedy UFO to zoom through space. Your kids will love decorating their own alien ship.



Supplies -

- Aluminum foil
- 2 paper bowls or plates
- Hot glue gun
- Beads or gems
- Large green pom pom
- Googly eyes
- Pipe cleaners
- Scissors
- Glue stick

Prep Work -

Before your child joins you, make the UFO shell by turning the plates face-to-face and hot gluing the rims together.



Directions -

1. Help your child wrap the aluminum foil tightly around the UFO shell.
2. Invite him to design his own alien with a large pom pom, googly eyes and pipe cleaners. Glue the alien to the roof of the UFO.

Note: Depending on your child's age, he can attach the parts using a glue stick or an adult can stick them together using a hot glue gun.



3. Give your child beads, plastic jewels, paper cut outs or other items to decorate his space ship. Viola!! Your child's UFO is officially ready for takeoff.



Extensions -



Turn the craft into an active game by having your child fly the UFO through the air like a Frisbee.

If you have a group of children, organize a UFO throwing competition. Have each child throw his space ship as far as he can. Whose flies the farthest?



Outer Space Cake Pops

About –

These sweet treats are colorful AND delicious. Campers will agree – they're out of this world delicious!



Supplies -

- Cake balls or donut holes
- A jar of white icing
- Food coloring {gel food coloring creates the brightest colors}
- A divided plate or several small bowls
- Several kids' knives, spoons and forks
- Several empty Ziploc bags
- Scissors
- Pictures of planets
- Lollipop sticks



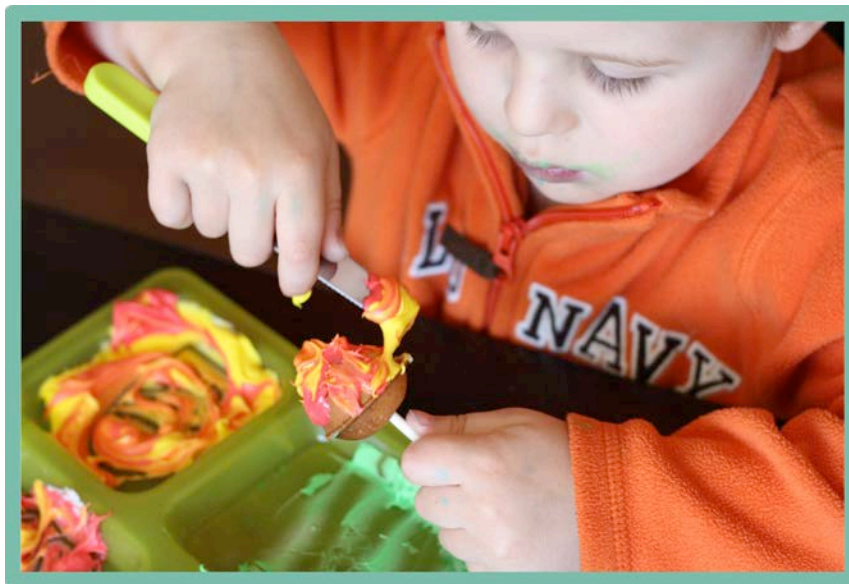
Directions -

1. Have kids look through the photos and pick a planet they'd like to create. Talk about the colors of icing they'll need to decorate the planet accurately.
2. Invite children to scoop several tablespoons of white icing onto their plates and then squeeze a small amount of food coloring on top. Mix well.



Directions -

1. Let campers use kids' knives to decorate the cake pop with icing.



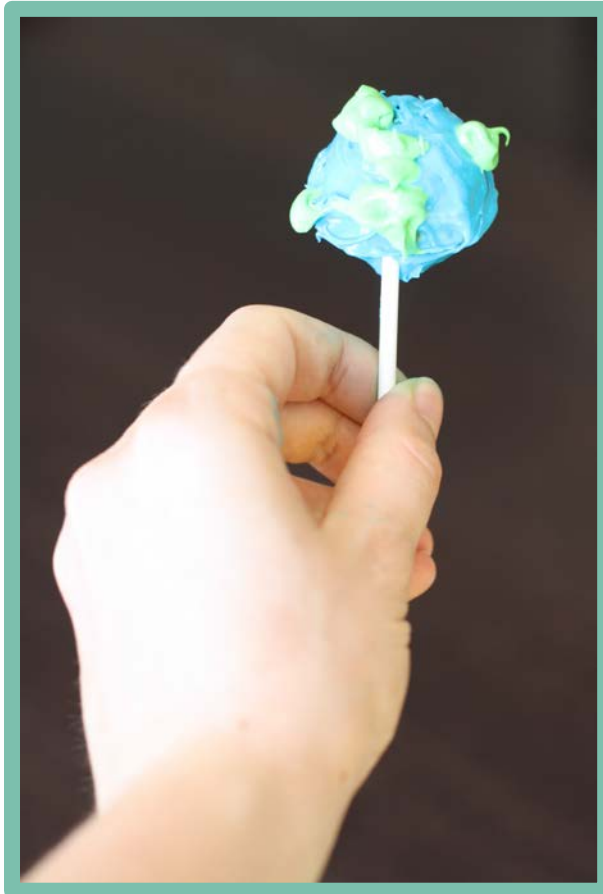
To add more detailed features like the land on an Earth pop or a red spot on a Jupiter pop, add some icing to a small Ziploc bag and snip the end to make a decorating piper.





Directions {cont}

2. Have children insert lollipop sticks at the bottom of their planets for easier eating.

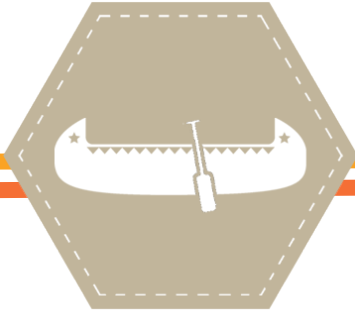


Extensions -

Make a cake pop solar system by creating all of the planets.

Decorate your planets with candy: thin strips of licorice to make Saturn's rings, two M and Ms to make Mars' moons, etc.

Alien Bowling



About -

Get ready for some serious fun as campers zap aliens in this high energy game.

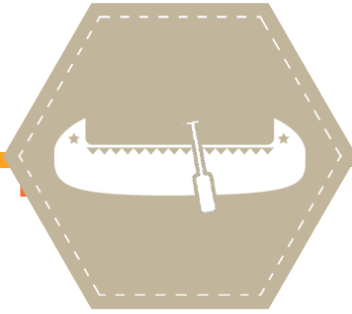


Supplies -

- 12 clear plastic cups
- Alien printables {attached}
- Scissors
- Hot glue
- A playground ball

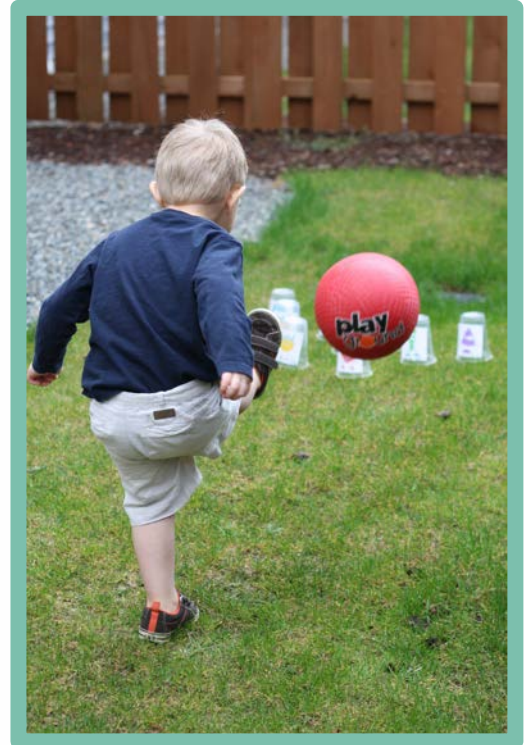
Prep Work -

Before kids join you, make your alien bowling pins. Print the aliens on cardstock and cut along the dotted line to separate them. Hot glue each alien to a clear cup. When the glue has cooled, spread out the alien bowling pins on a flat surface.



Directions -

1. Explain that the kids are going to bowl for aliens. The goal is to kick the ball and knock over as many aliens as possible.
2. Form a line several feet away from the pins. Have the first player kick the ball toward the pins and count the number of pins he knocks over.
3. Ask the kicker to run to set up the pins again and bring the ball to the next person in line.
4. Play continues until kids lose interest.

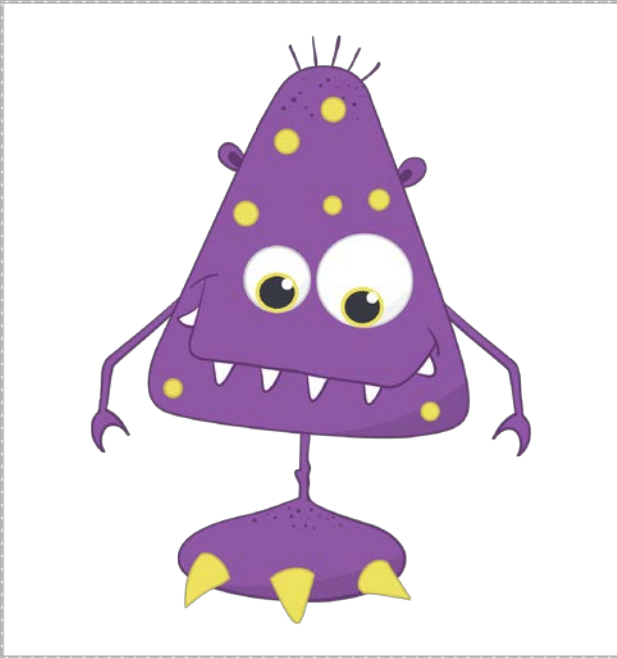
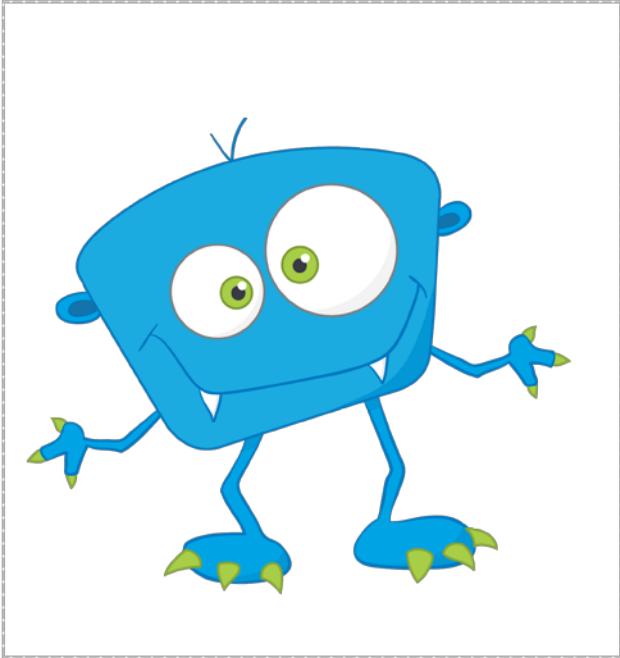
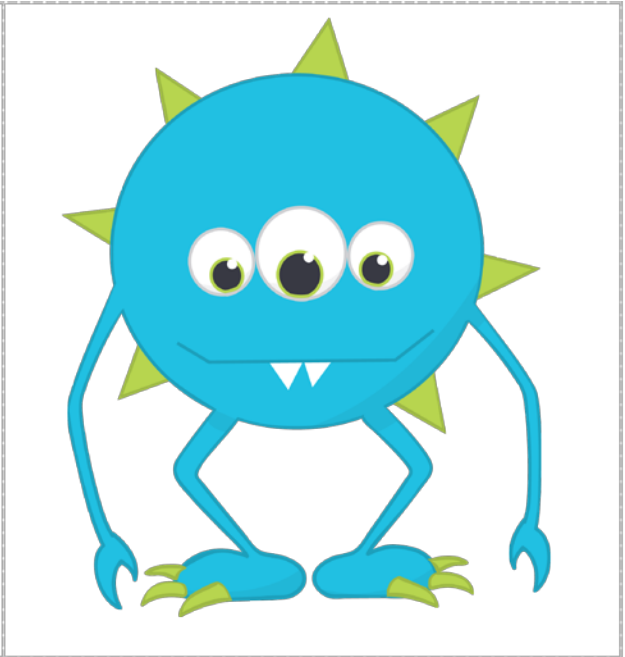
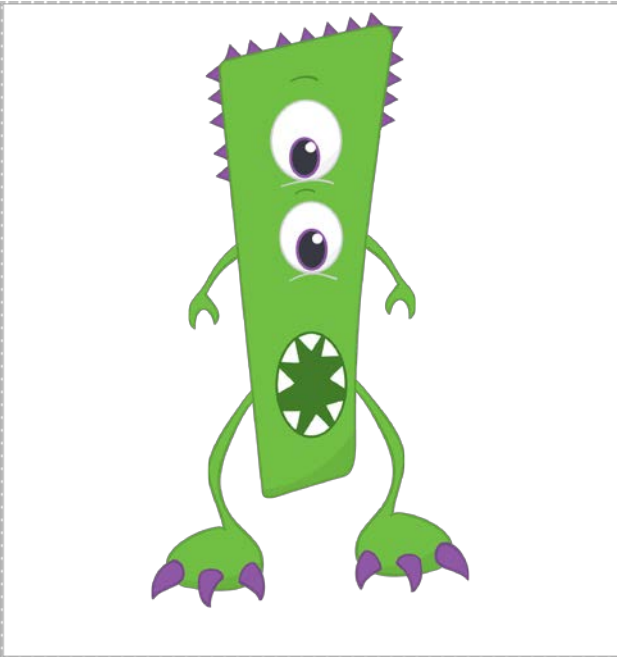
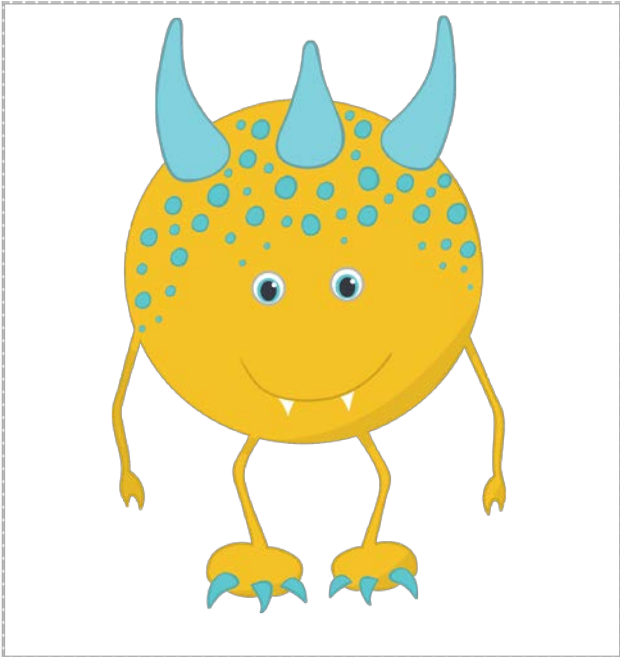


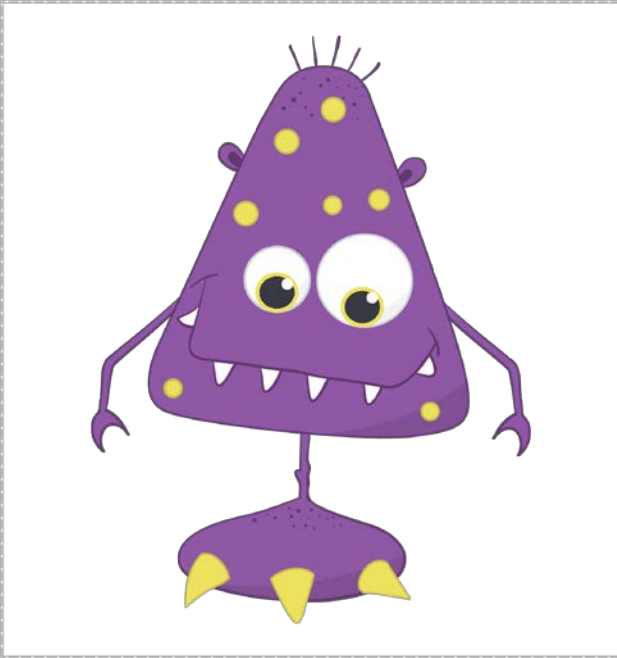
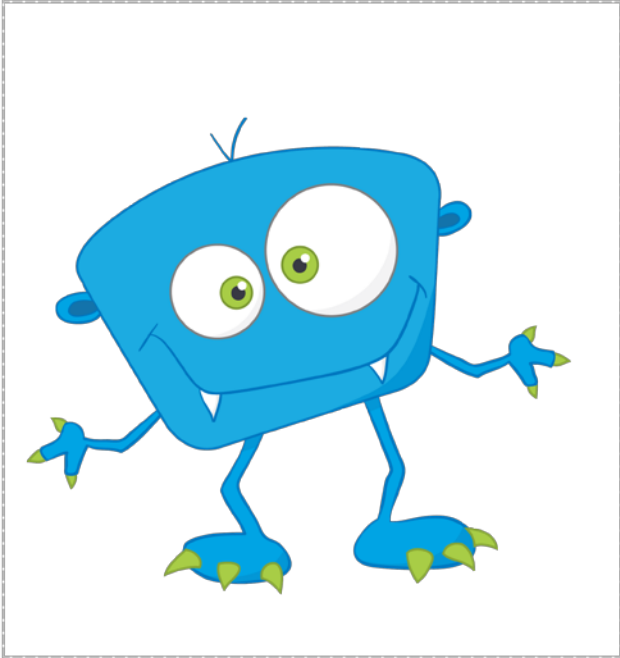
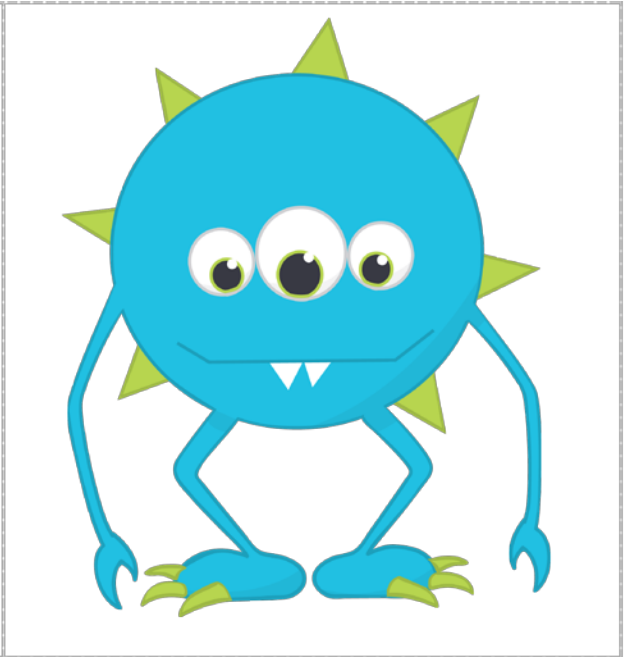
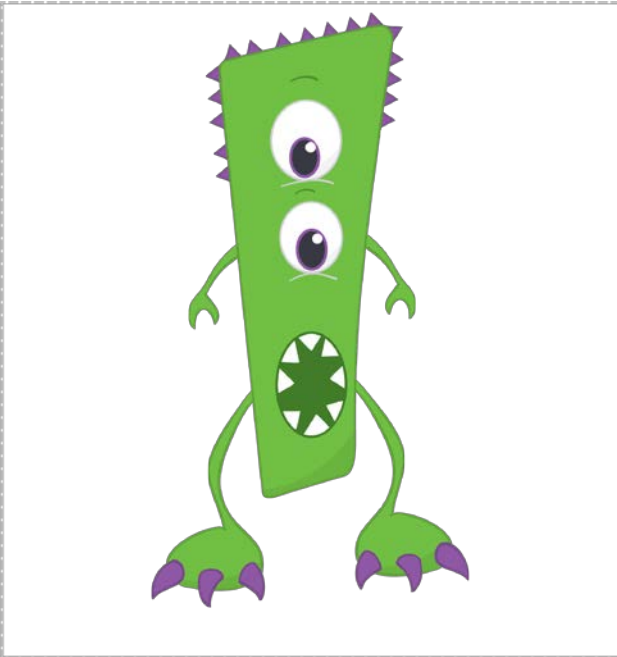
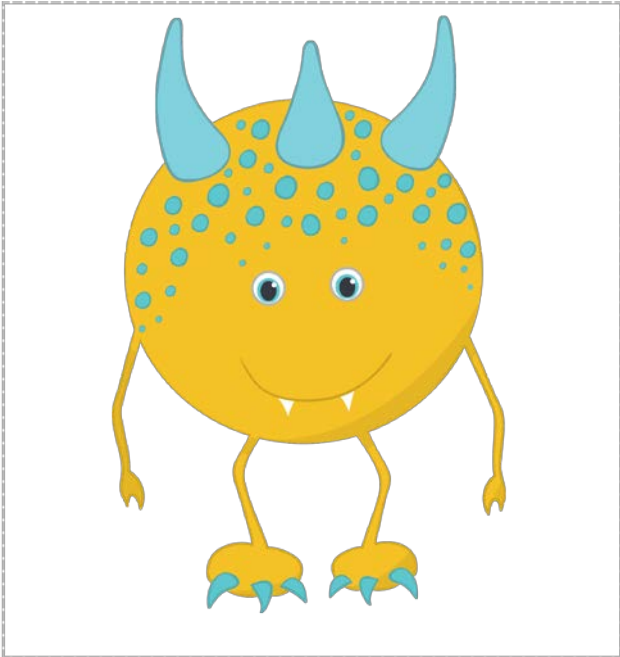
Extensions -

Have players keep track of their score on a simple tally sheet. The player with the most points wins?

To make the game more challenging, have players take several steps back – away from the pins. To make it easier, have kickers move closer.

Invite players to use the alien pins as stacking cups. How many cups can they stack before the tower falls?





Name _____

ALIEN BOWLING SCORE CARD

Directions: Tally each team's points below. The team with the highest score at the end of play wins the game.

TEAM ONE	TEAM TWO
Total: _____	Total: _____



Recommended Books

Magic Tree House: Midnight on the Moon

By Mary Pope Osborne

Jake and Annie, two of my family's favorite book characters, head off on an exciting new adventure to space. This book is great to use as a read aloud for younger kids or an independent chapter book for older readers.

The Magic School Bus: Lost in the Solar System

By Joanna Cole

The mischievous elementary school teacher, Ms. Frizzle, turns an ordinary field trip to the planetarium into a thrilling race to the Moon and beyond. The story is extremely entertaining and impressively educational.

National Geographic Kids First Big Book of Space

By Catherin D. Hughes

If you're looking for a great introduction to the solar system, this book's for you. The easy to understand explanations make it perfect for younger kids who are interested in learning more about space.

There's No Place Like Space: All About Our Solar System

By Tish Rabe

Buckle your seatbelts! The Cat in the Hat takes his friends Thing One, Thing Two, Dick and Sally out on another entertaining, rhyming adventure.



Roaring Rockets {Amazing Machines}

By Tony Mitton and Ant Parker

My family LOVES the Amazing Machines series including this fun book about rockets. The whitty rhymes and detailed illustrations make this a must-checkout selection.

On the Launch Pad: A Counting Book About Rockets

By Michael Dahl

For younger kids who are learning numbers, this title is a space-themed way to practice one through twelve.

Me and My Place in Space

By Joan Sweeney

It can be difficult for kids to understand the relationship between the Earth they live on and the other parts of our solar system. This book does a great job of introducing the solar system in a kid-friendly way.

Mousetronaut: Based on a {Partially} True Story

By Mark Kelly

When a team of astronauts needs help fast, their littlest crew member saves the day. Written by Mark Kelly, a former NASA astronaut, this is a charming story for kids.



Astronaut Handbook

By Meghan McCarthy

This book is a must for any kids who hope to become an astronaut. They'll learn how to measure themselves for a space suit, what it feels like to be weightless and much, much more.

If You Decide to Go to the Moon

By Faith McNulty

Illustrated by Steven Kellogg, this story uses beautiful pictures and minimal text to take kids on an exciting adventure to the Moon.



Additional Resources

[Outer Space Playdough](#) {I Can Teach My Child}

[Homemade Moon Sand](#) {Frugal Fun 4 Boys}

[Googley Eyed Aliens](#) {Make and Takes}

[Galaxy Playdough](#) {Mama Papa Bubba}

[Monster Math ABC Chalk Activity](#) {Educators' Spin On It}

[11 Easy Outer Space Activities for Preschoolers](#) {Little Family Fun}

[Puffy Planets](#) {I Can Teach My Child}

[DIY Moon Rocks](#) {Along the Way}

[Paper Mache Solar System](#) {Red Ted Art}

[Counting Sun Spots Busy Bag](#) {I Can Teach My Child}

[Monster Math Quilt](#) {Educators' Spin On It}