SUMMER CAP

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Oozetastics

<u>Grades:</u> K-5th

Each of the five days is set to three-hour periods. Depending on how much time is allotted, you may extend or shorten times if needed, however, the set minutes are a good time frame.

Day One: Regular Theme

Introduction - 20 minutes:

First, introduce the instructors, then pass the ball to a student so they can introduce themselves. Each student passes the ball to another student after they introduce themselves. Whoever passes it to the next person asks the next person one question.

Example:

"Hi, my name is John Doe, my favorite color is orange." John passes the ball to Jane and asks "How many pets do you have?" Jane says, "Hi, my name is Jane Doe, and I have two pets."

Question Examples:

What is your favorite color? How many pets do you have? What is your favorite song? How many siblings do you have? What sports do you like? What superpower would you have? What is your biggest fear?

Explain the chemistry about slime:

"Chemistry is the study of matter, which is defined as anything that has mass and takes up space. There are many different kinds of matter and they can be described using their properties. There are two different kinds of properties: chemical properties and physical properties. Chemical



The Edgerton Education Foundation is a 501(c)(3) organization. 208 16th Street, Aurora, Nebraska 68818 402-694-4032 * <u>mary@edgerton.org</u> properties are qualities that can be observed during a chemical reaction, like when vinegar reacts with baking soda. Physical properties are qualities that can be observed with a physical change, like the melting of an ice cube. Physical properties can also be used to describe the state of some kinds of matter as a solid, liquid, or gas. Slime is made by chemical reactions. We will see the glue react with the activator to become thick and less sticky."

Play YouTube video:

"What Makes SLIME? The Science of Slime" by Squint Science. https://www.youtube.com/watch?v=T2CJxo5drqA

Activator Solution - 20-40 minutes:

In a pitcher, mix one gallon of water mixed with ¼ cup of borax. Have students alternate mixing. Give each student two minutes to stir. If all students stir for two minutes and twenty minutes have not passed, instructors stir the remaining time. Twenty minutes seems like a long time, but you want to be thorough as this amount of solution is tricky and doesn't mix very easily. Stir for three minutes every half hour.

Alternative measurements:

- 1 quart water 2 tablespoons borax
- 1 cup water ½ tablespoon borax

If you want more or less solution, keep the ratio that is set in all listed measurements. 1 gallon water to ¼ cup borax.

Regular Slime - 20 minutes:

Measurements are subject to change according to your liking.

In a mixing container, mix together 1 cup of glue with 1 tbsp of the activator solution with a mixing tool. Once the slime starts to thicken, use your hands to work it all together. If the slime is too sticky, add a little bit more activator until it becomes less sticky. If it's not sticky enough, add a little bit more glue. To make it stretchier, add lotion. Add food coloring, paint, or colored glue.

For clear slime, use clear glue. Keep in mind that the borax solution listed may or may not work for clear glue. If it doesn't, try using less borax in your water.



Clean Up - 5 minutes Slime Bubbles - 5 minutes:

Insert a straw into your slime. Proceed to blow air through the straw to make bubbles with the slime. Play with the bubbles. Try to make the biggest bubble you can.

Fluffy Slime - 30 minutes

Shaving cream will increase the volume of this slime. Keep in mind when packaging. In a mixing container, mix together 1 cup of glue with 1 tbsp of the activator solution with a mixing tool. Once the slime starts to thicken, use your hands to work it all together. If the slime is too sticky, add a little bit more activator until it becomes less sticky. If it's not sticky enough, add a little bit more glue. To make it stretchier, add lotion. Add food coloring, paint, or colored glue. To make it fluffy, add shaving cream. The exact amount is up to each student. Usually students like a lot of shaving cream. Time may need to be added as shaving cream can be difficult to mix into slime and can become very messy. Use previously mentioned activator solution measurements as this slime is the same as regular slime up until shaving cream is added.

Clean Up - 5 minutes

Hidden Treasure - 5 minutes:

Make slime before the day starts. Make one slime for each student. The volume of the slime is up to you, but there will be a prize hidden in it. This means there will need to be a fair amount of slime for each student to make it harder to find the prize. Once handed out, the students will search through the slime to find the prize.

Prize Ideas:

- Fun erasers
- Stickers
- Minifigures
- Toy cars
- Hematite zinger magnets (elliptical shape)

Glitter Slime - 25 minutes:

Time is set for adding glitter separately. If you are using glitter glue, 5 minutes can be taken off.



In a mixing container, mix together 1 cup of glue with ¼ cup of glitter. A lot of glitter needs to be added to really be seen. You can use less if you'd like. Mix glue with 1 tbsp of the activator solution with a mixing tool. Once the slime starts to thicken, use your hands to work it all together. If the slime is too sticky, add a little bit more activator until it becomes less sticky. If it's not sticky enough, add a little bit more glue. To make it stretchier, add lotion. Add food coloring, paint, or colored glue.

Clean Up - 5 minutes

Baking Soda Volcano - 30 minutes:

For this, you will need baking soda, a small cup, food coloring, water, vinegar, dish soap, a spoon, tray. First, begin by adding ¼ of a cup of baking soda to your bowl or cup, each bowl or cup you do can only be one color so do a different cup for each color you want to do. Then, add a drop of food coloring to a tablespoon of water. After that, add a drop of dish soap on top and then, on the side, mix half water and half vinegar together. Once they are mixed together slowly add a little bit of the mixture and begin slowly stirring it all together to watch it begin to explode out of the cup. During this part of the experiment, it is vital to have a tray underneath your cup so anything that spills can go directly on the tray and you can just wash it when the experiment is over.

Clean Up - 5 minutes

Play with Slime - 10-30 minutes:

If all activities are completed and there is left over time, have students play with the slimes they created.

Day Two: Unique Slime

Activator Solution - 20 minutes:

Start the day by having the students remix the activator solution. This time, they will stir for one minute each. If you need more activator solution, make more. Restir for three minutes every half hour.

Explain Glow in the Dark - 5 minutes:

Luminescence is what causes items to glow brightly when it's dark. Unlike charcoal, wood, or paper, which can all give off light when they burn hot, things that use luminescence emit light



without needing heat. When you have something like a toy that glows in the dark, it can glow because it contains materials called phosphors. Phosphors can radiate light after they have gotten energy from the sun or another source of bright light. The phosphors soak up the energy from the light, and then they radiate this energy as light. Luminescence comes in several different forms, including chemiluminescence, radioluminescence, phosphorescence, and bioluminescence. Each type of luminescence is created in a different way. Phosphorescence is the kind of luminescence that uses phosphors to make something glow in the dark. Some examples of this type of luminescence include items like a computer screen and white LED lights. Chemiluminescence makes things glow by creating a chemical reaction. The electrons within the object become excited because of the reaction between two chemicals, and the electrons give off energy by glowing. Glow sticks are a good example of this process, since they require you to mix the chemicals inside to make the stick light up.

Glow in the Dark Slime - 40 minutes:

In a mixing container, mix together 1 cup of glue with 1 tbsp of the activator solution with a mixing tool. Once the slime starts to thicken, use your hands to work it all together. If the slime is too sticky, add a little bit more activator until it becomes less sticky. If it's not sticky enough, add a little bit more glue. To make it stretchier, add lotion. Add glow in the dark paint. Avoid using any coloring items. Let the slimes sit in the sun for five minutes. Bring them inside and turn off the lights. Provide each student with a small uv light to take with them to make the slimes glow whenever they want.

Clean Up - 5 minutes

Bouncy Slime - 15 minutes:

In one mixing container, mix together 2 tbsp of glue with 1 tbsp of cornstarch and a coloring agent. In a separate mixing container, mix together 4 tbsp of warm water with 1 tsp of borax. Once both are completely mixed, slowly add in the water to the glue. Stir together until it becomes very thick. Shape the slime into a ball and have fun bouncing.

Clean Up - 5 minutes

Play with Bouncy Slime - 15 minutes:

Take some time to enjoy playing with the bouncy slime and glow in the dark slime. The students can also play with slime they made the day before. See who can bounce the highest or make a game. Have fun!



Explain Magnetism - 5 minutes:

All magnets have a north and south pole. Magnetic poles are the strongest parts of a magnet. North and south poles of magnets attract each other. The two south poles and the two north poles repel each other. A *magnetic field* is the area around a magnet that attracts and repel objects. If you place an object inside the magnet's field, it will be attracted to the magnet. The Earth also has a magnetic field – it is like a huge magnet. Compasses work because the needle inside the compass is a magnet. One side of the needle is the north pole and the other side of the needle is the south pole. The north pole of the needle is attracted to the North Pole and the south pole of a needle is attracted to the South Pole.

Magnetic Slime - 20 minutes:

In a mixing container, mix together 1 cup of glue with 1 tbsp of the activator solution with a mixing tool. Once the slime starts to thicken, use your hands to work it all together. If the slime is too sticky, add a little bit more activator until it becomes less sticky. If it's not sticky enough, add a little bit more glue. To make it stretchier, add lotion. Add 2 tbsp of magnetic filings into the slime and mix. Stronger magnets will need to be used to play with this slime.

Clean Up - 5 minutes

Play with Magnetic Slime - 15 minutes:

Once again, take some time to experiment with the magnets and the slime. It's fun to watch the slime move with the magnets.

Color Changing Slime - 20 minutes:

In a mixing container, mix together 1 cup of glue with 1 tbsp of the activator solution with a mixing tool. Once the slime starts to thicken, use your hands to work it all together. If the slime is too sticky, add a little bit https://connor.anglican.org/wp-content/uploads/2018/01/Game-Ships-Sailors.pdfmore activator until it becomes less sticky. If it's not sticky enough, add a little bit more glue. To make it stretchier, add lotion. Add 1 tsp of thermal color changing powder into the slime and mix well. This slime reacts to heat. Experiment with using a lighter (handled only by instructors) to change the color of the slime.

Clean Up - 5 minutes



Day Three: Non-Slime Day

Cloud Dough - 15 minutes:

In a mixing container, mix together 1 cup of cornstarch and 1 cup of any hair conditioner.

Clean Up - 5 minutes

Homemade Play-Doh - 30 minutes:

Mix together 1 cup flour, 1 cup water, 2tsp cream of tartar, ¹/₃ cup salt, 1 tbsp vegetable oil, and food coloring in a saucepan over low/medium heat.

Clean Up - 5 minutes

Play with Play-Doh - 30 minutes:

Make sculptures and shapes with the play-doh. Take some time to enjoy your new creation.

Clean Up-5 minutes

Oobleck - 1 hour:

In a 10-15 gallon tote, mix together equal parts water and cornstarch. It takes a long time to come together so have everyone help with mixing it. When it's done, have fun playing in it.

Clean Up - 5 minutes

Day Four: Ocean Theme

Activator - 20 minutes:

New activator will be required for this day. Mix together 1 gallon of water with 1/6 cup borax.

Ocean Slime - 1 hour:

In a large clear tote, add in clear glue. As much clear glue as you want. Mix in the amount of activator that is required for the amount of glue that is in the tote. Add in a lot of blue food coloring (depends on how blue you want the slime and how much slime you have). Add in fish and other sea creatures. Put sand in, and add some seashells.

Clean Up - 5 minutes



Explain Sea Slime - 5 minutes:

Sea slime is a substance found in occupied bodies of water. Just like humans, fish and other sea creatures produce mucus. Mucus is a slimy goo that is made up mostly of water and is thick because of the proteins in it. It's what boogers are made of. Sea creatures produce mucus all the time and it leaks into the water. Sometimes this mucus can clump up and create big masses of mucus. This creates sea slime.

Play with Ocean Slime - 10 minutes

Watch Videos - 20 minutes:

Watch "Oceans of the World for Kids | Learn all about the 5 Oceans of the Earth" by Learn Bright <u>https://www.youtube.com/watch?v=1WZsxVDTqcU&ab_channel=LearnBright</u> Watch "Interesting Facts About Seas and Oceans | Educational Video for Kids" by Happy Learning English <u>https://www.youtube.com/watch?v=pob8VfvXtIc&ab_channel=HappyLearningEnglish</u> Watch "Ocean Facts for Kids | Facts About Ocean Pollution" by Thinking Captain https://www.youtube.com/watch?v=7o7DinDdY54&ab_channel=ThinkingCaptain

Water Activity - 1 hour:

Play with water balloons, squirt guns, or go to the pool. Have fun playing with water.

Day Five: Space & Fun

Activator - 20 minutes:

Make new activator and stir well.

Galaxy Slime - 40 minutes:

In separate mixing containers, mix together ½ cup clear glue with 1 tsp activator solution. Color them black, dark purple, pink, blue, orange, red. Make 3-4 of the colors of your choosing, then add iridescent or silver glitter. Line them up next to each other and twist and stretch.

Clean Up - 5 minutes



Watch Space Videos - 30 minutes:

Watch "Space Compilation: Crash Course Kids" by Crash Course Kids <u>https://www.youtube.com/watch?v=Td_A9H69eE8&ab_channel=CrashCourseKids</u>

Foil-Printed Moon - 10 minutes:

On a small plate, put white, black, and gray paint together so that they touch, but they are not mixed. Take a piece of foil and crumple it into a ball. Dip the crumpled foil into the paint and tap the back of a paper plate, being sure to tap and not rub. Be careful not to get paint anywhere but the back of the plate.

Elephant Toothpaste - 20 minutes:

Measure 1/2 cup of hydrogen peroxide, and carefully pour it into the bottle. Add a big squirt of dish soap into the bottle, and swirl gently to mix. If you want to make your foam a single color, add a few drops of food coloring directly into the hydrogen peroxide, and swirl the bottle gently to mix. If you want to give your foam stripes like some toothpastes, put the drops along the inside rim of the bottle's mouth. Let them drip down the inside of the bottle, but do not mix. In a measuring cup mix together one tablespoon of yeast and three tablespoons of warm water. Stir for about 30 seconds. Pour the yeast mixture into the bottle then quickly step back, and watch your reaction.

Clean Up - 5 minutes

Homemade Kinetic Sand - 20 minutes:

Each person should have 2 cups of flour and ¼ cup of vegetable oil. Preheat an oven at 350 degrees and bake the flour on a sheet pan for 5 minutes. Allow the baked four to cool before placing in a bowl. Add in the oil and whisk together with a fork.

Galaxy in a Bottle - 30 minutes:

Start by adding your glitter, <u>stars</u>, and <u>food coloring</u> to the jar. Add your warm water, filling the jar about ¼ of the way. Next, fill your mason jar to the rim with baby oil. Tightly secure your lid. You may add some hot glue to the ring to ensure it stays secure. Shake your jar until everything is well mixed. Watch all your glitter and oil slowly settle to the bottom. You now have a jar from out of this world!



Supplies:

- Day One
 - Activator
 - Borax
 - Water
 - Container
 - Regular Slime
 - Glue
 - Borax-water solution
 - Mixing container
 - Stirring tool
 - Coloring agent
 - o Slime Bubbles
 - Slime
 - Straw
 - Fluffy Slime
 - Glue
 - Borax-water solution
 - Mixing container
 - Stirring tool
 - Coloring agent
 - Shaving cream
 - Hidden Treasure
 - Previously made slime
 - Prize of choice
 - o Glitter Slime
 - Glue
 - Borax-water solution
 - Mixing container
 - Stirring tool
 - Coloring agent
 - Glitter
 - o Slime Volcano
 - Glue
 - Borax-water solution
 - Mixing container
 - Stirring tool



- Coloring agent
- Baking soda
- Vinegar

• Day Two

- Activator
 - Borax
 - Water
 - Container
- Glow in the Dark Slime
 - Glue
 - Borax-water solution
 - Mixing container
 - Stirring tool
 - Glow in the dark paint
 - UV light
- Magnetic Slime
 - Glue
 - Borax-water solution
 - Mixing container
 - Stirring tool
 - Magnetic filings
 - Strong magnet
- Bouncy Slime
 - Glue
 - Borax-water solution
 - Mixing container
 - Stirring tool
- Color Changing Slime
 - Glue
 - Borax-water solution
 - Mixing container
 - Stirring tool
 - Thermochromic pigments
- Day Three
 - $\circ \quad \text{Cloud Dough} \\$



- Corn starch
- Hair conditioner
- Mixing container
 - Stirring tool
- Homemade Play-Doh

- Flour
- Water
- Cream of tartar
- Salt
- Vegetable oil
- Coloring agent
- Stove
- Saucepan
- Stirring tool
- o Oobleck
 - Tote
 - Corn starch
 - Water

• Day Four

- o Ocean Slime
 - Tote
 - Clear glue
 - Borax-water solution
 - Stirring tools
 - Blue food coloring
 - Sea creature figurines
 - Sand
 - Seashells
- o Water Activity
 - Water balloons
 - Squirt guns
 - Slip-N-Slide
- Day Five
 - Activator
 - Borax
 - Water
 - Container



- o Galaxy Slime
 - Glue
 - Borax-water solution
 - 3-4 mixing containers
 - Stirring tool
 - Various colors
 - Iridescent/Silver glitter
- Foil-Printed Moon
 - 2 paper plates
 - Black, gray, white paint
 - Tin foil
- Elephant Toothpaste
 - Bottle
 - Yeast
 - Hydrogen peroxide
 - Water
- Kinetic Sand
 - All-purpose flour
 - Vegetable oil
 - Sheet pan
 - Oven
 - Bowl
 - Whisk
- Galaxy in a Jar
 - Jar
 - Glitter
 - Purple food coloring
 - Water
 - Baby oil

