



Middle School Science First Five Weeks of School Plans



Hi there, I'm Karla! I'm a middle school science teacher from New Jersey. Are you new to teaching middle school science or happy to gather some new ideas to engage your students?

I know how nerve-racking the beginning of the school year can be. You want to feel confident and prepared. You want to create a warm and inviting learning environment. You want to set a high bar and a solid tone in order to lay the groundwork for a great year with your learners.

This resource includes five weeks of tried and tested activities that I use for:

- Getting to know my students
- Helping my students get to know me and each other
- Setting the tone for expectations and procedures of my classroom
- Assessing my new students' critical thinking skills
- Giving my students hands-on lab experiences right out of the gate
- Diving into the scientific process
- And more!

I hope that these Back to School plans help in your planning!

I want to invite you to check out my website and connect with me here: <https://sunrisescienceclassroom.com/>



Time Frame	Big Ideas / Objectives	Activities	Materials / Notes
Day 1	<p>Names + STEM Challenge</p> <p>Students will be able to engage in a STEM challenge by figuring out how to light a light bulb and attach it to a name tag.</p>	<p>★ Light Up Name Plates Challenge</p> 	<ul style="list-style-type: none"> ★ Student directions sheet ★ Name plate circuit template sheet (printed single-sided) ★ Large index card (4 x 6") ★ Aluminum foil sheet (about 12 x 4") ★ 3 Volt coin cell battery ★ LED light (5 mm) ★ Small index card (3 x 5") ★ Scissors ★ Glue stick ★ Scotch tape ★ Colored pencils, crayons, or markers
Days 2-3	<p>Introductory Lab + Getting to Know Peers</p> <p>Students will be able to participate in a social task and a science task at 8 different stations to help get to know peers and be pre-assessed on behavior and science content knowledge.</p>	 <p>★ Gab Lab First Lab of the Year Activity</p>	<ul style="list-style-type: none"> ★ Two sets of colored pencils ★ Two computers or devices with internet ★ A "drinking bird" toy ★ Two transparency sheets or plastic wrap ★ Cotton balls ★ Twizzlers ★ Ruler ★ Triple beam balance or scale ★ Two stopwatches
Days 4-5	<p>Getting to Know You</p> <p>Students will be able to choose three words and four items that</p>	<p>★ Brown Bag Biographies Activity</p>	<p>★ Your own "Brown Bag" filled with 5-10 items that represent unique things about you. For example, in my bag: photo of my husband and kids, crochet hook, passport holder, seashell, lavender, my favorite novel, chemistry flask</p>

	<p>represent who they are.</p> <p>SWBAT use basic computer skills to insert images of their chosen items onto a Google Slide.</p> <p>SWBAT present their Brown Bag Biography to the class or small groups of peers.</p>		<ul style="list-style-type: none"> ★ Students need computer/Google Apps access ★ Have students present their Brown Bag biographies tomorrow! 
Day 6	<p>Classroom Procedures</p> <p>Students will be able to explain the procedures and expectations of the class.</p>	<ul style="list-style-type: none"> ★ Doodle Syllabus ★ Bellwork Procedure 	<ul style="list-style-type: none"> ★ Printed or digitally-delivered syllabus ★ Bellwork board for the day ★ Optional: Blooket game on class procedures as review
Days 7-8	<p>Science Career Research</p> <p>SWBAT research a science career and design a t-shirt to showcase the education, skills, and job of a person in that career.</p> 	<ul style="list-style-type: none"> ★ Science Career Research and T-Shirt Design Project 	<ul style="list-style-type: none"> ★ Printed student project directions and career list ★ New or used-turned-inside-out T-shirts OR shirt templates printed on paper ★ <i>I suggest having students complete their career research and brainstorm sketches/how they will design their shirts in class and do the actual T-shirt decorating at home. Have students bring their decorated shirts into school on a specific due date that can be your 'Science Career Fashion Show Day' (Day 12)</i>
Day 9	<p>Lab Safety</p> <p>Students will be able to draw a labeled scientific diagram.</p>	 <ul style="list-style-type: none"> ★ Gummy Bear Demo 	<ul style="list-style-type: none"> ★ <i>Note: If the following lab equipment is not available to you, you can show this video instead while going over the names of the lab equipment and safety precautions! Even if you don't use all of this type of</i>

	<p>SWBAT explain the reasoning behind safety rules in the laboratory.</p>	<p>★ Lab Safety Rules Poster Project</p>	<p><i>equipment in your curriculum, it's still exciting for students to see this reaction. The other focus of this activity is drawing and labeling a scientific diagram– this means labeling everything! You can stress this as a main point as hopefully students will be modeling a lot throughout the school year.</i></p> <ul style="list-style-type: none"> ★ Pair of goggles ★ Ring stand ★ Test tube clamp ★ Large test tube ★ Tongs ★ Bunsen burner and tubing ★ Striker to light Bunsen burner ★ Scoopula (to scoop powdered chemical) ★ Potassium Chlorate ★ Gummy bears ★ White paper ★ Colored pencils, crayons, or markers ★ Optional: Student computers for digital activity
<p>Day 10</p>	<p>Science Process</p> <p>Students will be able to solve a mini chemistry puzzle with a partner without speaking or being able to see one another.</p>	<p>★ Mystery Solutions Challenge</p>	<ul style="list-style-type: none"> ★ white vinegar ★ 2% baking soda solution (mix 4 grams of baking soda into 200 mL of water) ★ 2% Alum (aluminum potassium sulfate) solution– you can get Alum in the spices aisle of the grocery store or from Amazon (mix 4 grams of Alum into 200 mL of water) ★ You will need enough cassette cases so each student has

			<p>one (I have 24 students in my largest class so I prepped 12 pairs, or 24 total cases)</p> <ul style="list-style-type: none"> ★ thin-stem pipettes (cut off most of the stem) ★ Sharpie marker to label the pipette bulbs and the case pairs ★ about 5 acetate sheets (transparency sheets) ★ some sort of cardboard dividers to place between students so partners can't see one another during the activity ★ Printed student sheets or digitally delivered version
Day 11	<p>Emailing a Teacher</p> <p>Students will be able to write a properly formatted and polite email to the teacher. (This will be helpful to you ALL year!)</p>	<ul style="list-style-type: none"> ★ Emailing a Teacher Mini-Lesson (scroll down to #4) 	<ul style="list-style-type: none"> ★ Student computers and access to email ★ <i>In their emails, you could have students write goals for their school year and tell you how they've been enjoying school so far. What activities have they liked best so far? What do they want you to know about them as a student?</i>
Day 12	<p>Science Career Fashion Show Day!</p>		<div style="text-align: center;">  </div> <ul style="list-style-type: none"> ★ Host the Science Career Research Project Fashion Show! Roll out a red carpet, invite other teachers and administrators to pop in, provide a small snack, and have students take turns walking the red carpet and telling about their science career! Take photos to show on Back to School Night!
Day 13	<p>Scientific Theories and Laws</p> <p>Students will be able to simulate the</p>	<ul style="list-style-type: none"> ★ Scientific Theories vs. Laws Activity (scroll down to #5) 	<ul style="list-style-type: none"> ★ Printed and cut out words in plastic baggies ★ Printed student sheets

	evolution of a scientific theory and differentiate between scientific theories and laws.		<ul style="list-style-type: none"> ★ Tennis balls 
Day 14	<p>Lab Equipment</p> <p>Students will be able to become familiar with the names and uses of common laboratory equipment.</p>	<ul style="list-style-type: none"> ★ Lab Equipment Scavenger Hunt and Practice Activities 	<ul style="list-style-type: none"> ★ One piece of each type of lab equipment or print out the included images of the lab equipment ★ Printed student sheets
Day 15	<p>Making Scientific Observations</p> <p>Students will be able to make observations and ask questions about a phenomenon.</p>	<ul style="list-style-type: none"> ★ Making Observations in Science Activity 	<ul style="list-style-type: none"> ★ Goggles for each student ★ Each group of three students will need: ★ A small (50 mL) beaker with solid calcium chloride pellets (I use the kind made for putting in pools at Home Depot) ★ A small (50 mL) beaker with baking soda (sodium bicarbonate) ★ 2 teaspoons (one in each beaker above) ★ Phenol red solution (0.02%) (available on Amazon or at science supply stores like Flinn Scientific) ★ A Ziploc sandwich bag (or generic brand!) that has a 'ziplock' ★ Sharpie marker ★ Tray to hold materials ★ Printed student sheets
Day 16	<p>Claim-Evidence-Reasoning</p> <p>Students will be able to write a claim</p>	<ul style="list-style-type: none"> ★ Claim-Evidence-Reasoning (CER) Lesson 	<ul style="list-style-type: none"> ★ Google Slides delivered digitally

	supported by evidence.		
Day 17	<p>Bubble Solutions Lab</p> <p>Students will be able to review the basics of experimental design by collecting and analyzing data on which bubble solution makes the biggest bubbles.</p>	<p>★ Bubble Solutions Lab</p> 	<ul style="list-style-type: none"> ★ Dish detergent ★ Glycerin (can be purchased on Amazon or in the first aid section of a pharmacy) ★ Sugar ★ Large flasks to make bubble solutions ★ Medicine cups or small beakers or cups to hold solutions ★ 10 mL graduated cylinder (one per group) ★ Straws (one per student) ★ Meter stick (one per group) ★ Student lab pages (one per student)



Earth and Space Science

Days 18-25	<p>Graphing and Data Analysis</p> <p>Students will be able to use real life data to create various types of graphs and analyze them.</p>	<p>★ Graphing Great Whites Project</p>	<ul style="list-style-type: none"> ★ <i>In addition to the graphing and data analysis skills, for Earth and Space science, you can stress the geographical mapping and use of satellite data</i> ★ Student access to https://www.ocearch.org/tracker/ ★ Printed student sheets and/or delivery of digital version
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 Life Science			
Days 18-25	Graphing and Data Analysis Students will be able to use real life data to create various types of graphs and analyze them.	★ Graphing Great Whites Project	★ <i>In addition to the graphing and data analysis skills, for Life science, you can stress the behavior, ecological niche, and evolution of the Great White Shark</i> ★ Student access to https://www.ocearch.org/tracker/ ★ Printed student sheets and/or delivery of digital version
 Physical Science			
Day 18	The Metric System + Measuring Length Students will be able to describe how the number 10 is the base of the metric system. SWBAT convert units within the metric system.	★ Metric System Cornell Doodle Notes ★ Metric Length 80s Party Activity	 ★ Scaffolded versions of the Cornell Doodle Notes printed for students ★ Colored pencils, crayons, and/or markers ★ Printed student sheets ★ Metric rulers - one per student or pair

	SWBAT take precise and accurate measurements of metric length using a ruler.		★ Various fun objects
Days 19-20	<p>Measuring Mass and Weight</p> <p>Students will be able to take precise and accurate measurements of mass using a triple beam balance and of weight using a spring scale.</p> <p>SWBAT subtract away the mass of a container.</p> <p>SWBAT take multiple massings of an object and find the average mass.</p>	<ul style="list-style-type: none"> ★ Mass and Weight Mini-Labs ★ Measuring Length, Mass, and Volume Cornell Doodle Notes 	<ul style="list-style-type: none"> ★ Triple beam balances - one per group of 3 students ★ Random small, fun items that students will mass (think spider rings, small figurine toys, random things you have in your classroom) ★ Fist-sized ball of modeling clay or playdough per group ★ Spring scales 2 or 3 different strengths per group ★ 6 pennies per group (pre- and post- 1982) ★ One mesh bag filled with small items (marbles, stones) per group ★ Scaffolded versions of the Cornell Doodle Notes printed for students ★ Colored pencils, crayons, and/or markers
Days 21-22	<p>Measuring Liquid Volume</p> <p>Students will be able to take precise and accurate measurements of liquid volume using a graduated cylinder.</p>	 <ul style="list-style-type: none"> ★ Rainbow Rack Lab (graduated cylinder worksheet and Part 1; start Part 2 if time allows) 	<ul style="list-style-type: none"> ★ Graduated cylinders of various sizes (10 mL, 25 mL, 50 mL, 100 mL) per group of 3 students ★ Food coloring (red, yellow, blue) ★ One test tube rack per group ★ 6 large test tubes per group ★ 3 small beakers per group ★ 3 pipettes per group
Days	Experimental Design Process	★ Experimental Design	★ Scaffolded versions of the Cornell Doodle Notes printed for

23-25	<p>SWBAT write testable questions, define the manipulated (independent), responding (dependent), constant variables, and controls of an experiment.</p> <p>SWBAT describe the stages of the experimental design process and the scientific method.</p> <p>SWBAT plan and conduct a fair experiment to determine which is the superior of three different brands of a common household product.</p>	<p>Cornell Doodle Notes</p> <p>★ Consumer Product Testing Project</p>	<p>students</p> <ul style="list-style-type: none"> ★ Colored pencils, crayons, and/or markers ★ Printed or digitally delivered student sheets ★ Various lab equipment for students to use to conduct their experiments ★ Students will need to coordinate within their group to bring in three different brands of the same product of choice (for example: diapers, hand soap, makeup remover, bubble solution, toilet paper, sunscreen, etc.)
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Check out these activities! [Back to School Bundle](#), [Nature of Science Bundle](#), [Graphing Great Whites](#):



(science) Back to School BUNDLE

Grades 6-8 8 Resources for Kicking Off the Year!

Grades 6-9 Varied Activities! 3+ Weeks

Nature of Science BUNDLE

SUNRISE SCIENCE

DATA TABLES
BAR GRAPHS
SCATTERPLOTS
PIE CHARTS
LINE GRAPHS

Graphing Great Whites

NGSS SEP Analyzing & Interpreting Data

DIGITAL VERSION INCLUDED!

A JAWsome Data Analysis & Graphing Project

STUDENTS USE THE GREAT WHITE TRACKING WEBSITE OCEARCH TO COLLECT DATA TO GRAPH AND ANALYZE!

You may also be interested in downloading the **free** pacing guides for my science curriculum bundles:

EARTH AND SPACE SCIENCE MIDDLE SCHOOL CURRICULUM pacing guide

FREE!

Editable Google Doc

SUNRISE SCIENCE

PHYSICAL SCIENCE MIDDLE SCHOOL CURRICULUM pacing guide

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