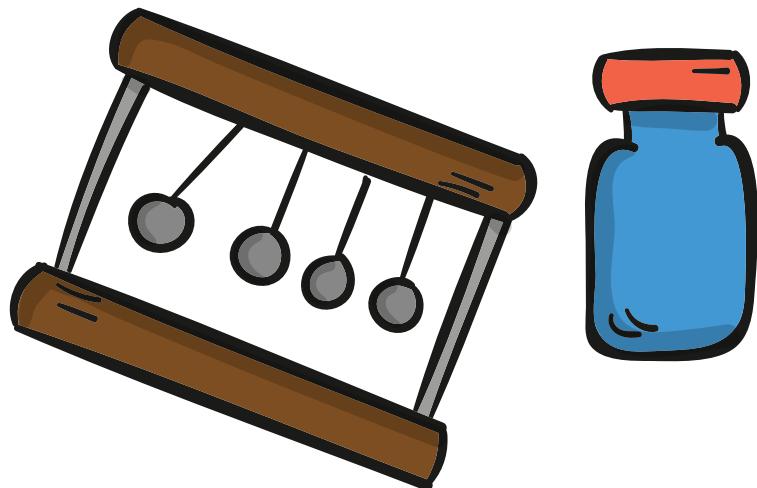


2026

# SCIENCE SLEUTHS CALENDAR

DAILY SCIENCE CHALLENGE  
WITH ANSWERS



# JANUARY

## SCIENCE SLEUTHS - DAILY SCIENCE CHALLENGE

### MATTER & ENERGY

PREDICTION - 01 WHAT WILL HAPPEN IF YOU HEAT AIR IN A SEALED BOTTLE PLACED IN WARM WATER?	TRIVIA - 02 WHAT STATE OF MATTER HAS A FIXED VOLUME BUT NO FIXED SHAPE?	TRUE OR FALSE - ALL SOLIDS SINK IN WATER.	OBSERVATION LOG - TOUCH THREE OBJECTS. WHICH FEELS COLDEST? WHY MIGHT THAT BE?	QUICK STEM - 05 BUILD THE STRONGEST PAPER COLUMN USING ONE SHEET OF PAPER.	VOCABULARY 06 MATCH - DENSITY = A. HOW HEAVY SOMETHING IS B. HOW TIGHTLY MATTER IS PACKED	RIDDLE - 07 I CAN CHANGE SHAPE BUT NOT VOLUME. WHAT AM I?
PREDICTION - 08 WHAT HAPPENS WHEN YOU PLACE A METAL SPOON AND A WOODEN SPOON IN HOT WATER?	TRIVIA - 09 WHAT TOOL IS USED TO MEASURE MASS?	TRUE OR FALSE - TEMPERATURE AND HEAT ARE THE SAME THING.	OBSERVATION LOG - FIND SOMETHING EXPANDING OR CONTRACTING TODAY.	QUICK STEM - 12 DESIGN A CONTAINER THAT KEEPS ICE FROM MELTING FOR 10 MINUTES.	VOCABULARY 13 MATCH - CONDUCTOR = A. BLOCKS HEAT B. TRANSFERS HEAT EASILY	TRIVIA - 14 WHICH MATERIAL CONDUCTS HEAT BETTER: PLASTIC OR METAL?
PREDICTION - 15 WHAT HAPPENS IF YOU COMPRESS A SPONGE UNDERWATER?	OBSERVATION LOG - HOW DOES STEAM BEHAVE NEAR A POT OF BOILING WATER?	TRUE OR FALSE - AIR TAKES UP SPACE.	QUICK STEM - 18 CREATE A BALANCE SCALE USING HOUSEHOLD ITEMS.	VOCABULARY 19 MATCH - INSULATION = A. TRAPS HEAT B. RELEASES HEAT	TRIVIA - 20 WHAT HAPPENS TO PARTICLES WHEN MATTER HEATS UP?	PREDICTION - 21 WHAT WILL HAPPEN IF YOU LEAVE A SEALED JUICE BOX IN THE SUN?
OBSERVATION LOG - WHAT MATERIALS FEEL WARMEST INDOORS?	RIDDLE - 23 I'M INVISIBLE, PUSH BALLOONS, AND FILL TIRES. WHAT AM I?	TRUE OR FALSE - GASES HAVE MASS.	QUICK STEM - 25 BUILD A FOIL SHAPE THAT FLOATS LONGEST.	VOCABULARY 26 MATCH - VOLUME = A. WEIGHT B. SPACE SOMETHING TAKES UP	TRIVIA - 27 WHAT UNIT IS USED TO MEASURE TEMPERATURE?	PREDICTION - 28 WHAT HAPPENS WHEN ICE IS PLACED IN SALT?
OBSERVATION LOG - HOW FAST DOES ICE MELT IN DIFFERENT CONTAINERS?	TRUE OR FALSE - MATTER CAN BE DESTROYED.	BONUS - CREATE YOUR OWN MATTER EXPERIMENT USING 3 MATERIALS.	31			

WORK SPACE

# FEBRUARY

## SCIENCE SLEUTHS – DAILY SCIENCE CHALLENGE

### LIFE SCIENCE

OBSERVATION <b>01</b> LOG – LIST THREE LIVING AND THREE NON-LIVING THINGS YOU SEE.	TRIVIA – <b>02</b> WHAT DO PLANTS NEED TO MAKE FOOD BESIDES SUNLIGHT?	PREDICTION – <b>03</b> WHAT HAPPENS IF SEEDS GROW WITHOUT SOIL?	VOCABULARY <b>04</b> MATCH – ORGANISM = A. LIVING THING B. HABITAT	TRUE OR FALSE – ALL PLANTS PRODUCE FLOWERS.	QUICK STEM – BUILD A MODEL OF A PLANT USING RECYCLED ITEMS.	RIDDLE – <b>07</b> I CARRY WATER FROM ROOTS TO LEAVES. WHAT AM I?
OBSERVATION <b>08</b> LOG – EXAMINE A LEAF CLOSELY. WHAT PATTERNS DO YOU SEE?	TRIVIA – <b>09</b> WHAT PART OF THE PLANT MAKES SEEDS?	PREDICTION – <b>10</b> WHAT HAPPENS IF A PLANT GETS TOO MUCH WATER?	VOCABULARY <b>11</b> MATCH – PHOTOSYNTHESIS = A. ROOT GROWTH B. MAKING FOOD USING LIGHT	TRUE OR FALSE – FUNGI ARE PLANTS.	QUICK STEM – DESIGN A GREENHOUSE USING PLASTIC WRAP.	OBSERVATION <b>14</b> LOG – HOW DO PLANTS FACE THE SUN?
TRIVIA – <b>15</b> WHAT GAS DO HUMANS EXHALE?	PREDICTION – <b>16</b> WHAT HAPPENS IF WORMS DISAPPEAR FROM SOIL?	VOCABULARY <b>17</b> MATCH – HABITAT = A. PLACE AN ORGANISM LIVES B. WHAT IT EATS	TRUE OR FALSE – BACTERIA ARE ALWAYS HARMFUL.	QUICK STEM – SORT OBJECTS AS LIVING, ONCE-LIVING, OR NON-LIVING.	OBSERVATION <b>20</b> LOG – WHERE DO INSECTS GATHER MOST?	TRIVIA – <b>21</b> WHICH ORGAN PUMPS BLOOD?
PREDICTION – <b>22</b> HOW DOES EXERCISE CHANGE BREATHING RATE?	VOCABULARY <b>23</b> MATCH – VERTEBRATE = A. NO BACKBONE B. HAS BACKBONE	TRUE OR FALSE – HUMANS ARE MAMMALS.	QUICK STEM – BUILD A MODEL LUNG USING BALLOONS.	OBSERVATION <b>26</b> LOG – MEASURE PULSE BEFORE AND AFTER MOVEMENT.	TRIVIA – <b>27</b> WHAT SYSTEM CONTROLS MOVEMENT?	PREDICTION – <b>28</b> WHAT HAPPENS IF MUSCLES DON'T GET OXYGEN?
BONUS – <b>29</b> INVENT A PLANT WITH THREE SURVIVAL TRAITS.						

WORK SPACE

# MARCH

## SCIENCE SLEUTHS - DAILY SCIENCE CHALLENGE EARTH & ENVIRONMENTAL SCIENCE

OBSERVATION <b>01</b> LOG - FIND TWO TYPES OF SOIL. HOW ARE THEY DIFFERENT?	TRIVIA - <b>02</b> WHAT IS SOIL MOSTLY MADE OF?	PREDICTION - <b>03</b> WHAT HAPPENS WHEN WATER FLOWS OVER LOOSE SOIL?	VOCABULARY <b>04</b> MATCH - EROSION = A. PLANT GROWTH B. BREAKING DOWN LAND	TRUE OR FALSE - <b>05</b> ROCKS ARE ALWAYS HARD.	QUICK STEM - <b>06</b> BUILD A MINI EROSION MODEL USING DIRT AND WATER.	OBSERVATION <b>07</b> LOG - WHERE DOES RAINWATER GO AFTER A STORM?
TRIVIA - <b>08</b> WHAT IS MAGMA CALLED ONCE IT REACHES EARTH'S SURFACE?	PREDICTION - <b>09</b> WHAT HAPPENS IF PLANTS ARE REMOVED FROM SOIL?	VOCABULARY <b>10</b> MATCH - FOSSIL = A. PRESERVED REMAINS B. LIVING ANIMAL	TRUE OR FALSE - <b>11</b> SOIL FORMS QUICKLY.	QUICK STEM - <b>12</b> SORT ROCKS BY SIZE, SHAPE, OR COLOR.	OBSERVATION <b>13</b> LOG - FIND SIGNS OF EROSION NEAR YOUR HOME.	TRIVIA - <b>14</b> WHAT LAYER OF EARTH DO WE LIVE ON?
PREDICTION - <b>15</b> WHAT HAPPENS WHEN SAND GETS WET?	VOCABULARY <b>16</b> MATCH - WEATHERING = A. BREAKING DOWN ROCKS B. MOVING ROCKS	TRUE OR FALSE - <b>17</b> EARTH'S SURFACE IS ALWAYS CHANGING.	QUICK STEM - <b>18</b> MAKE LAYERS USING COLORED SAND OR PAPER.	OBSERVATION <b>19</b> LOG - WHAT NATURAL MATERIALS DO YOU SEE TODAY?	TRIVIA - <b>20</b> WHAT CAUSES EARTHQUAKES?	PREDICTION - <b>21</b> WHAT HAPPENS WHEN LAND SHAKES?
VOCABULARY <b>22</b> MATCH - RENEWABLE = A. CAN BE REPLACED B. USED ONCE	TRUE OR FALSE - <b>23</b> TREES HELP PREVENT EROSION.	QUICK STEM - <b>24</b> DESIGN A MODEL HILL THAT RESISTS EROSION.	OBSERVATION <b>25</b> LOG - HOW DOES WIND AFFECT LOOSE OBJECTS?	TRIVIA - <b>26</b> WHAT ENERGY COMES FROM MOVING WATER?	PREDICTION - <b>27</b> WHAT HAPPENS WHEN TRASH ENTERS SOIL?	VOCABULARY <b>28</b> MATCH - CONSERVATION = A. PROTECTING RESOURCES B. WASTING RESOURCES
TRUE OR FALSE - <b>29</b> HUMANS AFFECT EARTH'S SURFACE.	OBSERVATION <b>30</b> LOG - ONE EARTH CHANGE YOU NOTICED THIS MONTH.	BONUS - <b>31</b> CREATE AN EARTH-CARE PLEDGE.				

WORK SPACE

# APRIL

## SCIENCE SLEUTHS – DAILY SCIENCE CHALLENGE WEATHER & CLIMATE

OBSERVATION 01 LOG – DESCRIBE TODAY'S WEATHER.	TRIVIA – 02 WHAT TOOL MEASURES RAINFALL?	PREDICTION – 03 WHAT HAPPENS WHEN WARM AND COOL AIR MEET?	VOCABULARY 04 MATCH – CLIMATE = A. LONG-TERM WEATHER B. DAILY WEATHER	TRUE OR FALSE – 05 WIND IS MOVING AIR.	QUICK STEM – 06 MAKE A PAPER WIND VANE.	OBSERVATION 07 LOG – WHICH DIRECTION IS THE WIND BLOWING?
TRIVIA – 08 WHAT CAUSES CLOUDS TO FORM?	PREDICTION – 09 WHAT HAPPENS TO PUDDLES ON CLOUDY DAYS?	VOCABULARY 10 MATCH – HUMIDITY = A. MOISTURE IN AIR B. WIND SPEED	TRUE OR FALSE – 11 ALL CLOUDS BRING RAIN.	QUICK STEM – 12 CREATE A CLOUD IN A JAR.	OBSERVATION 13 LOG – COMPARE MORNING AND AFTERNOON TEMPERATURES.	TRIVIA – 14 WHAT KIND OF STORM INCLUDES LIGHTNING?
PREDICTION – 15 WHAT HAPPENS BEFORE A STORM?	VOCABULARY 16 MATCH – FORECAST = A. WEATHER PREDICTION B. WEATHER RECORD	TRUE OR FALSE – 17 WEATHER CAN CHANGE QUICKLY.	QUICK STEM – 18 DESIGN A WEATHER SYMBOL CHART.	OBSERVATION 19 LOG – TRACK WEATHER FOR 3 DAYS.	TRIVIA – 20 WHAT CAUSES FOG?	PREDICTION – 21 WHAT HAPPENS WHEN AIR COOLS?
VOCABULARY 22 MATCH – BAROMETER = A. MEASURES AIR PRESSURE B. MEASURES WIND	TRUE OR FALSE – 23 SNOW IS FROZEN RAIN.	QUICK STEM – 24 BUILD A THERMOMETER MODEL.	OBSERVATION 25 LOG – HOW DOES WEATHER AFFECT CLOTHING?	TRIVIA – 26 WHAT CAUSES RAINBOWS?	PREDICTION – 27 WHAT HAPPENS WHEN SUNLIGHT HITS RAIN?	VOCABULARY 28 MATCH – PRECIPITATION = A. WATER FALLING B. WATER EVAPORATING
TRUE OR FALSE – 29 WEATHER AFFECTS PLANTS AND ANIMALS.	BONUS – 30 CREATE TOMORROW'S WEATHER FORECAST.					

WORK SPACE

# MAY

## SCIENCE SLEUTHS - DAILY SCIENCE CHALLENGE FORCES & MOTION

OBSERVATION 01 LOG - FIND SOMETHING THAT MOVES WITHOUT TOUCHING IT.	TRIVIA - 02 WHAT FORCE PULLS OBJECTS DOWN?	PREDICTION - 03 WHAT HAPPENS WHEN YOU PUSH HARDER?	VOCABULARY 04 MATCH - FORCE = A. PUSH OR PULL B. SHAPE	TRUE OR FALSE - FRICTION SLOWS MOVEMENT.	QUICK STEM - ROLL A BALL ON DIFFERENT SURFACES.	OBSERVATION 07 LOG - WHICH SURFACE SLOWS MOVEMENT MOST?
TRIVIA - 08 WHAT FORCE MAKES OBJECTS STICK TOGETHER?	PREDICTION - 09 WHAT HAPPENS IF FRICTION DISAPPEARS?	VOCABULARY 10 MATCH - GRAVITY = A. PULL TOWARD EARTH B. WIND	TRUE OR FALSE - HEAVIER OBJECTS FALL FASTER.	QUICK STEM - BUILD A RAMP AND TEST SPEED.	OBSERVATION 13 LOG - MEASURE DISTANCE TRAVELED.	TRIVIA - 14 WHAT SIMPLE MACHINE IS A RAMP?
PREDICTION - 15 WHAT HAPPENS WHEN YOU CHANGE RAMP HEIGHT?	VOCABULARY 16 MATCH - MOTION = A. MOVEMENT B. STILLNESS	TRUE OR FALSE - OBJECTS AT REST HAVE NO ENERGY.	QUICK STEM - CREATE A MARBLE MAZE.	OBSERVATION 19 LOG - WATCH MOVING OBJECTS OUTDOORS.	TRIVIA - 20 WHAT MAKES WHEELS USEFUL?	PREDICTION - 21 WHAT HAPPENS WHEN WHEELS ARE REMOVED?
VOCABULARY 22 MATCH - SPEED = A. HOW FAST B. HOW HEAVY	TRUE OR FALSE - MACHINES MAKE WORK EASIER.	QUICK STEM - BUILD A SPINNING TOY.	OBSERVATION 25 LOG - WHAT SPINS EASILY?	TRIVIA - 26 WHAT FORCE RESISTS MOTION?	PREDICTION - 27 WHAT HAPPENS ON SLIPPERY SURFACES?	VOCABULARY 28 MATCH - ENERGY = A. ABILITY TO DO WORK B. WEIGHT
TRUE OR 29 FALSE - MOTION ALWAYS NEEDS ENERGY.	OBSERVATION 30 LOG - MOTION YOU NOTICED TODAY.	BONUS - DESIGN A MOVING INVENTION.	31			

WORK SPACE

# JUNE

## SCIENCE SLEUTHS - DAILY SCIENCE CHALLENGE

### LiGHT & SOUND

OBSERVATION <b>01</b> LOG - FIND THREE LIGHT SOURCES INSIDE YOUR HOME.	TRIVIA - <b>02</b> WHAT IS THE MAIN NATURAL SOURCE OF LIGHT ON EARTH?	PREDICTION - <b>03</b> WHAT HAPPENS WHEN AN OBJECT BLOCKS LIGHT?	VOCABULARY <b>04</b> MATCH - SHADOW = A. A DARK AREA WHERE LIGHT IS BLOCKED B. A TYPE OF SOUND	TRUE OR FALSE - SOUND CAN TRAVEL THROUGH SOLIDS.	QUICK STEM - CREATE A PAPER TUBE TO AMPLIFY SOUND. DOES IT CHANGE VOLUME?	OBSERVATION <b>07</b> LOG - LISTEN FOR ONE MINUTE. WHAT SOUNDS DO YOU HEAR NEARBY?
TRIVIA - <b>08</b> WHAT CAUSES AN ECHO?	PREDICTION - <b>09</b> WHAT HAPPENS TO SOUND WHEN YOU COVER YOUR EARS?	VOCABULARY <b>10</b> MATCH - VIBRATION = A. BACK-AND-FORTH MOVEMENT B. STILLNESS	TRUE OR FALSE - LIGHT TRAVELS IN STRAIGHT LINES.	QUICK STEM - TRACE SHADOWS AT TWO DIFFERENT TIMES OF DAY.	OBSERVATION <b>13</b> LOG - HOW DOES THE DIRECTION OF LIGHT AFFECT SHADOWS?	TRIVIA - <b>14</b> WHAT TRAVELS FASTER: LIGHT OR SOUND?
PREDICTION - <b>15</b> WHAT HAPPENS WHEN LIGHT HITS A MIRROR?	VOCABULARY <b>16</b> MATCH - REFLECTION = A. LIGHT BOUNCING OFF A SURFACE B. LIGHT PASSING THROUGH AN OBJECT	TRUE OR FALSE - ALL SOUNDS ARE LOUD.	QUICK STEM - MAKE A CUP-AND-STRING PHONE. DOES SOUND TRAVEL THROUGH THE STRING?	OBSERVATION <b>19</b> LOG - DOES SOUND CHANGE AS YOU MOVE FARTHER AWAY?	TRIVIA - <b>20</b> WHAT CAUSES SOUND?	PREDICTION - <b>21</b> WHAT HAPPENS WHEN YOU WHISPER INSTEAD OF SHOUT?
VOCABULARY <b>22</b> MATCH - PITCH = A. HOW HIGH OR LOW A SOUND IS B. HOW LOUD A SOUND IS	TRUE OR FALSE - LIGHT CAN BEND WHEN IT PASSES THROUGH WATER.	QUICK STEM - SPIN A COLOR WHEEL TO SEE HOW COLORS MIX.	OBSERVATION <b>25</b> LOG - NAME THE COLORS YOU SEE IN WHITE LIGHT.	TRIVIA - <b>26</b> WHAT ANIMAL USES ECHolocation TO "SEE"?	PREDICTION - <b>27</b> WHAT HAPPENS IN A ROOM WITH NO LIGHT?	VOCABULARY <b>28</b> MATCH - TRANSPARENT = A. LETS LIGHT PASS THROUGH B. BLOCKS LIGHT
TRUE OR FALSE - SOUND NEEDS MATTER TO TRAVEL.	BONUS - <b>30</b> DESIGN YOUR OWN LIGHT OR SOUND EXPERIMENT USING HOUSEHOLD ITEMS.					

### WORK SPACE

# JULY

## SCIENCE SLEUTHS - DAILY SCIENCE CHALLENGE SPACE SCIENCE

OBSERVATION 01 LOG - LOOK AT THE SKY DURING THE DAY. WHAT DO YOU NOTICE?	TRIVIA - 02 WHAT IS THE NAME OF THE STAR CLOSEST TO EARTH?	PREDICTION - 03 WHAT WOULD HAPPEN IF THE SUN DISAPPEARED?	VOCABULARY 04 MATCH - ORBIT = A. THE PATH AN OBJECT TAKES AROUND ANOTHER OBJECT B. A TYPE OF STAR	TRUE OR FALSE - THE MOON REFLECTS LIGHT FROM THE SUN.	QUICK STEM - BUILD A SIMPLE PAPER ROCKET AND TEST HOW FAR IT FLIES.	OBSERVATION 07 LOG - LOOK AT THE MOON TONIGHT. WHAT SHAPE DOES IT APPEAR TO BE?
TRIVIA - 08 WHICH PLANET IS KNOWN FOR ITS RINGS?	PREDICTION - 09 WHAT DO YOU THINK WOULD HAPPEN TO YOUR WEIGHT ON THE MOON?	VOCABULARY 10 MATCH - GRAVITY = A. A FORCE THAT PULLS OBJECTS TOWARD EACH OTHER B. A TYPE OF GAS	TRUE OR FALSE - THE SUN IS A PLANET.	QUICK STEM - CREATE A MODEL OF THE SOLAR SYSTEM USING HOUSEHOLD MATERIALS.	OBSERVATION 13 LOG - COMPARE THE LENGTH OF SHADOWS IN THE MORNING AND AFTERNOON.	TRIVIA - 14 WHICH PLANET IS CLOSEST TO THE SUN?
PREDICTION - 15 WHAT MIGHT HAPPEN IF THERE WERE NO GRAVITY ON EARTH?	VOCABULARY 16 MATCH - SATELLITE = A. AN OBJECT THAT ORBITS A PLANET B. A TYPE OF ASTEROID	TRUE OR FALSE - STARS APPEAR TO MOVE ACROSS THE NIGHT SKY.	QUICK STEM - MAKE A CRATER MODEL USING FLOUR AND A SMALL OBJECT.	OBSERVATION 19 LOG - NOTICE THE COLORS OF THE SKY AT SUNSET.	TRIVIA - 20 WHY DO STARS SEEM TO TWINKLE?	PREDICTION - 21 WHAT WOULD HAPPEN IF EARTH SPUN FASTER?
VOCABULARY 22 MATCH - GALAXY = A. A GROUP OF BILLIONS OF STARS B. A SINGLE PLANET	TRUE OR 23 FALSE - EARTH IS THE ONLY PLANET THAT SUPPORTS LIFE (THAT WE KNOW OF).	QUICK STEM - CREATE A SUNDIAL AND TRACK TIME USING THE SUN.	OBSERVATION 25 LOG - HOW DO SHADOWS MOVE THROUGHOUT THE DAY?	TRIVIA - 26 WHAT IS THE LARGEST PLANET IN OUR SOLAR SYSTEM?	PREDICTION - 27 WHAT MIGHT HAPPEN IF EARTH HAD LONGER DAYS?	VOCABULARY 28 MATCH - ECLIPSE = A. WHEN ONE SPACE OBJECT BLOCKS ANOTHER B. WHEN A STAR EXPLODES
TRUE OR 29 FALSE - THE MOON GOES THROUGH PHASES EACH MONTH.	OBSERVATION 30 LOG - WRITE ONE NEW SPACE FACT YOU LEARNED THIS MONTH.	BONUS - DESIGN YOUR OWN PLANET AND DESCRIBE ITS FEATURES.	31			

WORK SPACE

# AUGUST

## SCIENCE SLEUTHS - DAILY SCIENCE CHALLENGE ANIMAL ADAPTATIONS

OBSERVATION 01 LOG - LOOK OUTSIDE. WHAT ANIMALS OR INSECTS DO YOU NOTICE?	TRIVIA - 02 WHAT IS AN ADAPTATION?	PREDICTION - 03 HOW WOULD AN ANIMAL SURVIVE WITHOUT SHELTER?	VOCABULARY 04 MATCH - ADAPTATION = A. A SPECIAL FEATURE THAT HELPS AN ANIMAL SURVIVE B. A PLACE AN ANIMAL LIVES	TRUE OR FALSE - ALL ANIMALS HAVE THE SAME ADAPTATIONS.	QUICK STEM - DESIGN AN ANIMAL THAT LIVES IN A VERY HOT PLACE.	OBSERVATION 07 LOG - WHERE DO ANIMALS FIND SHADE DURING THE DAY?
TRIVIA - 08 WHAT BODY COVERING DO BIRDS HAVE?	PREDICTION - 09 HOW DO ANIMALS STAY WARM IN COLD WEATHER?	VOCABULARY 10 MATCH - CAMOUFLAGE = A. BLENDING INTO SURROUNDINGS B. MOVING LONG DISTANCES	TRUE OR FALSE - CAMOUFLAGE HELPS ANIMALS HIDE.	QUICK STEM - CREATE A CAMOUFLAGE PATTERN USING PAPER AND CRAYONS.	OBSERVATION 13 LOG - CAN YOU FIND AN ANIMAL THAT BLENDs INTO ITS SURROUNDINGS?	TRIVIA - 14 WHAT DO WE CALL ANIMALS THAT EAT BOTH PLANTS AND ANIMALS?
PREDICTION - 15 WHAT MIGHT HAPPEN IF AN ANIMAL LOSES ITS CAMOUFLAGE?	VOCABULARY 16 MATCH - MIGRATION = A. MOVING TO A NEW PLACE DURING THE YEAR B. SLEEPING ALL WINTER	TRUE OR FALSE - SOME ANIMALS MIGRATE TO SURVIVE.	QUICK STEM - BUILD A MODEL OF AN ANIMAL HOME USING RECYCLED MATERIALS.	OBSERVATION 19 LOG - WATCH AN ANIMAL FOR TWO MINUTES. WHAT DOES IT DO?	TRIVIA - 20 WHICH ANIMAL IS KNOWN FOR CHANGING ITS COLOR?	PREDICTION - 21 HOW DO ANIMALS PROTECT THEMSELVES FROM PREDATORS?
VOCABULARY 22 MATCH - PREDATOR = A. AN ANIMAL THAT HUNTS OTHER ANIMALS B. AN ANIMAL THAT IS HUNTED	TRUE OR 23 FALSE - ALL ANIMALS HUNT FOR THEIR FOOD.	QUICK STEM - DESIGN A BEAK OR MOUTH TOOL FOR A SPECIFIC FOOD.	OBSERVATION 25 LOG - WHAT SOUNDS DO ANIMALS USE TO COMMUNICATE?	TRIVIA - 26 WHAT ANIMAL HAS THICK FUR AND BLUBBER TO STAY WARM?	PREDICTION - 27 WHAT HAPPENS TO ANIMALS WHEN THEIR HABITAT CHANGES?	VOCABULARY 28 MATCH - HIBERNATION = A. LONG WINTER SLEEP B. DAILY NAP
TRUE OR 29 FALSE - SOME ANIMALS HIBERNATE TO SAVE ENERGY.	OBSERVATION 30 LOG - WRITE ONE ANIMAL ADAPTATION YOU LEARNED THIS MONTH.	BONUS - INVENT A NEW ANIMAL WITH THREE ADAPTATIONS.	31			

WORK SPACE

# SEPTEMBER

## SCIENCE SLEUTHS - DAILY SCIENCE CHALLENGE CHEMISTRY BASICS

OBSERVATION <b>01</b> LOG - LOOK AROUND YOUR HOME. NAME TWO SOLIDS AND TWO LIQUIDS.	TRIVIA - <b>02</b> WHAT ARE THE THREE STATES OF MATTER?	PREDICTION - <b>03</b> WHAT HAPPENS WHEN ICE IS LEFT AT ROOM TEMPERATURE?	VOCABULARY <b>04</b> MATCH - SOLID = A. KEEPS ITS SHAPE B. FLOWS EASILY	TRUE OR FALSE - LIQUIDS TAKE THE SHAPE OF THEIR CONTAINER.	QUICK STEM - SORT CLASSROOM OR HOUSEHOLD ITEMS BY STATE OF MATTER.	OBSERVATION <b>07</b> LOG - FIND SOMETHING THAT CHANGES WHEN HEATED OR COOLED.
TRIVIA - <b>08</b> WHAT DO WE CALL A CHANGE THAT DOES NOT MAKE A NEW SUBSTANCE?	PREDICTION - <b>09</b> WHAT HAPPENS WHEN SUGAR IS STIRRED INTO WATER?	VOCABULARY <b>10</b> MATCH - MIXTURE = A. TWO OR MORE THINGS MIXED TOGETHER B. A BRAND-NEW SUBSTANCE	TRUE OR FALSE - MIXING ALWAYS CREATES A NEW SUBSTANCE.	QUICK STEM - MIX OIL AND WATER. WHAT DO YOU OBSERVE?	OBSERVATION <b>13</b> LOG - WHAT MIXTURES CAN YOU FIND IN THE KITCHEN?	TRIVIA - <b>14</b> WHAT GAS DO HUMANS NEED TO BREATHE?
PREDICTION - <b>15</b> WHAT HAPPENS WHEN VINEGAR IS ADDED TO BAKING SODA?	VOCABULARY <b>16</b> MATCH - CHEMICAL CHANGE = A. A CHANGE THAT MAKES A NEW SUBSTANCE B. A CHANGE IN SHAPE	TRUE OR FALSE - RUSTING IS A CHEMICAL CHANGE.	QUICK STEM - CREATE A FIZZING REACTION USING SAFE KITCHEN MATERIALS.	OBSERVATION <b>19</b> LOG - LOOK FOR SIGNS OF CHANGE (BUBBLES, COLOR, SMELL).	TRIVIA - <b>20</b> WHAT IS A CHEMIST?	PREDICTION - <b>21</b> WHAT HAPPENS WHEN A WET TOWEL IS LEFT IN THE SUN?
VOCABULARY <b>22</b> MATCH - EVAPORATION = A. LIQUID CHANGING INTO GAS B. SOLID MELTING	TRUE OR FALSE - EVAPORATION HAPPENS FASTER IN WARM PLACES.	QUICK STEM - DESIGN A SIMPLE FILTER USING PAPER AND WATER.	OBSERVATION <b>25</b> LOG - WHICH MATERIALS DISSOLVE IN WATER?	TRIVIA - <b>26</b> WHAT HAPPENS TO MATTER WHEN IT FREEZES?	PREDICTION - <b>27</b> WHAT WILL HAPPEN IF YOU MIX SALT AND WARM WATER?	VOCABULARY <b>28</b> MATCH - DISSOLVE = A. MIX EVENLY INTO A LIQUID B. SINK TO THE BOTTOM
TRUE OR FALSE - GASES TAKE UP SPACE.	BONUS - <b>30</b> CREATE YOUR OWN SAFE CHEMISTRY EXPERIMENT AND EXPLAIN IT.					

### WORK SPACE

# OCTOBER

## SCIENCE SLEUTHS - DAILY SCIENCE CHALLENGE ENGINEERING & DESIGN

OBSERVATION 01 LOG - LOOK AROUND YOU. WHAT OBJECTS WERE DESIGNED BY ENGINEERS?	TRIVIA - WHAT IS AN ENGINEER?	PREDICTION -03 WHAT HAPPENS IF A STRUCTURE HAS A WEAK BASE?	VOCABULARY 04 MATCH - ENGINEER = A. SOMEONE WHO DESIGNS AND BUILDS SOLUTIONS B. SOMEONE WHO STUDIES ANIMALS	TRUE OR FALSE - ENGINEERS SOLVE PROBLEMS.	QUICK STEM - BUILD THE TALLEST TOWER USING ONLY PAPER.	OBSERVATION 07 LOG - WHICH SHAPES MAKE STRUCTURES STRONGER?
TRIVIA - 08 WHAT SHAPE IS OFTEN USED IN BRIDGES FOR STRENGTH?	PREDICTION -09 WHAT HAPPENS IF YOU ADD MORE WEIGHT TO A BRIDGE?	VOCABULARY 10 MATCH - STRUCTURE = A. SOMETHING BUILT B. A TYPE OF MACHINE	TRUE OR FALSE - STRONG STRUCTURES ARE ALWAYS HEAVY.	QUICK STEM - DESIGN A BRIDGE THAT SPANS TWO BOOKS.	OBSERVATION 13 LOG - WHAT MATERIALS BEND? WHICH STAY STIFF?	TRIVIA - WHAT TOOL HELPS ENGINEERS MEASURE LENGTH?
PREDICTION - 15 WHAT HAPPENS WHEN YOU CHANGE BUILDING MATERIALS?	VOCABULARY 16 MATCH - DESIGN = A. A PLAN FOR BUILDING B. A FINISHED PRODUCT	TRUE OR FALSE - ENGINEERS TEST THEIR IDEAS MORE THAN ONCE.	QUICK STEM - BUILD A CHAIR FOR A TOY USING CRAFT MATERIALS.	OBSERVATION 19 LOG - Did YOUR DESIGN WORK THE FIRST TIME? WHY OR WHY NOT?	TRIVIA - WHAT DOES IT MEAN TO IMPROVE A DESIGN?	PREDICTION - 21 WHAT HAPPENS IF A DESIGN FAILS?
VOCABULARY 22 MATCH - PROTOTYPE = A. FIRST MODEL B. FINAL PRODUCT	TRUE OR FALSE - FAILURE HELPS ENGINEERS LEARN.	QUICK STEM - CREATE A CONTAINER THAT PROTECTS A FALLING OBJECT.	OBSERVATION 25 LOG - WHAT CHANGES MADE YOUR DESIGN BETTER?	TRIVIA - WHY DO ENGINEERS USE DIFFERENT MATERIALS?	PREDICTION - 27 WHAT HAPPENS WHEN YOU TEST THE SAME DESIGN AGAIN?	VOCABULARY 28 MATCH - SOLUTION = A. AN ANSWER TO A PROBLEM B. A MISTAKE
TRUE OR 29 FALSE - THERE IS ONLY ONE WAY TO SOLVE A PROBLEM.	OBSERVATION 30 LOG - WRITE ONE THING YOU LEARNED ABOUT ENGINEERING THIS MONTH.	BONUS - DESIGN AN INVENTION THAT SOLVES A DAILY PROBLEM.	31			

### WORK SPACE

# NOVEMBER

## SCIENCE SLEUTHS - DAILY SCIENCE CHALLENGE

### HUMAN BODY SYSTEMS

OBSERVATION 01 LOG - PLACE YOUR HAND ON YOUR CHEST. WHAT DO YOU FEEL?	TRIVIA - 02 WHAT ORGAN PUMPS BLOOD THROUGH YOUR BODY?	PREDICTION - 03 WHAT HAPPENS TO YOUR HEARTBEAT WHEN YOU RUN?	VOCABULARY 04 MATCH - ORGAN = A. A BODY PART THAT DOES A SPECIAL JOB B. A TYPE OF BONE	TRUE OR FALSE - 05 THE HEART IS A MUSCLE.	QUICK STEM - 06 MEASURE YOUR PULSE AT REST AND AFTER MOVEMENT.	OBSERVATION 07 LOG - HOW DOES YOUR BREATHING CHANGE AFTER EXERCISE?
TRIVIA - 08 WHICH BODY SYSTEM HELPS YOU BREATHE?	PREDICTION - 09 WHAT WOULD HAPPEN IF YOUR LUNGS STOPPED WORKING?	VOCABULARY 10 MATCH - LUNG = A. ORGAN USED FOR BREATHING B. ORGAN USED FOR THINKING	TRUE OR FALSE - 11 YOU CAN LIVE WITHOUT OXYGEN.	QUICK STEM - 12 BUILD A LUNG MODEL USING BALLOONS AND A BOTTLE.	OBSERVATION 13 LOG - WHAT BONES CAN YOU FEEL IN YOUR BODY?	TRIVIA - 14 WHAT SYSTEM IS MADE OF BONES?
PREDICTION - 15 WHAT HAPPENS IF BONES ARE WEAK?	VOCABULARY 16 MATCH - SKELETON = A. FRAMEWORK OF BONES B. GROUP OF MUSCLES	TRUE OR FALSE - 17 BONES PROTECT ORGANS.	QUICK STEM - 18 MAKE A PAPER MODEL OF A JOINT THAT BENDS.	OBSERVATION 19 LOG - WHAT MOVEMENTS CAN YOUR JOINTS MAKE?	TRIVIA - 20 WHICH SYSTEM HELPS YOU MOVE?	PREDICTION - 21 WHAT HAPPENS IF MUSCLES ARE NOT USED?
VOCABULARY 22 MATCH - MUSCLE = A. HELPS MOVE BONES B. MAKES BLOOD	TRUE OR FALSE - 23 MUSCLES WORK WITH BONES TO CREATE MOVEMENT.	QUICK STEM - 24 TEST REACTION TIME USING A DROPPED RULER.	OBSERVATION 25 LOG - HOW FAST DID YOU REACT?	TRIVIA - 26 WHAT SYSTEM CONTROLS YOUR THOUGHTS AND ACTIONS?	PREDICTION - 27 WHAT HAPPENS WHEN YOU TOUCH SOMETHING HOT?	VOCABULARY 28 MATCH - BRAIN = A. CONTROL CENTER OF THE BODY B. STORAGE FOR FOOD
TRUE OR FALSE - 29 YOUR BRAIN SENDS MESSAGES THROUGH NERVES.	BONUS - 30 CREATE A POSTER SHOWING ONE BODY SYSTEM.					

WORK SPACE

# DECEMBER

## SCIENCE SLEUTHS - DAILY SCIENCE CHALLENGE WINTER SCIENCE

OBSERVATION 01 LOG - DESCRIBE THE TEMPERATURE TODAY. COLD, COOL, OR WARM?	TRIVIA - 02 WHAT HAPPENS TO WATER WHEN IT FREEZES?	PREDICTION - 03 WHAT HAPPENS TO PUDDLES WHEN THE TEMPERATURE DROPS BELOW FREEZING?	VOCABULARY 04 MATCH - FREEZING = A. LIQUID CHANGING INTO A SOLID B. SOLID MELTING	TRUE OR FALSE - ICE IS COLDER THAN LIQUID WATER.	QUICK STEM - BUILD A MINI SHELTER THAT KEEPS A TOY WARM.	OBSERVATION 07 LOG - WHAT MATERIALS FEEL WARMEST TO THE TOUCH?
TRIVIA - 08 WHY DO ANIMALS GROW THICKER FUR IN WINTER?	PREDICTION - 09 WHAT HAPPENS WHEN SNOW IS BROUGHT INDOORS?	VOCABULARY 10 MATCH - INSULATION = A. MATERIAL THAT SLOWS HEAT LOSS B. MATERIAL THAT CREATES HEAT	TRUE OR FALSE - DARK COLORS ABSORB MORE HEAT THAN LIGHT COLORS.	QUICK STEM - TEST WHICH MATERIAL KEEPS ICE FROZEN THE LONGEST.	OBSERVATION 13 LOG - HOW DOES YOUR BREATH LOOK IN COLD AIR?	TRIVIA - 14 WHAT CAUSES FROST TO FORM?
PREDICTION - 15 WHAT HAPPENS TO METAL OBJECTS LEFT OUTSIDE IN WINTER?	VOCABULARY 16 MATCH - TEMPERATURE = A. HOW HOT OR COLD SOMETHING IS B. HOW HEAVY SOMETHING IS	TRUE OR FALSE - SALT HELPS MELT ICE ON ROADS.	QUICK STEM - MAKE FAKE "SNOW" USING SAFE HOUSEHOLD MATERIALS.	OBSERVATION 19 LOG - WHAT SIGNS OF WINTER DO YOU SEE AROUND YOU?	TRIVIA - 20 WHY DO PEOPLE WEAR LAYERS IN WINTER?	PREDICTION - 21 WHAT HAPPENS WHEN WARM AIR MEETS COLD AIR?
VOCABULARY 22 MATCH - MELT = A. SOLID TURNING INTO LIQUID B. LIQUID TURNING INTO GAS	TRUE OR FALSE - 23 SNOWFLAKES ARE ALL EXACTLY THE SAME.	QUICK STEM - DESIGN A WINTER HAT FOR A TOY USING PAPER OR FABRIC.	OBSERVATION 25 LOG - HOW DOES WINTER CHANGE ANIMAL BEHAVIOR?	TRIVIA - 26 WHAT SEASON COMES AFTER WINTER?	PREDICTION - 27 WHAT HAPPENS TO SHADOWS IN WINTER COMPARED TO SUMMER?	VOCABULARY 28 MATCH - REVIEW = A. LOOKING BACK TO LEARN AGAIN B. LEARNING SOMETHING NEW
TRUE OR FALSE - 29 SCIENCE HELPS US UNDERSTAND EVERYDAY LIFE.	REFLECTION 30 LOG - WRITE ONE SCIENCE FACT YOU'LL REMEMBER FROM THIS YEAR.	BONUS - 31 CHOOSE YOUR FAVORITE SCIENCE ACTIVITY FROM THIS YEAR AND IMPROVE IT.				

WORK SPACE

# DAILY SCIENCE CHALLENGE ANSWERS

## JANUARY – MATTER & ENERGY

1. Air expands; bottle may feel tight or push air out
2. Liquid
3. False
4. Answers vary (metal often feels colder due to heat transfer)
5. Open-ended
6. B
7. Liquid
8. Metal heats faster than wood
9. Scale or balance
10. False
11. Answers vary
12. Open-ended
13. B
14. Metal
15. Air escapes bubbles; sponge compresses
16. Steam rises and spreads
17. True
18. Open-ended
19. A
20. They move faster / spread out
21. Air expands; box may puff up
22. Answers vary
23. Air
24. True
25. Open-ended
26. B
27. Degrees (°C / °F)
28. Ice melts faster
29. Answers vary
30. False
31. Open-ended

## FEBRUARY – LIFE SCIENCE

1. Answers vary
2. Carbon dioxide
3. Poor growth or no growth
4. A
5. False
6. Open-ended
7. Stem
8. Answers vary
9. Flower
10. Roots may rot
11. B
12. False
13. Open-ended
14. They bend or turn toward light
15. Carbon dioxide
16. Soil quality worsens
17. A
18. False
19. Open-ended
20. Answers vary
21. Heart
22. Breathing speeds up
23. B
24. True
25. Open-ended
26. Answers vary
27. Nervous system
28. Muscles weaken / fatigue
29. Open-ended

## MARCH – EARTH & ENVIRONMENTAL SCIENCE

1. Answers vary
2. Rocks, minerals, organic matter
3. Soil washes away
4. B
5. False
6. Open-ended
7. Answers vary
8. Lava
9. More erosion
10. A
11. False
12. Open-ended
13. Answers vary
14. Crust
15. Sand sticks together
16. A
17. True
18. Open-ended
19. Answers vary
20. Tectonic plate movement
21. Ground cracks / shakes
22. A
23. True
24. Open-ended
25. Wind moves loose material
26. Hydropower
27. Soil pollution
28. A
29. True
30. Open-ended
31. Answers vary

# DAILY SCIENCE CHALLENGE ANSWERS

## APRIL – WEATHER & CLIMATE

1. Answers vary
2. Rain gauge
3. Clouds / storms form
4. A
5. True
6. Open-ended
7. Answers vary
8. Cooling air causes condensation
9. Slower evaporation
10. A
11. False
12. Open-ended
13. Answers vary
14. Thunderstorm
15. Dark clouds / wind
16. A
17. True
18. Open-ended
19. Answers vary
20. Cooling air near ground
21. Condensation
22. A
23. True
24. Open-ended
25. Answers vary
26. Light refraction
27. Rainbow forms
28. A
29. True
30. Open-ended

## MAY – FORCES & MOTION

1. Wind / magnet
2. Gravity
3. Object moves farther/faster
4. A
5. True
6. Open-ended
7. Rough surfaces
8. Magnetism
9. Objects move freely
10. A
11. False
12. Open-ended
13. Answers vary
14. Inclined plane
15. Speed increases
16. A
17. False
18. Open-ended
19. Answers vary
20. Reduce friction
21. Movement harder
22. A
23. True
24. Open-ended
25. Answers vary
26. Friction
27. Faster movement
28. A
29. True
30. Open-ended
31. Answers vary

## JUNE – LIGHT & SOUND

1. Answers vary
2. Sun
3. Shadow forms
4. A
5. True
6. Open-ended
7. Answers vary
8. Sound reflecting
9. Sound is quieter
10. A
11. True
12. Open-ended
13. Shadow changes direction
14. Light
15. Light reflects
16. A
17. False
18. Open-ended
19. Sound gets quieter
20. Vibrations
21. Sound is softer
22. A
23. True
24. Open-ended
25. Red, orange, yellow, green, blue, etc.
26. Bat (or dolphin)
27. Darkness / harder to see
28. A
29. True
30. Open-ended

# DAILY SCIENCE CHALLENGE ANSWERS

## JULY – SPACE SCIENCE

1. Answers vary
2. Sun
3. Earth freezes / no life
4. A
5. True
6. Open-ended
7. Answers vary
8. Saturn
9. Weight decreases
10. A
11. False
12. Open-ended
13. Shadows change
14. Mercury
15. Objects float away
16. A
17. True
18. Open-ended
19. Answers vary
20. Atmospheric light bending
21. Shorter days/nights
22. A
23. True
24. Open-ended
25. Shadows move
26. Jupiter
27. Longer daylight
28. A
29. True
30. Open-ended
31. Answers vary

## AUGUST – ANIMAL ADAPTATIONS

1. Answers vary
2. A survival feature
3. Survival is harder
4. A
5. False
6. Open-ended
7. Shade / burrows
8. Feathers
9. Fur / fat / huddling
10. A
11. True
12. Open-ended
13. Answers vary
14. Omnivores
15. More predators
16. A
17. True
18. Open-ended
19. Answers vary
20. Chameleon
21. Hiding / defense
22. A
23. False
24. Open-ended
25. Sounds / calls
26. Polar bear (or seal)
27. Animals migrate or adapt
28. A
29. True
30. Open-ended
31. Answers vary

## SEPTEMBER – CHEMISTRY BASICS

1. Answers vary
2. Solid, liquid, gas
3. Ice melts
4. A
5. True
6. Open-ended
7. Answers vary
8. Physical change
9. Sugar dissolves
10. A
11. False
12. Oil floats
13. Answers vary
14. Oxygen
15. Fizzing reaction
16. A
17. True
18. Open-ended
19. Answers vary
20. Scientist who studies chemicals
21. Evaporation
22. A
23. True
24. Open-ended
25. Answers vary
26. It becomes solid
27. Salt dissolves faster
28. A
29. True
30. Open-ended

# DAILY SCIENCE CHALLENGE ANSWERS

## OCTOBER – ENGINEERING & DESIGN

1. Answers vary
2. Problem solver/designer
3. Structure collapses
4. A
5. True
6. Open-ended
7. Triangles
8. Triangle
9. Bridge weakens
10. A
11. False
12. Open-ended
13. Answers vary
14. Ruler/tape
15. Strength changes
16. A
17. True
18. Open-ended
19. Answers vary
20. Make better
21. Redesign
22. A
23. True
24. Open-ended
25. Answers vary
26. Strength & use
27. Results improve
28. A
29. False
30. Open-ended
31. Answers vary

## NOVEMBER – HUMAN BODY SYSTEMS

1. Heartbeat
2. Heart
3. Beats faster
4. A
5. True
6. Open-ended
7. Faster breathing
8. Respiratory system
9. Cannot survive
10. A
11. False
12. Open-ended
13. Answers vary
14. Skeletal system
15. Injury risk
16. A
17. True
18. Open-ended
19. Answers vary
20. Muscular system
21. Muscles weaken
22. A
23. True
24. Open-ended
25. Answers vary
26. Nervous system
27. Reflex response
28. A
29. True
30. Open-ended

## DECEMBER – WINTER SCIENCE

1. Answers vary
2. It freezes
3. Ice forms
4. A
5. True
6. Open-ended
7. Answers vary
8. Stay warm
9. Snow melts
10. A
11. True
12. Open-ended
13. Visible breath
14. Water vapor freezing
15. Metal feels colder
16. A
17. True
18. Open-ended
19. Answers vary
20. Trap warm air
21. Fog / condensation
22. A
23. False
24. Open-ended
25. Animals adapt
26. Spring
27. Shorter shadows
28. A
29. True
30. Open-ended
31. Answers vary