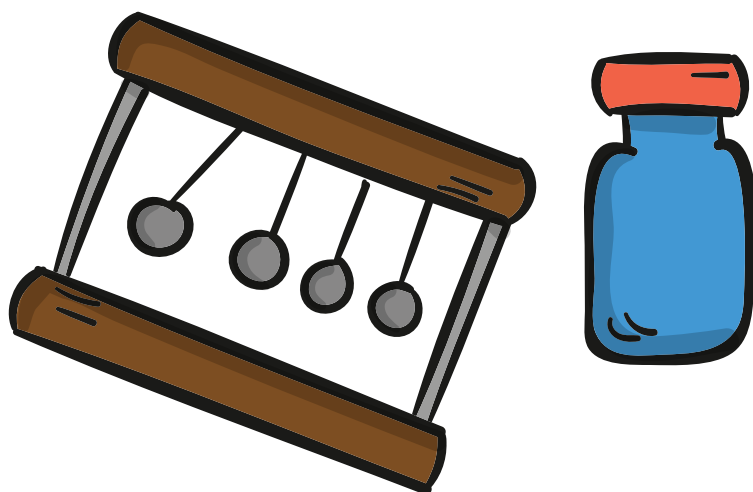


2026

SCIENCE SLEUTHS CALENDAR

DAiLY SCiENCE CHALLENGE
WiTH ANSWERS



JANUARY

SCIENCE SLEUTHS – DAILY SCIENCE CHALLENGE MATTER & ENERGY

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|--|---|---|---|--|---|--|
| 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 – 03 ALL SOLIDS SINK IN WATER. | OBSERVATION 04 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 – 10 TEMPERATURE AND HEAT ARE THE SAME THING. | OBSERVATION 11 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 16 LOG – HOW DOES STEAM BEHAVE NEAR A POT OF BOILING WATER? | TRUE OR FALSE – 17 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 22 LOG – WHAT MATERIALS FEEL WARMEST INDOORS? | RIDDLE – 23 I'M INVISIBLE, PUSH BALLOONS, AND FILL TIRES. WHAT AM I? | TRUE OR FALSE – 24 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 29 LOG – HOW FAST DOES ICE MELT IN DIFFERENT CONTAINERS? | TRUE OR FALSE – 30 MATTER CAN BE DESTROYED. | BONUS – 31 CREATE YOUR OWN MATTER EXPERIMENT USING 3 MATERIALS. | | | | |

WORK SPACE

FEBRUARY

SCIENCE SLEUTHS – DAILY SCIENCE CHALLENGE

LIFE SCIENCE

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|--|--|---|---|--|---|---|
| OBSERVATION LOG – LIST THREE LIVING AND THREE NON-LIVING THINGS YOU SEE. 01 | TRIVIA – WHAT DO PLANTS NEED TO MAKE FOOD BESIDES SUNLIGHT? 02 | PREDICTION – WHAT HAPPENS IF SEEDS GROW WITHOUT SOIL? 03 | VOCABULARY MATCH – ORGANISM = A. LIVING THING B. HABITAT 04 | TRUE OR FALSE – ALL PLANTS PRODUCE FLOWERS. 05 | QUICK STEM – BUILD A MODEL OF A PLANT USING RECYCLED ITEMS. 06 | RIDDLE – I CARRY WATER FROM ROOTS TO LEAVES. WHAT AM I? 07 |
| OBSERVATION LOG – EXAMINE A LEAF CLOSELY. WHAT PATTERNS DO YOU SEE? 08 | TRIVIA – WHAT PART OF THE PLANT MAKES SEEDS? 09 | PREDICTION – WHAT HAPPENS IF A PLANT GETS TOO MUCH WATER? 10 | VOCABULARY MATCH – PHOTOSYNTHESIS = A. ROOT GROWTH B. MAKING FOOD USING LIGHT 11 | TRUE OR FALSE – FUNGI ARE PLANTS. 12 | QUICK STEM – DESIGN A GREENHOUSE USING PLASTIC WRAP. 13 | OBSERVATION LOG – HOW DO PLANTS FACE THE SUN? 14 |
| TRIVIA – WHAT GAS DO HUMANS EXHALE? 15 | PREDICTION – WHAT HAPPENS IF WORMS DISAPPEAR FROM SOIL? 16 | VOCABULARY MATCH – HABITAT = A. PLACE AN ORGANISM LIVES B. WHAT IT EATS 17 | TRUE OR FALSE – BACTERIA ARE ALWAYS HARMFUL. 18 | QUICK STEM – SORT OBJECTS AS LIVING, ONCE-LIVING, OR NON-LIVING. 19 | OBSERVATION LOG – WHERE DO INSECTS GATHER MOST? 20 | TRIVIA – WHICH ORGAN PUMPS BLOOD? 21 |
| PREDICTION – HOW DOES EXERCISE CHANGE BREATHING RATE? 22 | VOCABULARY MATCH – VERTEBRATE = A. NO BACKBONE B. HAS BACKBONE 23 | TRUE OR FALSE – HUMANS ARE MAMMALS. 24 | QUICK STEM – BUILD A MODEL LUNG USING BALLOONS. 25 | OBSERVATION LOG – MEASURE PULSE BEFORE AND AFTER MOVEMENT. 26 | TRIVIA – WHAT SYSTEM CONTROLS MOVEMENT? 27 | PREDICTION – WHAT HAPPENS IF MUSCLES DON'T GET OXYGEN? 28 |
| BONUS – INVENT A PLANT WITH THREE SURVIVAL TRAITS. 29 | | | | | | |

WORK SPACE

MARCH

SCIENCE SLEUTHS – DAILY SCIENCE CHALLENGE EARTH & ENVIRONMENTAL SCIENCE

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

WORK SPACE

APRIL

SCIENCE SLEUTHS – DAILY SCIENCE CHALLENGE WEATHER & CLIMATE

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

WORK SPACE

MAY

SCIENCE SLEUTHS - DAILY SCIENCE CHALLENGE

FORCES & MOTION

| | | | | | | |
|---|---|--|--|---|--|--|
| OBSERVATION LOG - FIND SOMETHING THAT MOVES WITHOUT TOUCHING IT. 01 | TRIVIA - WHAT FORCE PULLS OBJECTS DOWN? 02 | PREDICTION - WHAT HAPPENS WHEN YOU PUSH HARDER? 03 | VOCABULARY MATCH - FORCE = A. PUSH OR PULL B. SHAPE 04 | TRUE OR FALSE - FRICTION SLOWS MOVEMENT. 05 | QUICK STEM - ROLL A BALL ON DIFFERENT SURFACES. 06 | OBSERVATION LOG - WHICH SURFACE SLOWS MOVEMENT MOST? 07 |
| TRIVIA - WHAT FORCE MAKES OBJECTS STICK TOGETHER? 08 | PREDICTION - WHAT HAPPENS IF FRICTION DISAPPEARS? 09 | VOCABULARY MATCH - GRAVITY = A. PULL TOWARD EARTH B. WIND 10 | TRUE OR FALSE - HEAVIER OBJECTS FALL FASTER. 11 | QUICK STEM - BUILD A RAMP AND TEST SPEED. 12 | OBSERVATION LOG - MEASURE DISTANCE TRAVELED. 13 | TRIVIA - WHAT SIMPLE MACHINE IS A RAMP? 14 |
| PREDICTION - WHAT HAPPENS WHEN YOU CHANGE RAMP HEIGHT? 15 | VOCABULARY MATCH - MOTION = A. MOVEMENT B. STILLNESS 16 | TRUE OR FALSE - OBJECTS AT REST HAVE NO ENERGY. 17 | QUICK STEM - CREATE A MARBLE MAZE. 18 | OBSERVATION LOG - WATCH MOVING OBJECTS OUTDOORS. 19 | TRIVIA - WHAT MAKES WHEELS USEFUL? 20 | PREDICTION - WHAT HAPPENS WHEN WHEELS ARE REMOVED? 21 |
| VOCABULARY MATCH - SPEED = A. HOW FAST B. HOW HEAVY 22 | TRUE OR FALSE - MACHINES MAKE WORK EASIER. 23 | QUICK STEM - BUILD A SPINNING TOY. 24 | OBSERVATION LOG - WHAT SPINS EASILY? 25 | TRIVIA - WHAT FORCE RESISTS MOTION? 26 | PREDICTION - WHAT HAPPENS ON SLIPPERY SURFACES? 27 | VOCABULARY MATCH - ENERGY = A. ABILITY TO DO WORK B. WEIGHT 28 |
| TRUE OR FALSE - MOTION ALWAYS NEEDS ENERGY. 29 | OBSERVATION LOG - MOTION YOU NOTICED TODAY. 30 | BONUS - DESIGN A MOVING INVENTION. 31 | | | | |

WORK SPACE

JUNE

SCIENCE SLEUTHS – DAILY SCIENCE CHALLENGE

LIGHT & SOUND

| | | | | | | |
|---|--|--|--|---|---|---|
| OBSERVATION LOG – FIND THREE LIGHT SOURCES INSIDE YOUR HOME. 01 | TRIVIA – WHAT IS THE MAIN NATURAL SOURCE OF LIGHT ON EARTH? 02 | PREDICTION – WHAT HAPPENS WHEN AN OBJECT BLOCKS LIGHT? 03 | VOCABULARY MATCH – SHADOW = A. A DARK AREA WHERE LIGHT IS BLOCKED B. A TYPE OF SOUND 04 | TRUE OR FALSE – SOUND CAN TRAVEL THROUGH SOLIDS. 05 | QUICK STEM – CREATE A PAPER TUBE TO AMPLIFY SOUND. DOES IT CHANGE VOLUME? 06 | OBSERVATION LOG – LISTEN FOR ONE MINUTE. WHAT SOUNDS DO YOU HEAR NEARBY? 07 |
| TRIVIA – WHAT CAUSES AN ECHO? 08 | PREDICTION – WHAT HAPPENS TO SOUND WHEN YOU COVER YOUR EARS? 09 | VOCABULARY MATCH – VIBRATION = A. BACK-AND-FORTH MOVEMENT B. STILLNESS 10 | TRUE OR FALSE – LIGHT TRAVELS IN STRAIGHT LINES. 11 | QUICK STEM – TRACE SHADOWS AT TWO DIFFERENT TIMES OF DAY. 12 | OBSERVATION LOG – HOW DOES THE DIRECTION OF LIGHT AFFECT SHADOWS? 13 | TRIVIA – WHAT TRAVELS FASTER: LIGHT OR SOUND? 14 |
| PREDICTION – WHAT HAPPENS WHEN LIGHT HITS A MIRROR? 15 | VOCABULARY MATCH – REFLECTION = A. LIGHT BOUNCING OFF A SURFACE B. LIGHT PASSING THROUGH AN OBJECT 16 | TRUE OR FALSE – ALL SOUNDS ARE LOUD. 17 | QUICK STEM – MAKE A CUP-AND-STRING PHONE. DOES SOUND TRAVEL THROUGH THE STRING? 18 | OBSERVATION LOG – DOES SOUND CHANGE AS YOU MOVE FARTHER AWAY? 19 | TRIVIA – WHAT CAUSES SOUND? 20 | PREDICTION – WHAT HAPPENS WHEN YOU WHISPER INSTEAD OF SHOUT? 21 |
| VOCABULARY MATCH – PITCH = A. HOW HIGH OR LOW A SOUND IS B. HOW LOUD A SOUND IS 22 | TRUE OR FALSE – LIGHT CAN BEND WHEN IT PASSES THROUGH WATER. 23 | QUICK STEM – SPIN A COLOR WHEEL TO SEE HOW COLORS MIX. 24 | OBSERVATION LOG – NAME THE COLORS YOU SEE IN WHITE LIGHT. 25 | TRIVIA – WHAT ANIMAL USES ECHOLOCATION TO “SEE”? 26 | PREDICTION – WHAT HAPPENS IN A ROOM WITH NO LIGHT? 27 | VOCABULARY MATCH – TRANSPARENT = A. LETS LIGHT PASS THROUGH B. BLOCKS LIGHT 28 |
| TRUE OR FALSE – SOUND NEEDS MATTER TO TRAVEL. 29 | BONUS – DESIGN YOUR OWN LIGHT OR SOUND EXPERIMENT USING HOUSEHOLD ITEMS. 30 | | | | | |

WORK SPACE

JULY

SCIENCE SLEUTHS – DAILY SCIENCE CHALLENGE

SPACE SCIENCE

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|---|---|--|---|--|--|--|
| 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 – 05 THE MOON REFLECTS LIGHT FROM THE SUN. | QUICK STEM – 06 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 – 11 THE SUN IS A PLANET. | QUICK STEM – 12 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 – 17 STARS APPEAR TO MOVE ACROSS THE NIGHT SKY. | QUICK STEM – 18 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 FALSE – 23 EARTH IS THE ONLY PLANET THAT SUPPORTS LIFE (THAT WE KNOW OF). | QUICK STEM – 24 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 FALSE – 29 THE MOON GOES THROUGH PHASES EACH MONTH. | OBSERVATION 30 LOG – WRITE ONE NEW SPACE FACT YOU LEARNED THIS MONTH. | BONUS – 31 DESIGN YOUR OWN PLANET AND DESCRIBE ITS FEATURES. | | | | |

WORK SPACE

AUGUST

SCIENCE SLEUTHS – DAILY SCIENCE CHALLENGE ANIMAL ADAPTATIONS

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|---|--|--|--|---|---|--|
| OBSERVATION LOG – LOOK OUTSIDE. WHAT ANIMALS OR INSECTS DO YOU NOTICE? | TRIVIA – WHAT IS AN ADAPTATION? | PREDICTION – HOW WOULD AN ANIMAL SURVIVE WITHOUT SHELTER? | VOCABULARY 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 LOG – WHERE DO ANIMALS FIND SHADE DURING THE DAY? |
| TRIVIA – WHAT BODY COVERING DO BIRDS HAVE? | PREDICTION – HOW DO ANIMALS STAY WARM IN COLD WEATHER? | VOCABULARY 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 LOG – CAN YOU FIND AN ANIMAL THAT BLENDS INTO ITS SURROUNDINGS? | TRIVIA – WHAT DO WE CALL ANIMALS THAT EAT BOTH PLANTS AND ANIMALS? |
| PREDICTION – WHAT MIGHT HAPPEN IF AN ANIMAL LOSES ITS CAMOUFLAGE? | VOCABULARY 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 LOG – WATCH AN ANIMAL FOR TWO MINUTES. WHAT DOES IT DO? | TRIVIA – WHICH ANIMAL IS KNOWN FOR CHANGING ITS COLOR? | PREDICTION – HOW DO ANIMALS PROTECT THEMSELVES FROM PREDATORS? |
| VOCABULARY MATCH – PREDATOR = A. AN ANIMAL THAT HUNTS OTHER ANIMALS B. AN ANIMAL THAT IS HUNTED | TRUE OR FALSE – ALL ANIMALS HUNT FOR THEIR FOOD. | QUICK STEM – DESIGN A BEAK OR MOUTH TOOL FOR A SPECIFIC FOOD. | OBSERVATION LOG – WHAT SOUNDS DO ANIMALS USE TO COMMUNICATE? | TRIVIA – WHAT ANIMAL HAS THICK FUR AND BLUBBER TO STAY WARM? | PREDICTION – WHAT HAPPENS TO ANIMALS WHEN THEIR HABITAT CHANGES? | VOCABULARY MATCH – HIBERNATION = A. LONG WINTER SLEEP B. DAILY NAP |
| TRUE OR FALSE – SOME ANIMALS HIBERNATE TO SAVE ENERGY. | OBSERVATION LOG – WRITE ONE ANIMAL ADAPTATION YOU LEARNED THIS MONTH. | BONUS – INVENT A NEW ANIMAL WITH THREE ADAPTATIONS. | | | | |

WORK SPACE

SEPTEMBER

SCIENCE SLEUTHS – DAILY SCIENCE CHALLENGE

CHEMISTRY BASICS

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|---|--|--|--|---|--|---|
| OBSERVATION LOG – LOOK AROUND YOUR HOME. NAME TWO SOLIDS AND TWO LIQUIDS. 01 | TRIVIA – WHAT ARE THE THREE STATES OF MATTER? 02 | PREDICTION – WHAT HAPPENS WHEN ICE IS LEFT AT ROOM TEMPERATURE? 03 | VOCABULARY MATCH – SOLID = A. KEEPS ITS SHAPE B. FLOWS EASILY 04 | TRUE OR FALSE – LIQUIDS TAKE THE SHAPE OF THEIR CONTAINER. 05 | QUICK STEM – SORT CLASSROOM OR HOUSEHOLD ITEMS BY STATE OF MATTER. 06 | OBSERVATION LOG – FIND SOMETHING THAT CHANGES WHEN HEATED OR COOLED. 07 |
| TRIVIA – WHAT DO WE CALL A CHANGE THAT DOES NOT MAKE A NEW SUBSTANCE? 08 | PREDICTION – WHAT HAPPENS WHEN SUGAR IS STIRRED INTO WATER? 09 | VOCABULARY MATCH – MIXTURE = A. TWO OR MORE THINGS MIXED TOGETHER B. A BRAND-NEW SUBSTANCE 10 | TRUE OR FALSE – MIXING ALWAYS CREATES A NEW SUBSTANCE. 11 | QUICK STEM – MIX OIL AND WATER. WHAT DO YOU OBSERVE? 12 | OBSERVATION LOG – WHAT MIXTURES CAN YOU FIND IN THE KITCHEN? 13 | TRIVIA – WHAT GAS DO HUMANS NEED TO BREATHE? 14 |
| PREDICTION – WHAT HAPPENS WHEN VINEGAR IS ADDED TO BAKING SODA? 15 | VOCABULARY MATCH – CHEMICAL CHANGE = A. A CHANGE THAT MAKES A NEW SUBSTANCE B. A CHANGE IN SHAPE 16 | TRUE OR FALSE – RUSTING IS A CHEMICAL CHANGE. 17 | QUICK STEM – CREATE A FIZZING REACTION USING SAFE KITCHEN MATERIALS. 18 | OBSERVATION LOG – LOOK FOR SIGNS OF CHANGE (BUBBLES, COLOR, SMELL). 19 | TRIVIA – WHAT IS A CHEMIST? 20 | PREDICTION – WHAT HAPPENS WHEN A WET TOWEL IS LEFT IN THE SUN? 21 |
| VOCABULARY MATCH – EVAPORATION = A. LIQUID CHANGING INTO GAS B. SOLID MELTING 22 | TRUE OR FALSE – EVAPORATION HAPPENS FASTER IN WARM PLACES. 23 | QUICK STEM – DESIGN A SIMPLE FILTER USING PAPER AND WATER. 24 | OBSERVATION LOG – WHICH MATERIALS DISSOLVE IN WATER? 25 | TRIVIA – WHAT HAPPENS TO MATTER WHEN IT FREEZES? 26 | PREDICTION – WHAT WILL HAPPEN IF YOU MIX SALT AND WARM WATER? 27 | VOCABULARY MATCH – DISSOLVE = A. MIX EVENLY INTO A LIQUID B. SINK TO THE BOTTOM 28 |
| TRUE OR FALSE – GASES TAKE UP SPACE. 29 | BONUS – CREATE YOUR OWN SAFE CHEMISTRY EXPERIMENT AND EXPLAIN IT. 30 | | | | | |

WORK SPACE

OCTOBER

SCIENCE SLEUTHS – DAILY SCIENCE CHALLENGE ENGINEERING & DESIGN

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|--|---|---|---|---|---|---|
| OBSERVATION LOG – LOOK AROUND YOU. WHAT OBJECTS WERE DESIGNED BY ENGINEERS? 01 | TRIVIA – WHAT IS AN ENGINEER? 02 | PREDICTION – WHAT HAPPENS IF A STRUCTURE HAS A WEAK BASE? 03 | VOCABULARY MATCH – ENGINEER = A. SOMEONE WHO DESIGNS AND BUILDS SOLUTIONS B. SOMEONE WHO STUDIES ANIMALS 04 | TRUE OR FALSE – ENGINEERS SOLVE PROBLEMS. 05 | QUICK STEM – BUILD THE TALLEST TOWER USING ONLY PAPER. 06 | OBSERVATION LOG – WHICH SHAPES MAKE STRUCTURES STRONGER? 07 |
| TRIVIA – WHAT SHAPE IS OFTEN USED IN BRIDGES FOR STRENGTH? 08 | PREDICTION – WHAT HAPPENS IF YOU ADD MORE WEIGHT TO A BRIDGE? 09 | VOCABULARY MATCH – STRUCTURE = A. SOMETHING BUILT B. A TYPE OF MACHINE 10 | TRUE OR FALSE – STRONG STRUCTURES ARE ALWAYS HEAVY. 11 | QUICK STEM – DESIGN A BRIDGE THAT SPANS TWO BOOKS. 12 | OBSERVATION LOG – WHAT MATERIALS BEND? WHICH STAY STIFF? 13 | TRIVIA – WHAT TOOL HELPS ENGINEERS MEASURE LENGTH? 14 |
| PREDICTION – WHAT HAPPENS WHEN YOU CHANGE BUILDING MATERIALS? 15 | VOCABULARY MATCH – DESIGN = A. A PLAN FOR BUILDING B. A FINISHED PRODUCT 16 | TRUE OR FALSE – ENGINEERS TEST THEIR IDEAS MORE THAN ONCE. 17 | QUICK STEM – BUILD A CHAIR FOR A TOY USING CRAFT MATERIALS. 18 | OBSERVATION LOG – DID YOUR DESIGN WORK THE FIRST TIME? WHY OR WHY NOT? 19 | TRIVIA – WHAT DOES IT MEAN TO IMPROVE A DESIGN? 20 | PREDICTION – WHAT HAPPENS IF A DESIGN FAILS? 21 |
| VOCABULARY MATCH – PROTOTYPE = A. FIRST MODEL B. FINAL PRODUCT 22 | TRUE OR FALSE – FAILURE HELPS ENGINEERS LEARN. 23 | QUICK STEM – CREATE A CONTAINER THAT PROTECTS A FALLING OBJECT. 24 | OBSERVATION LOG – WHAT CHANGES MADE YOUR DESIGN BETTER? 25 | TRIVIA – WHY DO ENGINEERS USE DIFFERENT MATERIALS? 26 | PREDICTION – WHAT HAPPENS WHEN YOU TEST THE SAME DESIGN AGAIN? 27 | VOCABULARY MATCH – SOLUTION = A. AN ANSWER TO A PROBLEM B. A MISTAKE 28 |
| TRUE OR FALSE – THERE IS ONLY ONE WAY TO SOLVE A PROBLEM. 29 | OBSERVATION LOG – WRITE ONE THING YOU LEARNED ABOUT ENGINEERING THIS MONTH. 30 | BONUS – DESIGN AN INVENTION THAT SOLVES A DAILY PROBLEM. 31 | | | | |

WORK SPACE

NOVEMBER

SCIENCE SLEUTHS – DAILY SCIENCE CHALLENGE

HUMAN BODY SYSTEMS

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

WORK SPACE

DECEMBER

SCIENCE SLEUTHS – DAILY SCIENCE CHALLENGE

WINTER SCIENCE

| | | | | | | |
|--|---|---|---|---|---|---|
| OBSERVATION LOG – DESCRIBE THE TEMPERATURE TODAY. COLD, COOL, OR WARM? 01 | TRIVIA – WHAT HAPPENS TO WATER WHEN IT FREEZES? 02 | PREDICTION – WHAT HAPPENS TO PUDDLES WHEN THE TEMPERATURE DROPS BELOW FREEZING? 03 | VOCABULARY MATCH – FREEZING = A. LIQUID CHANGING INTO A SOLID B. SOLID MELTING 04 | TRUE OR FALSE – ICE IS COLDER THAN LIQUID WATER. 05 | QUICK STEM – BUILD A MINI SHELTER THAT KEEPS A TOY WARM. 06 | OBSERVATION LOG – WHAT MATERIALS FEEL WARMEST TO THE TOUCH? 07 |
| TRIVIA – WHY DO ANIMALS GROW THICKER FUR IN WINTER? 08 | PREDICTION – WHAT HAPPENS WHEN SNOW IS BROUGHT INDOORS? 09 | VOCABULARY MATCH – INSULATION = A. MATERIAL THAT SLOWS HEAT LOSS B. MATERIAL THAT CREATES HEAT 10 | TRUE OR FALSE – DARK COLORS ABSORB MORE HEAT THAN LIGHT COLORS. 11 | QUICK STEM – TEST WHICH MATERIAL KEEPS ICE FROZEN THE LONGEST. 12 | OBSERVATION LOG – HOW DOES YOUR BREATH LOOK IN COLD AIR? 13 | TRIVIA – WHAT CAUSES FROST TO FORM? 14 |
| PREDICTION – WHAT HAPPENS TO METAL OBJECTS LEFT OUTSIDE IN WINTER? 15 | VOCABULARY MATCH – TEMPERATURE = A. HOW HOT OR COLD SOMETHING IS B. HOW HEAVY SOMETHING IS 16 | TRUE OR FALSE – SALT HELPS MELT ICE ON ROADS. 17 | QUICK STEM – MAKE FAKE “SNOW” USING SAFE HOUSEHOLD MATERIALS. 18 | OBSERVATION LOG – WHAT SIGNS OF WINTER DO YOU SEE AROUND YOU? 19 | TRIVIA – WHY DO PEOPLE WEAR LAYERS IN WINTER? 20 | PREDICTION – WHAT HAPPENS WHEN WARM AIR MEETS COLD AIR? 21 |
| VOCABULARY MATCH – MELT = A. SOLID TURNING INTO LIQUID B. LIQUID TURNING INTO GAS 22 | TRUE OR FALSE – SNOWFLAKES ARE ALL EXACTLY THE SAME. 23 | QUICK STEM – DESIGN A WINTER HAT FOR A TOY USING PAPER OR FABRIC. 24 | OBSERVATION LOG – HOW DOES WINTER CHANGE ANIMAL BEHAVIOR? 25 | TRIVIA – WHAT SEASON COMES AFTER WINTER? 26 | PREDICTION – WHAT HAPPENS TO SHADOWS IN WINTER COMPARED TO SUMMER? 27 | VOCABULARY MATCH – REVIEW = A. LOOKING BACK TO LEARN AGAIN B. LEARNING SOMETHING NEW 28 |
| TRUE OR FALSE – SCIENCE HELPS US UNDERSTAND EVERYDAY LIFE. 29 | REFLECTION LOG – WRITE ONE SCIENCE FACT YOU’LL REMEMBER FROM THIS YEAR. 30 | BONUS – CHOOSE YOUR FAVORITE SCIENCE ACTIVITY FROM THIS YEAR AND IMPROVE IT. 31 | | | | |

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