Science Adventures with the

THUNDERBOLT KIDS

SHUTTLEWORTH FUNDED

SIYAVULA
TECHNOLOGY-POWERED LEARNING

Sciences Adventures with the Thunderbolt Kids

Grade 5

by Siyavula and the Shuttleworth Foundation

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ATTRIBUTION

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1. FISH AND FROGS

ON A SUNNY SATURDAY MORNING, THE THUNDERBOLT KIDS KEEP BUSY BY THE RIVERSIDE.
WHAT DO YOU THINK WOULD HAPPEN IF THERE WERE NO GRAVITY? WOULD RAIN STILL FALL?
I'M GONNA TAKE A WILD GUESS AND SAY THAT YOU'RE STILL READING THAT BOOK OF QUESTIONS.

WHAT A GREAT QUESTION! AND HOW DOES GRAVITY MAKE THINGS FALL ANYWAY?
SUDDENLY THE QUESTION FALLS OUT OF SOPHIE'S MIND.
SPLIT
JOJO! WHAT THE HECK DID YOU DO THAT FOR?
WHAT? I DIDN'T DO ANYTHING!

BUT I HAVEN'T EVEN CAUGHT A FISH YET!
OH, SO I SUPPOSE IT JUST FELL OUT OF THE SKY, DID IT?
FWAP

JOJO!
I DIDN'T DO IT!
HE REALLY DIDN'T...

LOOKING UP TO THE SKY, THE THUNDERBOLT KIDS KNOW FOR SURE THAT JOJO DEFINITELY DIDN'T DO IT.
RUN...
SECONDS LATER, A TORRENT OF FISH RAINS DOWN FROM THE SKY.
SPLITCH
SPLOTCH

CALL BOX
CALL BOX
SOS
AM I GOING NUTS OR IS IT RAINING FISH?!
HOW IS THIS HAPPENING?
I DON'T KNOW, BUT IF I WERE A FISH OUT OF WATER, I'D PROBABLY WANT... SOME WATER!

THERE HAS TO BE A RATIONAL EXPLANATION FOR THIS. WE'LL WORK IT OUT IF WE ASK THE RIGHT QUESTIONS.
THEY'RE COMING!

BUT NOT EVERYONE HAS SUCH COOL REACTIONS TO STRANGE EVENTS.
FISH ARE FALLING FROM THE SKY! DO YOU KNOW WHAT THIS MEANS?
• ?! •
THE ALIENS ARE COMING!!!
LAZLO'S FREAKING OUT. WE HAVE TO FIGURE OUT WHAT'S GOING ON BEFORE EVERYONE ELSE DOES TOO!

ACCORDING TO THIS BOOK, THERE ARE SIX QUESTION WORDS THAT WILL HELP YOU SOLVE ANY PROBLEM.
WHAT, WHERE, WHEN, WHY, HOW AND WHO.
I DON'T THINK ANY QUESTION IS GONNA HELP THAT GUY...
I HEAR THEM. I CAN HEAR THE ALIENS!

COME ON! ASK QUESTIONS! LIKE... WHAT KINDS OF FISH ARE THEY?
WHERE DO THEY COME FROM?
WHEN DID THEY LEAVE THE WATER?
WHY ARE THEY FALLING HERE?
HOW IS THIS POSSIBLE AT ALL?
AND WHO CAN HELP US?
SOMETHING TELLS ME YOU DON'T NEED THE BOOK, SOPH!

RIGHT AWAY JOJO KNOWS THE ANSWER TO TWO OF SOPHIE'S QUESTIONS AND HE REACHES FOR THE EMERGENCY TELEPHONE.
I KNOW THOSE FISH ARE FROM THE RIVER MOUTH NEAR THE SEA. THEY NEVER COME THIS FAR INLAND.
BOX
AND WE CAN ASK DR ROBERTS FROM THE ANIMAL SANCTUARY FOR HELP. HE KNOWS ALL ABOUT FISH AND WEATHER ON THE ISLAND.
RING
RING

THE CAUSE OF THE RAINING FISH IS MUCH MORE OBVIOUS FROM DR ROBERTS'S OFFICE AT THE SANCTUARY.
RAINING FISH?! JEEPERS! THE WATERSPOUT MUST HAVE SUCKED THEM OUT OF THE RIVER AND DROPPED THEM UPRIVER!
WOOSH

WATERSPOUT?!
A WATERSPOUT IS LIKE A TORNADO ON WATER.
SOMETIMES THEY SUCK UP FISH AND OTHER WATER CREATURES AND DROP THEM NEARBY. JOJO, WHERE'S TIA?

SHE'S TRYING TO DRAG LAZLO AND HIS CRAZY FRIENDS INSIDE.
THE ALIENS ARE SENDING FROGS TOO! GLORIOUS FROGS!

AS THE WATERSPOUT NEARS THE SCHOOL, SO THE DANGER INCREASES FOR THE THUNDERBOLT KIDS.
JOJO, GET EVERYONE INSIDE RIGHT NOW! THE WATERSPOUT IS COMING TOWARDS YOU AND YOU MUST STAY AWAY FROM THE RIVER!
BUT PEOPLE STRUCK BY MOMENTARY MADNESS CAN BECOME VERY STUBBORN.
I'M STAYING FOR THE ALIENS!

COCONUTS! THE WATERSPOUT MUST HAVE SUCKED THEM OFF THE PALM TREES ON THE RIVERBANK!
TAKE ME!
OH MY GOODNESS! THOSE COCONUTS COULD KILL HIM!
CRONK

JOJO RUSHES PAST TIA AT LIGHTNING SPEED!
JOJO, NO!
FOR GOODNESS SAKE, LAZ, THERE ARE NO ALIENS!
JUST ASK YOURSELF: WHAT IS THAT BLUE STUFF? IT'S WATER! AND IT'LL SUCK YOU INTO THE CLOUDS IF YOU DON'T GET INSIDE NOW!

ALTHOUGH LAZ WON'T LISTEN TO REASON...
NO! THEY'RE COMING! AND THEY'LL PUNISH THE ONES WHO DON'T BELIEVE!
LAZ, COME ON! GET A GRIP!
THONK
... JOJO GETS A LITTLE HELP FROM A COCONUT.

AND, LIKE AN OLYMPIC ATHLETE, HE DODGES THE PALM DATES AND COCONUTS ALL THE WAY BACK TO THE SCHOOL.
PLINK
WELL... ALMOST ALL THE WAY.

SO THE ALIENS DIDN'T CAUSE THE WATERSPOUT?
ALIENS?!@#
MAYBE NEXT TIME YOU SEE A FISH, YOU CAN ASK IT WHAT PLANET IT COMES FROM.

2. THE FORBIDDEN BEACH

EVEN THOUGH IT'S ALMOST SUNSET, AND THEY SHOULD BE HEADING BACK TO SCHOOL, TOM AND JOJO CAN'T THINK ABOUT ANYTHING EXCEPT FINDING TREASURE.
THIS METAL DETECTOR IS AMAZING! IF THERE IS TREASURE ANYWHERE UNDERNEATH OUR FEET, IT WILL TELL US WHERE IT IS.
WHAT DO YOU THINK WE'LL FIND? GOLD? SILVER?

A MINUTE LATER, THE METAL DETECTOR BEEPS AND TOM FINDS HIS FIRST TREASURE.
LOOK!
UH... IS IT VALUABLE?
I HAVEN'T GOT A CLUE.
WHY DON'T WE CHECK OUT THAT BEACH OVER THERE?

MANY ADVENTURES BEGIN BY BREAKING THE RULES. BUT SOME RULES SHOULD NOT BE BROKEN.
COME ON! THERE'S NO ONE HERE.
I DON'T THINK THIS IS SUCH A GOOD IDEA. THERE ARE NO ENTRY SIGNS EVERYWHERE.
SEE? THERE'S NOTHING TO WORRY ABOUT!
CRIKEY! I DON'T KNOW WHAT'S BENEATH THE SURFACE HERE, BUT THE METAL DETECTOR IS GOING CRAZY!

TOM. WH-WH-WHAT IS THAT?
WHAT?
THAT!
WH-WH-WHAT IS IT?!

BUT THE BOYS DON'T STICK AROUND TO FIND OUT THE ANSWER.

LATER THAT NIGHT...
I CAN'T BELIEVE I LET YOU TALK ME INTO SNEAKING OUT! WE COULD GET EXPELLED FOR THIS!
WILL YOU STOP WHINING?! THIS IS BIG STUFF!

WITHOUT REALLY KNOWING WHAT THEY'RE LOOKING FOR, THE THUNDERBOLT KIDS WANDER ABOUT THE BEACH HOPING TO SEE SOMETHING THAT EXPLAINS THE MYSTERY OF THE GIANT SEA MONSTER.
I ONLY CAME WITH TO PROVE THAT THERE IS A RATIONAL EXPLANATION FOR WHAT YOU SAW.
OUCH!
OW, OW, OW, OW, OUCH!

JEEPERS, SOPH, IT'S A TOOTH! MAYBE THE BOYS ARE RIGHT. MAYBE THERE IS A SEA MONSTER.
THERE'S DEFINITELY SOMETHING FISHY BENEATH THE SURFACE OF THIS MYSTERY. BUT I'M NOT SURE I BELIEVE IN SEA MONSTERS JUST YET.

BUT NO AMOUNT OF SCEPTICISM CAN PREPARE THE THUNDERBOLT KIDS FOR WHAT THEY SEE NEXT.
LOOK BEHIND YOU!
SHRIEK
AAGGHHH!
WHAT IS IT?

AND THE ONLY THING THEY CAN DO IS RUN!
AAGH!
AAGH!
AAGH!
AAGH!
AND SCREAM!

AND IF THEIR TROUBLES WEREN'T ENOUGH...
I THOUGHT THESE THINGS WERE EXTINCT!
LOOK! THE SEA MONSTER!
THE AIR SEEMS TO CHILL AS THE GIANT MONSTER BREAKS THE SURFACE OF THE WATER.
SLOOSH

AND THEN THEY ARE TRAPPED BETWEEN THE MONSTER IN THE SKY AND THE ONE IN THE SEA.
WHAT DO WE DO?
PANIC?

SUDDENLY A DEEP VOICE BOOMS OUT.
WHO ARE YOU? AND WHAT DO YOU WANT HERE?
THAT'S A HUMAN VOICE...
AND THEN THE MYSTERY DEEPENS AS THE MONSTER'S MOUTH OPENS WITH A CREAK AND REVEALS THE METALLIC CAVE WITHIN.
CREEEAK

CLICK
BUT STRANGER THAN ANYTHING THEY HAVE SEEN IS THE SIGHT OF THE MAN WHO EMERGES FROM THE MOUTH OF THE MONSTER AND POINTS A REMOTE CONTROL AT THE PTERODACTYL.
THE NAME IS HENRY SHELLMAN. I'M AN INVENTOR. AND YOU ARE TRESPASSING.
FOLLOW ME, KIDS. IT'S MORE COMFORTABLE INSIDE.
• ?! •

SOME TIME LATER, IN HENRY SHELLMAN'S UNDERGROUND HOME.
AND THEN YOU STEPPED OUT OF THE MOUTH OF THE SEA MONSTER AND... WELL, YOU KNOW THE REST.
YOU MUST HAVE GOTTEN QUITE A FRIGHT. BUT THEN THAT IS THE POINT.
I QUITE LIKE MY PRIVACY, AND THAT'S WHY I LIKE PEOPLE TO BE SCARED OF THE BEACH.

IT SEEMS THERE ARE THREE LESSONS YOU CAN LEARN FROM THIS.
FIRSTLY, YOU SHOULD NEVER TRESPASS. NO ENTRY, MEANS NO ENTRY.
SECONDLY, YOU SHOULD NEVER SNEAK OUT OF SCHOOL AT NIGHT.
THIRDLY, AND THIS IS MOST IMPORTANT...
YOU MUST LEARN TO RECOGNISE THAT THINGS ARE NOT ALWAYS WHAT THEY SEEM.

TAKE MY HOME, FOR EXAMPLE. FROM ABOVE GROUND, IT APPEARS TO BE A BEACH...
BUT IF YOU LOOK BENEATH THE SURFACE, YOU SEE THAT THERE IS MORE TO THE TRUTH.
ANOTHER EXAMPLE... YOU SAID YOU FOUND SOME METAL ON THE BEACH, BUT YOU THOUGHT IT WAS WORTHLESS.

YEAH, I'VE GOT IT RIGHT HERE. AND HERE'S THE TOOTH THAT SOPHIE STOOD ON.
I THOUGHT SO. THIS IS AN ANCIENT ARROWHEAD FROM A TRIBE THAT LIVED ON THE ISLAND THOUSANDS OF YEARS AGO. IT'S ACTUALLY VERY VALUABLE.
ON THE SURFACE IT APPEARS WORTHLESS, BUT THE TRUTH IS MORE COMPLICATED.

AND THAT IS NOT A SEA MONSTER, IT'S A SUBMARINE. A MACHINE. JUST LIKE MY RADIO CONTROLLED PTERODACTYL.
YOU SEE, ANIMALS ARE MY INSPIRATION. I INVENT THINGS BASED ON WHAT I LEARN FROM ANIMALS.
MY SUBMARINE DESIGN IS BASED ON MY IMPRESSION OF A PREHISTORIC SHARK CALLED A MEGALODON.
THE TOOTH THAT SOPHIE STOOD ON IS ACTUALLY A FOSSIL OF A MEGALODON TOOTH.
BUT THAT'S ENOUGH STORY TELLING FOR ONE NIGHT. IT'S TIME I GOT YOU HOME.

IT'S A LONG RIDE BACK TO SCHOOL. THE THUNDERBOLT KIDS KNOW THAT THEY MAY BE IN TERRIBLE TROUBLE. BUT THEY MAY BE ABLE TO SNEAK BACK IN WITHOUT TIA FINDING OUT WHERE THEY'VE BEEN.
THE NEXT DAY, IN CLASS...
TODAY WE'RE GOING TO TALK ABOUT FOSSILS. BUT APPARENTLY SOME OF YOU ALREADY KNOW ABOUT FOSSILS!

3. THE GAME OF DEATH

ANOTHER ADVENTURE IN THE VIRTUAL REALITY MACHINE IS ABOUT TO BEGIN.
TODAY WE'RE PLAYING A GAME IN THE VR MACHINE. YOU WILL PLAY IN GROUPS OF FOUR.
IF YOU GET REALLY STUCK, YOU'LL FIND THAT HELP WILL POP UP RIGHT IN FRONT OF YOU.
RIGHT, YOU FOUR! YOU'RE UP FIRST.

A FLASH OF WHITE LIGHT AND A SECOND LATER, THE THUNDERBOLT KIDS ARE STANDING IN A ROMAN ARENA FULL OF CHEERING CROWDS.
WELCOME, BRAVE CONTESTANTS!
WOW! IT'S LIKE WE'RE MOVIE STARS!
I WAS BORN FOR THIS!

IN THE VR STUDIO, TIA PLUGS IN THE REMAINING GROUPS TO THEIR OWN GAMES.
YOUR TURN NEXT. DON'T WORRY! THERE'S NOTHING DANGEROUS IN THE GAME!
HMM... NOTHING DANGEROUS, EH?...
BUT WITH A SINGLE TURN OF A SINGLE DIAL, LAZLO CHANGES THE FATE OF THE THUNDERBOLT KIDS.
LET'S SEE IF OUR FRIENDS CAN HANDLE A LITTLE DANGER!

INSTANTLY, THE MOOD CHANGES IN THE ROMAN ARENA.
SEIZE THEM!
HEY! WHAT'S GOING ON?

PUT ME DOWN YOU BIG BRUTE!
FOR THE EMPEROR'S PLEASURE, ONE OF YOU WILL OFFER YOUR LIFE IF THE OTHERS SHOULD FAIL TO COMPLETE THE CHALLENGES BEFORE YOU.

LIFE?! ARE YOU NUTS?!
YOU HAVE MADE YOUR CHOICE! TAKE THE BLUE-HAIRED ONE TO THE CAGE!
NOOOO! PUT HER DOWN!
* RELAX, BUDDY. WE'RE GONNA NEED CLEAR HEADS TO GET THROUGH THIS. *

MEANWHILE, LAZLO AND HIS FRIENDS ARE HAVING A MUCH EASIER TIME IN THEIR VERSION OF THE GAME...
IT'S A SIMPLE TEST OF WITS, SIR. YOU'LL LOVE IT!
WELCOME, YOUNG GENTS! I HOPE YOU ARE COMFORTABLE UP THERE!

AND BACK IN DARK ARENA, FARRAH MEETS A NEW FOE.
I HOPE YOUR FRIENDS ARE QUICK THINKERS. YOUR LIFE DEPENDS ON IT.
YOU'RE GONNA PAY FOR THIS, JERK!
YOU MUST COMPLETE THE CHALLENGES, OR YOUR FRIEND IN THE CAGE WILL DIE!

IN THE ARENA BELOW, THE THUNDERBOLT KIDS FACE THEIR FIRST DEADLY CHALLENGE.
YOU HAVE UNTIL THE SANDS IN THE HOURGLASS RUN OUT TO WALK A THOUSAND STEPS ACROSS THIS FLOOR.

AS USUAL, JOJO IS IN A HURRY.
COME ON! LET'S GO-- OOOO!
CRUMBLE!
AND BEING IN A HURRY IS NEVER A GOOD IDEA WHEN YOU'RE IN THE MIDDLE OF A DIFFICULT CHALLENGE.
BUT THEN, JUST AS TIA SAID IT WOULD, HELP POPPED UP OUT OF NOWHERE.
THAT IDEA DIDN'T WORK, SON. YOU'LL JUST HAVE TO TRY ANOTHER.

WHO ARE YOU?
GEORGE POLYA, MATHEMATICIAN...
HE JUST POPPED UP OUT OF NOWHERE.
... AND I'M VERY PLEASED TO MEET YOU, BUT THERE'S REALLY NO TIME TO CHAT.
NOW IT ALL LOOKS TOUGH, BUT I'M HERE TO HELP.
BUT HOW CAN YOU HELP?

BY ASKING THE RIGHT QUESTIONS, TOM.
FIRSTLY, DOES ANYTHING LOOK FAMILIAR IN THIS CHALLENGE?
YEAH. IT'S A ROMAN ARENA.
AND, WITH THAT ANSWER, GEORGE POLYA'S SIMPLE QUESTION POINTED TOWARDS A POSSIBLE SOLUTION.
YES! AND WHAT DO YOU KNOW ABOUT YOUR CHALLENGE?
THAT WE MUST TAKE A THOUSAND STEPS ACROSS THE FLOOR, OR FARRAH WILL DIE.
BUT WE DON'T NEED A THOUSAND STEPS TO GET ACROSS HERE!

PERHAPS NOT. BUT YOU'VE SEEN WHAT HAPPENS WHEN YOU LEAP IN WITHOUT THINKING. LET ME ASK ANOTHER QUESITON...
DO YOU SEE A PATTERN IN THIS CHALLENGE?
... A PATTERN THAT IS BOTH ROMAN, AND TELLS YOU ABOUT A THOUSAND STEPS.
C M I VI
I GET IT! ROMAN NUMERALS. ROMANS DIDN'T USE NUMBERS, LIKE US, THEY USED LETTERS.
SO WE CAN COUNT TO ONE THOUSAND IN LETTERS: 1, 5, 10, 50, 100, 500, 1000!
M D C L X V I
COME ON! LET'S GO!

ARMED WITH CONFIDENCE, THEY SKIP OVER THE ROCKS WITHOUT FEAR OF THE DEADLY SNAKES BELOW.
AND AS THE LAST GRAIN OF SAND FALLS THROUGH THE HOURGLASS, THE FLOOR CAVES IN BEHIND THEM.
BUT SUDDENLY, IN FRONT OF THEM, A DEADLY MACHINE OF SPINNING RAZOR BLADES RISES OUT OF THE EARTH.
GR-GR
SS-SS
THERE'S NO WAY THROUGH!
EEEK!

WHEN THE FAT MAN LAYS DOWN THE CHALLENGE, THE THUNDERBOLT KIDS CANNOT BELIEVE THEIR EARS.
CROSS THE LINE ON THE OTHER SIDE OF THE MACHINE, OR YOUR FRIEND WILL BE MAULED BY A VICIOUS TIGER!
YOUR END IS NEAR. YOUR FRIENDS WILL NEVER MAKE IT!
YOU'RE NOT A VICIOUS KITTY, ARE YOU?
* PURR! *

MEANWHILE, GEORGE POLYA CAN BARELY BELIEVE HIS EARS AS HE LISTENS TO THE "1000-STEP" CHALLENGE IN LAZLO'S GROUP.
OH, GIMME A BREAK...
STEP ONLY ON THE STONES THAT COUNT TO THREE IN ROMAN NUMERALS.

SO WHAT DO YOU KNOW ABOUT *THIS* CHALLENGE?
WE HAVE TO *CROSS THE LINE* ON THE OTHER SIDE.
YES. BUT WHAT ARE YOU *ASSUMING* ABOUT THE CHALLENGE.
THAT WE HAVE TO *DODGE* THESE SPINNING BLADES?

EXACTLY! AND THAT'S NOT EASY. SO WHY DON'T YOU SOLVE A SIMPLER PROBLEM.
SIMPLER? LIKE BREAKING THE MACHINE?
IF WE JAM ROCKS IN IT, IT'LL BREAK!
EXCELLENT THINKING!
BY THE WAY, I THINK YOU MIGHT ASK YOUR FRIEND, LAZLO, WHY YOU'VE HAD SUCH A ROUGH RIDE.
I KNEW IT! THERE'S NO WAY TIA WOULD'VE MADE THE GAME THIS HARD!
THANKS, GEORGE! GRAB A ROCK AND FOLLOW ME, GUYS!
CRUNCH
CRACK
STEP BY STEP, ROCK BY ROCK, THE MACHINE GRINDS TO A HALT AND THE THUNDERBOLT KIDS WALK TO FREEDOM.

AS THE EMPEROR SEES THE THUNDERBOLT KIDS DESTROY HIS MACHINE, HE LETS OUT A TERRIBLE SCREAM.
BUT HE WOULD BE EVEN MORE UPSET IF HE KNEW WHAT WAS HAPPENING BEHIND HIM.
GOOOOD KITTY. BAAAAD EMPEROR.
• MEOW •
GNAAA!
AND AT THAT MOMENT, THE THUNDERBOLT KIDS CROSS THE FINISH LINE AND EXIT THE VIRTUAL REALITY MACHINE.
VZ
VZ
VZ
JUST AS FARRAH VANISHES FROM THE CAGE.
VZ
AND HER NEW FRIEND STARTS TO LOOK DIFFERENTLY AT HIS OLD MASTER.

BACK IN THE VIRTUAL REALITY CONTROL ROOM, TIA HAS A WORD WITH LAZLO.
LAZLO, I COULD PUNISH YOU FOR WHAT YOU'VE DONE.
BUT INSTEAD I'M GOING TO LEAVE YOU ALONE TO HAVE A LITTLE CHAT WITH TOM, JO, SOPHIE AND FARRAH.
HI, LAZ!
GOOD TO SEE YOU, LAZ!
HOW WAS YOUR GAME, LAZ?
I HOPE IT WAS AS FUN AS OURS, LAZ!
BZZ

4. THE BALLOON BET

WHEN TOM SEES THE BRIGHT COLOURS OF THE **BALLOON** AGAINST THE SKY, HE MAKES UP HIS MIND TO LEARN EVERYTHING HE CAN THAT WILL TEACH HIM TO MAKE ONE FOR HIMSELF.

TOM NEVER WAISTS TIME WHEN HE'S INTERESTED IN SOMETHING.
HI, I'M TOM. FROM THE THUNDERBOLT SCHOOL OF THINKING.
HOW DO YOU DO, TOM. IM BASIL. FROM THE SKY!
HE GOES STRAIGHT TO THE BEST SOURCE OF INFORMATION AND HE ASKS ALL THE QUESTIONS HE CAN THINK OF.
SO HOW DOES IT WORK?
THERE'S A LOT OF INFORMATION YOU NEED TO THINK ABOUT TO MAKE A BALLOON WORK SAFELY...

AS THE BALLOON LIFTS OFF, TOM'S HEAD REELS WITH ALL THE NEW FACTS HE HAS LEARNED...
... FACTS THAT HE CAN'T WAIT TO USE IN HIS OWN BALLOONING EXPERIMENTS.
BASIL'S BALLOON USES HOT AIR, BUT HE SAID HELIUM GAS WOULD WORK FINE FOR MY EXPERIMENTS.
HE

THE NEXT DAY...
MY AIM IS TO WORK OUT HOW TO SEND A BALLOON INTO THE UPPER ATMOSPHERE!
TEMPERATURE, WIND SPEED AND DIRECTION, AIR PRESSURE, TIME AND ALTITUDE!
I WILL DO A SERIES OF EXPERIMENTS. EACH TIME I WILL RECORD THE SAME INFORMATION.
32°

WHAT'S AIR PRESSURE?
AIR PRESSURE DECREASES AT ALTITUDE, SO THE GAS INSIDE THE BALLOON EXPANDS 'TIL EVENTUALLY THE BALLON EXPLODES!
• WHAT DID HE SAY? •
• I'M HOPING I'LL GET IT AS HE GOES ALONG. •
• ME TOO. •
AND THEY WILL ALL GET IT AS HE GOES ALONG. BUT FOR NOW, TOM IS TOO EXCITED TO SLOW DOWN AND EXPLAIN HIMSELF.
I WILL MEASURE THE HEIGHT THAT EACH BALLOON REACHES WITH THIS ROPE.
EACH BLACK MARK ON THE ROPE REPRESENTS ONE METRE.

AND, AS I LIFT THE BRICK, THE BALLOON SHOULD SHOOT UP INTO THE AIR.
BUT IT PROBABLY SHOULDN'T POP IMMEDIATELY...
I GUESS IT'S BACK TO THE DRAWING BOARD.

CLAP
CLAP
CLAP
BACK TO THE DRAWING BOARD? HOW ABOUT BACK TO REALITY?!
• GRRRR! •
• ? •
32°
TOM DOESN'T MIND THAT HIS FIRST ATTEMPT AT PUTTING A BALLOON INTO THE UPPER ATMOSPHERE WAS A FAILURE. FOR HIM, ALMOST NOTHING COULD DULL THE THRILL OF EXPERIMENTING. WELL, ALMOST...

WHAT'S THAT SUPPOSED TO MEAN?
IT MEANS YOU'RE NOT A GENIUS JUST BECAUSE YOU'VE LEARNED A NEW WORD.
* !@#$ *
GRFF!
AIR PRESSURE? PLEASE! I BET THE NEXT ONE POPS BEFORE IT LEAVES THE GROUND!
YOU BET? WELL I BET THAT IN THREE DAYS I'LL PUT A BALLOON UP SO HIGH, WE WON'T HAVE ENOUGH STRING TO MEASURE THE ALTITUDE!
SO HOW'RE YOU GONNA KNOW HOW HIGH IT GOES, STUPID? ARE YOU GONNA SEND YOUR ROBOT UP WITH IT?

THEN, CAUGHT UP IN THE HEAT OF THE MOMENT, TOM MAKES A PROMISE THAT HE IS NOT SURE HE CAN KEEP.
EXACTLY! I'LL SEND MY ROBOT UP IN THE BALLOON, AND THEN WE'LL KNOW EXACTLY HOW HIGH IT GOES!
!
AND LAZLO KNOWS IT.
HA! THE LAST DAY IN THE LIFE OF TOM'S ROBOT. I WOULDN'T MISS THAT FOR THE WORLD!

WHAT ARE YOU GONNA DO NOW?!
WHY DID YOU DO THAT? LAZ IS A JERK! HE WAS JUST TRYING TO WORK YOU UP, AND YOU FELL FOR IT!
TOM, YOU'VE SPENT TWO YEARS BUILDING THAT ROBOT.
YOU KNOW THE BALLOON WILL EVENTUALLY POP. HOW WILL YOU SAVE YOUR ROBOT?
I HAVE NO IDEA. BUT I WILL.

THE NEXT DAY...
AFTER EXAMINING ALL THE INFORMATION HE RECORDED, TOM COMES TO A FEW CONCLUSIONS.
YESTERDAY I USED TOO MUCH GAS. THE AIR PRESSURE ON THE BALLOON WAS TOO GREAT, SO IT POPPED RIGHT ABOVE ME.
AND SO TRIES AGAIN. THIS TIME WITH LESS GAS. AND THE RESULTS ARE EXTRAORDINARY.
YEAH!

THE NEXT DAY, AFTER STUDYING HIS INFORMATION AGAIN, TOM TRIES A NEW THEORY.
MAYBE A SOFTER BALLOON CAN EXPAND MORE.
AND HIS THEORY PAYS OFF WHEN THE BALLOON TRAVELS UP FOR AGES BEFORE THE GAS INSIDE EXPANDS SO MUCH THAT IT POPS.
ALMOST THERE...

AFTER ANALYSING ALL THE INFORMATION HE HAS COLLECTED, TOM IS SURE THAT THE CONDITIONS TODAY ARE PERFECT TO SEND A BALLOON INTO THE UPPER ATMOSPHERE! HE LIFTS THE BRICK...
COME ON BABY... RISE!
AND SECONDS LATER, THE ROPE FLIES OFF THE SPINDLE.
AND NOW MY TOUGHEST CHALLENGE BEGINS. HOW DO I GET YOU BACK TO EARTH SAFELY?
• ? •
HE'S DONE IT! IT'S OUT OF ROPE!

LATER THAT NIGHT...
WHAT GOES UP, MUST COME DOWN...
SO WHAT GOES UP AND COMES DOWN SAFELY?
SAFELY AND SLOWLY?
... QUESTIONS TURN TO THOUGHTS, UNTIL EVENTUALLY...
... ONE THOUGHT MAKES HIM THINK...
EUREKA!
AND THEN TOM SPENDS THE REST OF THE NIGHT TURNING THAT ONE EUREKA THOUGHT INTO SOMETHING REAL!

THE NEXT DAY, AS TOM PREPARES HIS ROBOT TO TRAVEL UP WITH HIS BALLOON...
HIYA, LAZ!
WHY ARE YOU SO CHEERFUL?!
* !! *
GRRRR-RUFF!
I'VE FITTED MY ROBOT WITH AN ALTIMETER. WHEN IT COMES BACK DOWN TO EARTH, WE'LL KNOW EXACTLY HOW HIGH IT WENT.
DOWN TO EARTH? IN PIECES, YOU MEAN?
* !@#$ *
SNARL-ROW-GR-RUFF!
ALL IS GOING WELL, UNTIL...

UNTIL LAZLO'S DOG JUMPS OUT OF HIS GRASP AND INTO THE BASKET!
WHOA!
REX! NO!

DON'T JUST STAND THERE, DO SOMETHING!
LIKE WHAT? PUT YOUR DOG ON A LEASH? IT'S A BIT LATE FOR THAT.

I KILLED MY DOG...
REALLY, LAZ, RELAX. REX WILL BE FINE.
TOM, WHAT'S GOING TO HAPPEN TO LAZ'S DOG?
IF HE STAYS IN THE BASKET, HE'LL BE FINE. TRUST ME.
IF HE STAYS IN THE BASKET?
I'M A KILLER!? REX! COME BACK!

AND WHEN THUNDERBOLT ISLAND IS JUST A BLOB OF GREEN BELOW...
AND WHEN THE AIR BEGINS TO FREEZE POOR REX, THE ALTIMETER SENDS A SIGNAL TO TOM'S ROBOT TO POP THE BALLOON!
POP

AND WHEN REX AND THE ROBOT FLOAT BACK DOWN TO EARTH, THE CROWD SEES THAT ALL ALONG, THE BALLOON WAS COVERED BY A PARACHUTE.
THAT'LL DO, ROBOT. THAT'LL DO.
A PARACHUTE! THE BALLOON WAS COVERED BY A PARACHUTE!
REX!
H-H-HOW DID YOU DO IT?
WITH A LITTLE INFOMRATION. AND A LITTLE HELP FROM MY ROBOT.

5. PHILOSOPHERS STONE

IT IS JUST AFTER SUNSET WHEN THEY ARRIVE AT THE SCIENCE MUSEUM ON THE MAINLAND.
THEY CLOSED TO THE PUBLIC AN HOUR AGO, BUT MY FRIEND IS THE CURATOR. HE IS EXPECTING US FOR A SPECIAL TOUR.

THERE ARE SO MANY INTERESTING THINGS TO SEE INSIDE. YOU'LL LOVE IT!
BZZZZ
A STRANGE, ANGRY VOICE COMES THROUGH THE INTERCOM.
WHA -. I... ER...
WHO'S THERE? MFL...MBL... WE'RE CLOSED!

BUT, A SECOND LATER, THE STRANGE VOICE IS REPLACED BY THE FAMILIAR SOUND OF TIA'S FRIEND, THE CURATOR.
TIA? UH... FORGIVE ME. NEW STAFF. DIDN'T KNOW YOU WERE COMING. MY NEW... UH... ASSISTANTS WILL BE WITH YOU SHORTLY.
AS PROMISED, THE CURATOR'S ASSISTANTS ARRIVE IN A MINUTE. BUT THEY DON'T LOOK MUCH LIKE SCIENTISTS...
TIA! DR KAY HAS TOLD US ALL ABOUT YOU. I AM ELVIRA AND THIS IS KLAUS. WE'RE DR KAY'S NEW ASSISTANTS.

AS KLAUS LEADS THE KIDS AWAY TO BEGIN THEIR TOUR OF THE SCIENCE MUSEUM, ELVIRA TAKES TIA TO SEE HER FRIEND, DR KAY.
DR KAY, WILL BE SO HAPPY TO SEE YOU.
AND DON'T WORRY ABOUT THE BRATS - UH - KIDS! KLAUS IS EXCELLENT WITH CHILDREN!
FOLLOW ME, CHILDREN! YOUR RE-EDUCATION IS ABOUT TO BEGIN.

SECONDS LATER, TIA IS GONE, AND THE THUNDERBOLT KIDS ARE LEFT IN KLAUS'S HANDS.
ALL RIGHT, KIDS, LET'S LEARN ABOUT SOME OF THE GREAT FALLACIES OF SCIENCE.
BUT, BEING SCEPTICAL CHILDREN, THEY ARE IMMEDIATELY SUSPICIOUS.
FALLACIES? MISTAKEN BELIEFS? THIS GUY DOESN'T SOUND LIKE A SCIENTIST AT ALL.
SOMETHING'S NOT RIGHT. WE BETTER KEEP AN EYE ON HIM.

MEANWHILE, ELVIRA LEADS TIA TO DR KAY'S OFFICE...
HE'S RIGHT IN HERE.
... AND INTO A TRAP!
DO AS WE SAY AND NO ONE GETS HURT.
ELVIRA, HAS KLAUS GOT THE BRATS UNDER CONTROL?
ALEX! ARE YOU ALRIGHT?
OF COURSE, GUSTAV! THEY WILL BE NO TROUBLE AT ALL!

UNAWARE THAT THEIR TEACHER HAS BEEN TAKEN HOSTAGE, THE KIDS LISTEN PATIENTLY TO KLAUS'S VERY STRANGE IDEAS ABOUT SCIENCE.
BEHOLD THE PHENOMENON KNOWN AS ELECTRICITY!
MAN'S GREAT OBSESSION FOR MORE THAN 400 YEARS.
AN OBSESSION THAT HAS PRODUCED EXACTLY NOTHING OF VALUE TO THE HUMAN RACE!
NATURALLY, THE THUNDERBOLT KIDS CAN BARELY BELIEVE THEIR EARS.

NOR CAN THEY HOLD THEIR TONGUES.
SO WHAT ABOUT ELECTRIC LIGHT? OR REFRIGERATION?
YEAH, OR HEATING? OR ANYTHING AT ALL THAT'S ELECTRONIC?
OR ANY OF THE MILLION INVENTIONS THAT DEPEND ON ELECTRICITY TO MAKE OUR LIVES BETTER, SAFER AND LONGER!

YOU SHOULD LEARN NOT TO QUESTION WHAT OLDER, SMARTER PEOPLE TELL YOU.
TIA WOULD NEVER TELL US NOT TO QUESTION SOMEONE, EVEN IF THEY WERE OLDER OR SMARTER.
YEAH, AND SHE'D NEVER LEAVE US ALONE WITH AN IDIOT LIKE THIS EITHER. NOT IF SHE HAD A CHOICE.

BUT, OF COURSE, SHE DOESN'T HAVE A CHOICE.
MY DEAR, YOUR SHOWING UP IS AN UNFORESEEN NUISANCE. WHAT WE WANT, DR KAY CAN DO ALONE.
WHY ARE YOU DOING THIS? AND WHERE ARE MY KIDS?
BUT NOW THAT YOU ARE HERE, YOU CAN HELP HIM. YOUR KIDS WILL BE PERFECTLY SAFE. UNLESS YOU REFUSE.

AND THEN GUSTAV REVEALS HIS PLAN.
I HOLD THE LAST RECIPE FOR... THE PHILOSOPHER'S STONE!
AND YOU WILL MAKE IT FOR US!
A STONE THAT TURNS BASE METALS INTO GOLD, THAT'S RIDIC- UH...
* THIS ISN'T A RECIPE FOR THE PHILOSOPHER'S STONE... *
DR KAY STARTS TO OBJECT, BUT THEN TIA NUDGES HIM TO STOP...
... BECAUSE SHE REALISES THAT THE RECIPE THEY ARE READING IS ACTUALLY THEIR MEANS TO ESCAPE!
OF COURSE, WE'LL MAKE IT. WE DON'T WANT ANY TROUBLE.
OH WELL DONE, TIA!
JUST ONE LOOK TELLS DR KAY THE SAME THING.

BEHOLD, THE PENDULUM, WITH IT'S POTENT HEALING POWERS.
ALSO USED IN DOWSING TO FIND WATER BENEATH THE GROUND.
AND IN THE HANDS OF A HYPNOTIST, ITS RHYTHMIC SWING COULD TAKE CONTROL OF YOUR MIND.
TO THE THUNDERBOLT KIDS, THE PENDULUM MEANS SOMETHING VERY DIFFERENT.
WHAT ABOUT THE PENDULUM'S USE IN TIME KEEPING?
GALILEO DID EXPERIMENTS WITH A PENDULUM AND THAT'S WHAT HE THOUGHT THEY COULD BE USED FOR.

AND HE WAS RIGHT! WHAT DO YOU THINK KEEPS TIME IN A PENDULUM CLOCK?!
AND METRONOMES ARE PENDULUMS THAT MUSICIANS USE TO KEEP TIME WHEN THEY'RE PLAYING MUSIC.
AND GRAVITY IS WHAT MAKES THAT POSSIBLE, NOT HEALING POWERS, NOT WATER BENEATH THE GROUND, AND NOT HYPNOTISM!

OKAY, NOW I'M SURE OF IT. THIS GUY IS TROUBLE. AND THAT MEANS TIA MUST BE IN DANGER.
YEAH, BUT WHAT DO WE DO?
GET AWAY FROM THIS CREEP, FOR STARTERS. WITHOUT RAISING ANY ALARMS!
THE NEXT EXHIBIT IS ON MAGNETISM. WHICH GIVES ME AN IDEA...

THE ONE THING WE COULDN'T GET OUTSIDE IS METEOR DUST. WHICH IS ONE THING YOUR MUSEUM HAS PLENTY OF.
I'VE ALSO ADDED A FEW SPECIAL INGREDIENTS OF MY OWN!
AND IT'S THE ONE THING THAT ALL THE FAILED RECIPES IN HISTORY HAVE LEFT OUT!
THAT'S WHY TONIGHT, WE'LL MAKE THE TRUE PHILOSOPHER'S STONE...
WHICH WILL MAKE US RICH, AND IMMORTAL!

BEHOLD AN ELECTROMAGNET.
A MACHINE THAT CHANNELS THE SUN'S ENERGY TO EARTH.
WHICH IS WHY A POWERFUL ENOUGH MAGNET CAN GIVE YOU SUNBURN!
* PSST! JO! YOU READY? *
I HOPE THIS WORKS...
* READY! *

WITH THE SNEAKY FLICK OF A SWITCH, JOJO TURNS ON THE GIANT ELECT-ROMAGNET. AND IF TOM'S WORK IS SUCCESSFUL, IT SHOULD BE WAY MORE POWERFUL THAN NORMAL.
THEN HE TURNS THE POWER TO MAX!
IMMEDIATELY, THE MAGNET STARTS TO PULL... ON KLAUS'S JEWELLERY!
YOW-!
RUN FOR IT, GUYS!

GET BACK HERE, YOU BRATS!
I - GRR - HAVEN'T - FIN- ISHED!
CLANG

WHEN IT'S TIME FOR THE FINAL INGREDIENT IN THE RECIPE...
I THINK YOU SHOULD ADD THE FINAL INGREDIENT, GUSTAV.
... TIA AND DR KAY STAND BACK AND ADMIRE THEIR WORK.
BANG
NICE WORK, ALEX!
NAH! IT WAS ALL YOU!

WHEN THE DUST SETTLES (AND WHEN THE ELECTROMAGNET IS SWITCHED OFF) THE POLICE LEAD THE LUCKLESS CRIMINAL TRIO AWAY.
A FIRECRACKER RECIPE? CAN YOU BELIEVE THEY FELL FOR THAT?
FOLKS WHO KNOW NOTHING ABOUT SCIENCE WILL FALL FOR ANYTHING.
NOW, IF YOU'LL EXCUSE ME, I HAVE TO REPAIR MY ELECTROMAGNET.
UH... YEAH. SORRY ABOUT THAT!

6. DIAMOND DECEPTION

THE FAMOUS DETECTIVE, JJ GETTY, PLAYED BY THE FAMOUS ACTOR, TRENT TAYLOR, IS ABOUT TO EXPOSE THE DIAMOND THIEF!
AND SO I DEDUCED THAT THERE ARE ONLY THREE PLACES THAT THE DIAMOND COULD BE.

THE FIRST WAS MRS CRUMB'S SAFE DEPOSIT BOX. BUT SHE HASN'T USED THAT IN TWO YEARS, SO I HAD TO RULE IT OUT.
THE SECOND WAS REVERAND BROWN'S OFFICE. BUT HE DIDN'T RETURN THERE 'TIL LONG AFTER THE DIAMOND WAS STOLEN, SO I HAD TO RULE IT OUT.

WHICH LEAVES... PROFESSOR APPLE'S DRINK!
CLINK
WITH HIS AMAZING POWERS OF DEDUCTION, JJ GETTY IS CORRECT!
BRAVO!
WOW!
BRAVO!
IT SAYS HERE THAT A RICH JEWELLER - A FAN OF TRENT TAYLOR - LOANED A REAL DIAMOND TO THE THEATRE.
A REAL DIAMOND.
AS THE DETECTIVE REMOVES THE DIAMOND FROM PROFESSOR APPLE'S DRINK, WHERE HE WAS DISGUISING IT AS AN ICE CUBE, JOJO'S EYES GROW WIDE WITH WONDER.

AFTER THE SHOW, JOJO EAVESDROPS WHILE HE THINKS OF A PLAN TO SEE THE DIAMOND.
WE'VE HAD RAVE REVIEWS. IN FACT, THE ONLY COMPLAINTS ARE ABOUT THE SMELL.
YES, I'M AFRAID THE STAGE IS RIGHT ABOVE AN OLD SEWER.
I CAN'T BELIEVE IT WAS A REAL DIAMOND! YOU THINK THEY'LL LET US SEE IT?
THEY SAY THE JEWELLER WHO OWNS THE DIAMOND WATCHES EVERY SHOW.
AND HE LOCKS THE IT AWAY HIMSELF EVERY NIGHT.

SO WE RELY ON BEAUTIFUL LADIES IN THE AUDIENCE TO FILL THE AIR WITH PERFUME!
OH, TRENT! WHAT A CHARMER!
TRENT TAYLOR SEEMS COOL. MAYBE IF I ASK HIM TO ASK THE JEWELLER...
YEAH! THAT'S IT! ACTORS LOVE FANS THAT SHOW THEM ATTENTION!
THE SAFE IS IN THE THEATRE MANAGER'S OFFICE. THE DIAMOND MUST BE THERE NOW. COOL!

JOJO HEADS TOWARDS THE ACTORS' DRESSING ROOMS TO MEET TRENT TAYLOR.
BUT THEN HE HEARS THE ACTOR SAY SOMETHING THAT MAKES HIM DROP THE CANDY HE'S HOLDING.
LADIES AND GENTLEMEN, IT IS DONE. THE DIAMOND IS OURS!
KLIK
AND THEN HE SEES SOMETHING THAT PARALYSES HIM WITH SHOCK.
CAN YOU BELIEVE THAT THE FOOL FELL FOR THE SAME TRICK HE HAS WATCHED ON STAGE EVERY NIGHT?!
AS HE TURNED TO OPEN THE SAFE, I DROPPED THE REAL DIAMOND IN MY DRINK AND GAVE HIM THE FAKE.

JUST AS JOJO BEGINS TO REALISE THAT TRENT TAYLOR IS NOTHING MORE THAN A THIEF...
NOW THE ONLY THING LEFT TO DO IS TO MAKE OUR GETAWAY.
... A PAIR OF HEAVY HANDS GRABS HIM FROM BEHIND.
YOU SHOULDN'T LISTEN AT DOORS, BOY!
• ?! •

IN THE FOYER OF THE THEATRE, TIA GETS THE THUNDERBOLT KIDS READY TO LEAVE.
HAS ANYONE SEEN JOJO?
NOT SINCE THE SHOW.
NOPE.
NOT ME.
NOT FOR ABOUT 20 MINUTES
BUT THEN SHE REALISES THAT ONE OF THEM IS MISSING.

WHEN TIA ASKS FOR HELP, THE THEATRE SECURITY GUARD REASSURES HER.
DON'T WORRY, MISS. HAPPENS ALL THE TIME.
THERE'S AN ARCADE NEXT DOOR. KIDS ALWAYS SNEAK OUT TO PLAY GAMES.
AND THEN AN OLD LADY SAYS SOMETHING THAT GIVES HER HOPE.
I SAW A YOUNG BOY RUN OVER TO THE ARCADE ABOUT 20 MINUTES AGO.
SEE? TOLD YA!

A SECOND LATER, TIA IS OUT THE DOOR WITH THE SECURITY GUARD.
DON'T MOVE! I'LL BE BACK IN A MINUTE.
BUT...
AND THE MOMENT SHE'S GONE, SOPHIE, FARRAH AND TOM BEGIN TO WORK OUT WHAT HAS REALLY HAPPENED TO THEIR FRIEND.
BUT THIS DOESN'T MAKE SENSE. JUST BECAUSE "KIDS ALWAYS SNEAK OUT," THAT DOESN'T MEAN JOJO DID.
YEAH! AND DID YOU SEE THAT OLD LADY'S GLASSES? SHE COULDN'T TELL THE DIFFERENCE BETWEEN JOJO AND AN ELEPHANT!
I'M WITH YOU. NOTHING LOGICAL IN THAT!

WITH THE SIMPLE USE OF LOGIC, THEY ARE ALREADY ONE STEP CLOSER TO FINDING JOJO.
JO CAN BE A LITTLE NUTS SOMETIMES, BUT HE WOULDN'T LEAVE THE BUILDING.
AND BESIDES, HE'D BE MORE INTERESTED IN SEEING THE DIAMOND THAN IN PLAYING VIDEO GAMES.
SO HE WOULDN'T LEAVE? AND HE'D RATHER SEE THE DIAMOND THAN PLAY VIDEO GAMES?
IF YOU'RE BOTH RIGHT, THEN HE MUST STILL BE IN THE BUILDING!

KNOWING THAT JOJO WANTED TO SEE THE DIAMOND, THE KIDS MAKE THEIR WAY TO THE MANAGER'S OFFICE.
JUST AS THEY REACH THE DOOR, THEY HEAR...
DAMN YOU TRENT TAYLOR!
INSIDE THE OFFICE, THE OWNER OF THE DIAMOND GROWLS ANGRILY TO THE THEATRE MANAGER.
I KNEW IT. I KNEW I HAD TO DOUBLE CHECK. IT'S A FAKE!
AND TRENT TAYLOR IS A THIEF!

MEANWHILE, IN A ROOM FULL OF OLD THEATRE PROPS...
BY THE TIME THEY FIND YOU, WE WILL BE LONG GONE.
AFTER LOCKING JOJO IN THE SARCOPHAGUS, TRENT TAYLOR TURNS TO HIS ACCOMPLICES: THE ENTIRE CAST OF THE PLAY!
POLICE WILL BE WATCHING THE AIRPORTS AND PORTS.
SO WE'LL SAIL OUT UNDER THEIR NOSES. IF YOU'LL EXCUSE THE PUN!

MEANWHILE, IN THE VIDEO ARCADE ACROSS THE STREET.
HERE HE IS! I TOLD YOU I SAW HIM.
OH NO!

MEANWHILE, BACK IN THE THEATRE MANAGER'S OFFICE.
BUT HOW COULD HE HAVE SWITCHED THE DIAMONDS? HE WAS STANDING RIGHT IN FRONT OF ME?!
BUT FARRAH KNOWS THAT WHAT THE DIAMOND OWNER SAYS IS NOT LOGICAL.
EXCEPT WHILE YOU WERE OPENING THE SAFE...
THEN HE WOULD HAVE HAD A FEW SECONDS TO SWITCH THE DIAMOND WHILE YOUR BACK WAS TURNED.

BUT THE JEWELLER DOESN'T TAKE KINDLY TO FARRAH'S THEORY.
YOU THINK I'M STUPID?
MAYBE THE REASON YOUR FRIEND IS MISSING IS BECAUSE HE STOLE MY DIAMOND!
AND SOPHIE DOESN'T TAKE KINDLY TO THE LACK OF LOGIC IN THE JEWELLER'S THEORY.
JUST BECAUSE BOTH ARE MISSING UNDER THE SAME ROOF, DOES NOT MEAN THEY'RE CONNECTED!

THE THUNDERBOLT KIDS FIND THEIR WAY TO THE ACTORS' DRESSING ROOMS.
IF FARRAH IS RIGHT ABOUT TRENT TAYLOR, THEN THAT'S WHO WE NEED TO SEE.
AND IT DOESN'T TAKE MUCH TO CONVINCE THE JEWELER TO COME WITH THEM.
WHAT'S IN HERE?
CHECK THIS OUT. JOJO WAS EATING THESE SWEETS ALL THROUGH THE PLAY.

WHEN THEY OPEN THE DOOR THEY FOLLOW THE TRAIL OF CANDY TO THE SARCOPHAGUS.
CAN YOU HEAR THAT? THERE'S SOMEONE IN HERE.
RATTLE
RATTLE
WHEN FARRAH OPENS THE SARCOPHAGUS, JOJO CAN'T WAIT TO SPEAK.
HURRY! THERE'S NOT MUCH TIME. I THINK I KNOW WHERE THEY ARE.

JOJO USED ALL THE THINGS HE HEARD TRENT TAYLOR SAY TO DEDUCE WHERE HE HAD GONE.
I HEARD TRENT TAYLOR SAY THEY WERE GOING TO SAIL OUT UNDER OUR NOSES.
YUCK!
I ALSO HEARD THE THEATRE MANAGER SAY THERE WAS AS SEWER UNDER HERE.
WHEN HE SEES THE NOTE THAT TRENT TAYLOR LEFT ON THE WALL, HE KNOWS HIS DEDUCTIONS ARE CORRECT.
BUT HE ALSO KNOWS THEY ARE TOO LATE. AND TRENT TAYLOR WILL LIVE TO STEAL AGAIN.
"THE SHOW IS OVER!" SIGNED, TRENT TAYLOR

BACK ON STAGE, A FEW MINUTES LATER.
YES, INSPECTOR, YOU HEARD CORRECTLY: TRENT TAYLOR STOLE THE DIAMOND.
I THINK I PREFER BEING "ON" THE STAGE TO BEING UNDER IT.
OH, BOY, ARE YOU A SIGHT FOR SORE EYES!
THAT IS NOT THE BOY AT ALL. DON'T BE RIDICULOUS!

7. THE VOLCANO

THE ONE THING THAT IS EASY TO PREDICT ABOUT THE THUNDERBOLT KIDS, IS THAT THEY WILL ALWAYS DO THINGS DIFFERENTLY FROM EACH OTHER.
BETCHYA MINE GOES FURTHEST! IT'S GOT THE BIGGEST WINGSPAN
ANY SIMPLE DESIGN WORKS. IT ALL DEPENDS ON HOW YOU THROW IT.
THAT'S NOT PAPER! WHAT DID YOU USE TO MAKE YOUR PLANE?
DRINKING STRAWS AND CELLOPHANE. I THOUGHT I'D EXPERIMENT.

MINE'S GOING RIGHT OVER THAT HILL!
YEAH! RIGHT BEHIND MINE!
I'LL PASS YOU ON THE WAY TO FETCH MINE.
MINE'S NOT EVEN COMING DOWN.
BUT NOT EVEN THEIR JOKES CAN PREDICT WHAT ACTUALLY HAPPENS.
WHOA!
WHAT MADE THEM GO SO HIGH?
I GUESS WE DON'T KNOW OUR OWN STRENGTH.
WHERE'S THAT SMOKE COMING FROM?

A LITTLE WHILE LATER, ON TOP OF THE HILL, THE SOURCE OF THE SMOKE IS OBVIOUS. AND RIGHT AWAY, THE KIDS FORGET ABOUT THEIR AEROPLANES.
IT'S COMING FROM THE VOLANCO! BUT TIA SAID IT WAS DORMANT.
WHAT DO YOU THINK IT MEANS?
IT MEANS NOTHING UNTIL WE KNOW MORE.
WELL WHAT ARE WE WAITING FOR, LET'S TAKE A CLOSER LOOK!

A LITTLE CLOSER TO THE VOLCANO, THINGS SEEM EVEN STRANGER.
PHEW! WHAT IS THAT SMELL? IT SMELLS LIKE ROTTEN EGGS. YUCK!
WHAT'S MAKING THE WATER STEAM LIKE THAT?
I DON'T KNOW. BUT MAYBE WE SHOULDN'T HAVE COME THIS CLOSE. LET'S GO BACK TO SCHOOL.

BACK AT SCHOOL, THE THUNDERBOLT KIDS FIND LAZLO PREACHING TO A CROWD. RIGHT AWAY, THEY SMELL TROUBLE!
YUCK! THAT EGGY SMELL IS EVERYWHERE!
I TELL YOU, THE END IS COMING!
WHAT IS THAT IDIOT UP TO NOW?

FIRST, THE SCHOOL WAS ATTACKED BY SNAKES.
THEN WE WERE FLOODED IN A RAIN OF FISH AND FROGS.
AND NOW WE ARE PLAGUED BY AN EVIL STENCH.
THE SIGNS ARE CLEAR TO ME, MY BROTHERS AND SISTERS...

ALL THIS CAN ONLY BE THE WORK OF THE MUNCHY MONSTER! AND I PREDICT THAT HE WILL ATTACK SOON.
MUNCHY WHAT?
HOW ON EARTH DOES THAT BOY'S BRAIN WORK?! THAT'S A PICTURE OF MY HALLOWEEN COSTUME!
LAZ'S SO-CALLED "PREDICTION" IS GONNA FREAK EVERYONE OUT.
IF WE'RE GONNA MAKE OUR OWN PREDICTION, WE'RE GONNA BASE IT ON FACTS.

AFTER A LITTLE RESEARCH, THE STRANGE HAPPENINGS AT THE VOLCANO START TO MAKE SENSE.
THAT EGGY SMELL COULD BE CAUSED BY SULPHUR FROM THE VOLCANO.
THE HOT WATER IN THE POOLS COULD BE CAUSED BY HEAT FROM UNDER THE VOLCANO.
AND IF HEAT IS RISING OUT OF THE CONE THAT COULD BE WHAT MADE OUR PAPER PLANES FLY SO HIGH.
IF ALL THIS IS TRUE, THEN THE VOLCANO COULD BE ABOUT TO ERUPT.
BUT WE HAVE TO BE MORE CERTAIN!

WE'VE GOTTA TELL TIA ABOUT THIS.
SURE, BUT NOT JUST YET.
WE KNOW THAT LAZ'S PREDICTION ABOUT THE MONKEY MONSTER, OR WHATEVER, IS RUBBISH.
BUT WE HAVE TO BE SURE ABOUT OUR PREDICTION BEFORE WE RAISE A PANIC, OR WE'RE NO BETTER THAN HIM.

AN HOUR LATER, NEAR THE VOLCANO.
I DON'T WANNA SEEM LIKE A CHICKEN, BUT MAYBE WE SHOULDN'T GET SO CLOSE THIS TIME.
IF WE'RE GONNA PREDICT AN ERUPTION, THEN THE RESPONSIBLE THING TO DO IS LOOK FOR REASONS WE MIGHT BE WRONG.
OK, OK, WE'RE RIGHT BEHIND YOU!
• I WISH WE WERE A FEW HUNDRED METRES BEHIND YOU... •

A SAFE DISTANCE FROM THE VOLCANO, THE THUNDERBOLT KIDS SET UP THEIR EQUIPMENT.
I'LL TAKE PHOTOS, AND IF THE SMOKE PLUME GETS SMALLER OVER TIME, THEN WE MIGHT BE WRONG.
IF THE WATER IN THESE POOLS ISN'T ACIDIC, THEN WE MIGHT BE WRONG.
IF THE SOIL TEMPERATURE IS UNDER 30°, THEN WE MIGHT BE WRONG.
AND IF THIS SEISMOMETER DOESN'T PICK UP ANY TREMORS, THEN WE'LL DEFINITELY BE WRONG.

THE FACTS DON'T LOOK GOOD. BUT THERE IS A LITTLE HOPE.
OH NO! THE PLUME GOT BIGGER. THERE'S NO QUESTION ABOUT THAT!
THE WATER IS PRACTICALLY PURE ACID!
THE SOIL IS SO HOT YOU COULD COOK AN EGG IN IT!
BUT THE MOST IMPORTANT SIGN IS MISSING! NO SEISMIC ACTIVITY. NO SHAKES!

BUT NOT FOR LONG.
WHOA!
YIKES!
OK, I THINK THAT'S ALL THE *INFO* WE NEED!
YEAH! CAN WE *PLEASE* PREDICT AN ERUPTION NOW!
LET'S WARN *DOC ROBERTS* AND THEN GET BACK TO SCHOOL.

DR ROBERTS! THE VOLCANO IS GOING TO ERUPT!
I KNOW! WHAT ARE YOU DOING HERE?
YOU KNOW?!
TIA AND I HAVE BEEN MONITORING IT FOR A WHILE. WE JUST DIDN'T EXPECT IT TO BLOW SO SOON.
I'M GETTING THE ANIMALS OUT AND TIA'S EVACUATING THE SCHOOL NOW. YOU'D BETTER COME WITH ME.

HAS ANYONE SEEN LAZ?
HIS HOROSCOPE TOLD HIM THE MOOMOO MONSTER IS COMING.
THE WHAT?!
AFTER HE READ THAT, HE WAS TOO SCARED TO LEAVE HIS ROOM.
"BEWARE YOUR INNER DEMONS TODAY..." HOW DID HE GET THE MOJO MONSTER OUT OF THAT?
THAT MAKES ABSOLUTELY NO SENSE AT ALL.

WELL I PREDICT THAT IN ABOUT FIVE MINUTES, LAZ WILL BE IN THE BACK OF THIS TRUCK.
EXCUSE ME, BOYS AND GIRLS! I HAVE TO SEE IF MY HALLOWEEN COSTUME STILL FITS.
IN HIS ROOM, LAZ SHIVERS UNDER THE COVERS.
THEY DON'T KNOW WHAT'S OUT THERE...
KNOWLEDGE IS A TERRIBLE BURDEN...

SUDDENLY, THE DOOR FLIES OPEN.
AARGH! AARGH! AARGH!

TIA! I SAW IT! THE MUNCHY MONSTER!
CLEVER GIRL!
THANK GOODNESS YOU GUYS ARE SAFE. IT WAS TEN FEET TALL!

DOWN AT THE DOCKS, A BOAT PREPARES TO SAIL EVERYONE TO SAFETY.
COME ON! LET'S GO!

WE MADE IT. BUT I WONDER HOW LONG IT WILL BE BEFORE WE CAN GO BACK?
WE SHOULDN'T GO BACK AT ALL 'TIL WE'RE SURE THE MONSTER'S GONE.
I THINK IT'S SAFE TO PREDICT THAT THE MONSTER WON'T BE AROUND ANY MORE.

8. SNAKES ALIVE

AN ADVENTURE IN THE VIRTUAL REALITY MACHINE DOES NOT ALWAYS MEAN THAT YOU ARE GOING SOME-WHERE...
WHERE ARE WE GOING?
NOT WHERE. WHEN. WE'RE GOING BACK IN TIME.
WE'RE GOING TO SEE A MAN WHO PEOPLE USED TO CALL THE WIZARD OF MENLO PARK.

WHEN THE USUAL BRIGHT LIGHT DISAPPEARS, THE KIDS FIND THEMSELVES IN AN EXTRAORDINARY ROOM.
WELCOME TO THE LAB OF THE GREATEST INVENTOR IN HISTORY: THOMAS ALVA EDISON.
YOU MUST BE LOVING THIS, TOM!
WHOA!

EDISON DIDN'T *INVENT* THE INCANDESCENT LIGHT BULB. HE JUST *PERFECTED* IT.
I KNOW! HE TRIED MORE THAN *3000* DIFFERENT MATERIALS TO FIND THE ONE THAT BURNS THE *LONGEST* AND *BRIGHTEST*.

IN THE GLOW OF EDISON'S LIGHT BULB, TOM FEELS LIKE HE HAS THE POWER TO THINK OF A MILLION NEW IDEAS!
HE WANTED TO MAKE A BULB THAT HE COULD SELL. WHEN HE BUILT ONE THAT LASTED 1200 HOURS, HE --
DANGER ALERT! MACHINE SHUT DOWN! MACHINE SHUT DOWN!
IN THE MIDDLE OF THOMAS EDISON'S DEMONSTRATION, THE VIRTUAL REALITY MACHINE SOUNDS A DANGER ALERT!

SUDDENLY, THE VIRTUAL WORLD SLIPS AWAY AND THE THUNDERBOLT KIDS ARE PULLED BACK INTO REALITY.
WHAT'S HAPPENING?
STAY CALM, GUYS.
FIRE ALERT! FIRE IN THE FOREST!
VZZZZZZ

A BLAZING FIRE ON THE HILLSIDE PAINTS THE SKY ORANGE.
DON'T WORRY, GUYS. THERE ARE FIREBREAKS SO THE FIRE WON'T REACH US.
UNFORTUNATELY, THE FIREBREAKS WON'T STOP THE SNAKES...
SNAKES!?@#

WHILE SOME KIDS SHIVER IN FEAR, TOM REALISES THAT THIS IS HIS CHANCE.
FIRES SCARE THE ANIMALS, SO THEY COME DOWN HERE.
THE SCHOOL WAS INFESTED WITH SNAKES LAST TIME!
ITS HIS CHANCE TO INVENT SOMETHING GREAT!
WAIT UP!
THE SNAKETRAPS WE USE AREN'T PERFECT, BUT LUCKILY NONE OF THE SNAKES ARE VENOMOUS.
THERE'S NO TIME, JOJO! WE MUST GET STARTED RIGHT AWAY!

ALL GREAT INVENTORS HAVE A GOAL... A PURPOSE! AND I'VE FOUND MINE.
PLEASE, PLEASE TELL ME THAT YOUR GOAL IS TO PROTECT US FROM SNAKES.
YEAH... ARE YOU GONNA FRIGHTEN THEM AWAY WITH PILES OF JUNK FROM YOUR CUPBOARD?

I'M GOING TO INVENT A BETTER SNAKETRAP!
WITHIN MOMENTS OF TOM ANNOUNCING HIS PURPOSE, THE THUNDERBOLT KIDS ARE AT WORK.
EDISON WANTED TO MAKE A BETTER LIGHT BULB. I WANT TO MAKE A BETTER SNAKETRAP.
YOU HEARD TIA: THE TRAPS AREN'T PERFECT!
THERE ARE STACKS OF TRAP DESIGNS ON THE NET.

AND WITHIN A FEW MOMENTS MORE, TOM DISCOVERS HOW HE CAN MAKE A BETTER SNAKE TRAP...
WHOA! THIS ONE USES LIVE MICE OR CHICKENS!
I AM NOT KILLING MICE OR CHICKENS!
THAT IS, A TRAP THAT WILL DO THE JOB, BUT DO NO HARM!
NO PROBLEM! I'LL USE FAKE BAIT: MICE MADE OF SOCKS! THEN EVERYONE WHO FEELS LIKE FARRAH WILL BUY ONE!
I DON'T MIND KILLING SOCKS...

BUT ONE LOOK OUT THE WINDOW IS ENOUGH TO ENSURE THAT NOT EVERYONE IS HAPPY FOR LONG.
THEY'RE COMING! THEY'RE FOLLOWING THE SMELL OF FEAR!!!
SMELL?
THE SCALY CREATURES SLITHERING THEIR WAY TOWARDS THE SCHOOL HEAR THE SOUND OF TOM BEING INSPIRED BY A NEW IDEA.
EUREKA!
GRAB ALL THE SOCKS YOU CAN AND FOLLOW ME!

AN ANNOUNCEMENT COMES OVER THE INTERCOM, BUT THE KIDS ARE TOO FULL OF THE THRILL OF ADVENTURE TO STOP AND LISTEN.
* EVERYONE PLEASE STAY IN YOUR ROOMS UNTIL FURTHER NOTICE. *
UP TO THE LAB! WE NEED LIVE MICE. AND CHICKENS!
AS LONG AS OUR BAIT SMELLS LIKE MICE OR CHICKENS, THE SNAKES SHOULD GO FOR IT.
AS LONG AS WE'RE NOT KILLING ANYTHING!

UP IN THE LAB, TOM SETS UP A PRODUCTION LINE.
GUYS! STUFF THE SOCKS TO MAKE THEM LOOK LIKE MICE.
THEN RUB THEM ON THE REAL MICE AND CHICKENS TO RUB OFF THEIR SCENT.
THE MICE LOOK GREAT. AND THE BOXES WILL WORK WELL AS TRAPS.
BUT IF THE MICE DON'T MOVE THEN THE SNAKES WON'T TAKE THE BAIT. HOW DO I MAKE THEM MOVE?

JUST AS PRODUCTION IS ALMOST COMPLETE, THEY GET A SURPRISE VISITOR.
ANY GOOD REASON WHY YOU ARE NOT IN YOUR ROOMS?
OR PERHAPS I SHOULD ASK YOU WHY YOU ARE SCRUBBING THAT CHICKEN WITH A PAIR OF SOCKS?
ENTER

A FEW MINUTES - AND A LOT OF EXPLAINING - LATER.
OK, YOU'RE OFF THE HOOK. FOR NOW! BUT ONLY BECAUSE I NEED MORE SNAKETRAPS.
GREAT! BECAUSE WE NEED YOUR HELP TO MAKE THESE THINGS MOVE.
YEAH, SNAKES DON'T LIKE LAZY BAIT.
I'VE THOUGHT OF GEARS, SPRINGS, MOTORS AND EVEN PUPPET STRINGS.
BUT I DON'T HAVE THE TIME TO MAKE ANY OF THEM WORK.

AS THE PROBLEM BECOMES CLEAR TO HER, TIA OPENS A STORE CUPBOARD AND REACHES FOR A JAR OF BEANS.
WHAT'S THAT NOISE?
MEXICAN JUMPING BEANS. THEY'RE NOT REALLY BEANS. THEY'RE SEEDS.
BUT A CERTAIN KIND OF MOTH LAYS ITS EGGS INSIDE THEM. AND WHEN THE LARVAE MOVE THEY MAKE THE SEEDS "JUMP".
THEY'LL KEEP THE BAIT JUMPING ALL DAY LONG!
OK, GUYS, YOUR WORK HERE IS DONE. STEP ASIDE AND LET JOJO TAKE OVER!

IN THE CORRIDORS OUTSIDE THE LAB, THE SLITHERING SERPENTS HAVE NO IDEA WHAT IS ABOUT TO COME THEIR WAY.
CLANG
CLUTTER

AS JOJO SPEEDS ALONG, THE SNAKES BEGIN TO **TAKE THE BAIT** AND ENTER THE TRAPS.
AND THE FRIGHTENED STUDENTS EMERGE FROM THEIR ROOMS TO **CHEER HIM** ON HIS WAY.

IT WORKED! SMELLY SOCKS AND JUMPING BEANS... AMAZING!
I CAN'T RELY ON A SUPPLY OF JUMPING BEANS. THERE MUST BE ANOTHER WAY TO MAKE THESE MOVE!
YOU CAN TAKE A BREAK NOW, EDISON. YOU'LL GET PLENTY OF CHANCE TO MAKE A BETTER SNAKETRAP.

ONCE THE FIREFIGHTERS HAVE PUT OUT THE FIRE, THEY COME DOWN TO THE SCHOOL TO FETCH THE SNAKETRAPS.
HOW CAN WE THANK YOU, TOM? YOU'VE DONE HALF OUR WORK DOWN HERE.
I THINK WE'D ALL BE VERY HAPPY IF YOU TOOK THE SNAKES FAR AWAY BEFORE LETTING THEM GO.
I'M PRETTY SURE THEY'RE GONNA BE HUNGRY! AND ANGRY!

Science Adventures with the

THUNDERBOLT KIDS

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