

TANDY COMPUTER

CAT. NO. 68-2015

whizkids

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and SHANNA
STARRING IN

**SAFEGUARDING
the ENVIRONMENT**



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Whizkids

SAFEGUARDING
the ENVIRONMENT

HURRY UP!
LET'S DUMP
THIS JUNK!

AMERICANS COLLECTIVELY
GENERATE 160 MILLION TONS
OF SOLID WASTE PER YEAR
AND HALF OF ALL PRESENT
LANDFILLS WILL BE FILLED
TO CAPACITY BY THE YEAR
2000!

WITH THE CLOSING OF MANY LANDFILLS, SOME DISHONEST INDIVIDUALS USE
ILLEGAL MEANS TO GET RID OF DANGEROUS TYPES OF TRASH AND OTHER
ENVIRONMENTALLY DAMAGING MATERIALS!

CRIMINAL DUMPERS ARE WILL-
ING TO SACRIFICE THE ENVIRON-
MENT IN EXCHANGE FOR FAST
MONEY!



OKAY,
PETE!

NOW
LET'S
GET
OUT
OF
HERE!

SCRIPT: MIKE PELLOWSKI PENCILLING: HOWARD BENDER INKING: JON D'AGOSTINO LETTERING: BILL YOSHIDA COLORING/PRODUCTION: BARRY GROSSMAN EDITOR: VICTOR GORELICK

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ILLEGAL DUMPERS ARE NOT CONCERNED ABOUT THE POLLUTION THEY CREATE OR THE PROBLEMS IT CAN CAUSE!

THAT'S ANOTHER LOAD OF GARBAGE WE WON'T HAVE TO WORRY ABOUT!



RIGHT, BOSS! IT WAS SURE OUR LUCKY DAY WHEN YOU FOUND THIS REMOTE SPOT IN THE WOODS!

HEAD FOR TOWN, PETE...



... WE'VE GOT ONE MORE PICK-UP TO MAKE!



WHAT TO DO WITH ALL THE TRASH AMERICANS GENERATE IS NOT AN EASY PROBLEM TO SOLVE!



HOWEVER, ONE OF THE BEST WAYS TO COPE WITH THE GARBAGE CRISIS IS ...



TO SAFEGUARD OUR ENVIRONMENT WE MUST ALL RECYCLE AS MUCH AS POSSIBLE!





YOU'RE WRONG, JACK! RECYCLING ISN'T MUCH TROUBLE AT ALL! IN FACT, WE KIND OF ENJOY IT!

I GUESS THAT'S BECAUSE WE LEARNED HOW IMPORTANT RECYCLING IS TO THE PRESERVATION OF OUR ENVIRONMENT!

RECYCLING NOT ONLY SAVES SPACE IN LANDFILLS, BUT IT SAVES ENERGY, TOO!

INSTEAD OF USING MORE ENERGY TO CREATE NEW CANS AND GLASS, RECYCLING CONSERVES ENERGY BY REUSING OLD ONES!

DID YOU KNOW THE ENERGY SAVED BY RECYCLING JUST ONE GLASS BOTTLE WILL LIGHT A 100-WATT LIGHT BULB FOR FOUR HOURS?

WOW! THAT'S A LOT OF ENERGY!

YOU'VE CONVINCED ME TO START RECYCLING, TOO! BUT HOW DO I GET STARTED?

GETTING STARTED IS SIMPLE, JACK!

WE USE CRATES TO KEEP OUR RECYCLABLE MATERIALS SEPARATE!

BUT BAGS OR ANY KIND OF BOXES WORK JUST AS WELL!

TO PREPARE BOTTLES TO BE RECYCLED, YOU HAVE TO REMOVE ALL CAPS, CORKS AND RINGS ... PAPER LABELS CAN BE LEFT ON!



NEXT YOU RINSE OUT THE BOTTLES AND SORT THEM BY COLOR! YOU NEED SEPARATE CRATES FOR GREEN, BROWN AND CLEAR GLASS!



STEEL CANS NO LONGER NEED TO BE DE-LABELED TO BE RECYCLABLE! AND YOU DON'T HAVE TO CUT THE ENDS OFF EITHER!

THAT'S RIGHT! THE SHREDDING PROCESS AT THE RECYCLING PLANT NOW TAKES CARE OF THAT!



GEE... I NEVER REALIZED RECYCLING CANS AND BOTTLES WAS SO EASY!



I JUST WISH *MORE* FAMILIES WOULD REALIZE HOW IMPORTANT IT IS TO RECYCLE!

IN A TOWN OF 50,000 PEOPLE LIKE OURS, 1,400 TONS OF STEEL CANS ARE DISCARDED EACH YEAR!

AMERICANS THROW OUT 28 BILLION BOTTLES A YEAR! BOTTLES MAKE UP 8% OF ALL SOLID WASTE IN THE UNITED STATES!



PHEW! THAT'S A LOT OF STEEL CANS AND BOTTLES! BUT WHY DO YOU KEEP ALUMINUM CANS IN A SPECIAL PLACE?





WE USE ALUMINUM CANS WE SAVE AND FIND TO MAKE EXTRA SPENDING MONEY!

YOU MEAN YOU MAKE SPENDING MONEY BY RECYCLING?

COLLECTING ALUMINUM CANS AND SELLING THEM TO A SCRAP DEALER IS VERY PROFITABLE!

WE SURE DO! COME ON! I'LL SHOW YOU HOW MUCH WE'VE EARNED ON MY COMPUTER!

MINUTES LATER AT ALEC'S COMPUTER...

THERE! THAT'S WHAT WE'VE MADE SO FAR THIS YEAR!

HOLY SMOKE! THAT'S A LOT OF EXTRA CASH!

RECYCLING ALUMINUM IS BIG BUSINESS, JACK! SOME AMERICAN COMPANIES EARN 2 TO 3 MILLION DOLLARS A DAY RECYCLING ALUMINUM CANS!



AND THERE ARE PLENTY OF ALUMINUM CANS TO RECYCLE!

AN AVERAGE AMERICAN USES ABOUT 1,500 CANS A YEAR!

HEY! I HAVE AN IDEA! SINCE OUR CLASS IS STUDYING THE ENVIRONMENT, WHY DON'T WE START A RECYCLING PROGRAM AT SCHOOL?

THAT'S A GREAT IDEA, JACK!

IT SURE IS!



LATER
AT
SCHOOL

I THINK JACK'S SUGGESTION OF ESTABLISHING
A RECYCLING PROGRAM AT SCHOOL IS A
TERRIFIC IDEA! LET'S PUT IT TO
A CLASS VOTE!

Recycling
Program



ALL IN FAVOR OF START-
ING A SCHOOL RECYCLING
PROGRAM PLEASE RAISE
YOUR HANDS!



THE MOTION
IS CARRIED!
NOW WHAT
ARE SOME
WAYS WE
CAN RECYCLE
HERE IN
SCHOOL?

WE CAN
SAVE OLD
COMPUTER
AND SCHOOL
PAPERS,
MRS. WILSON!



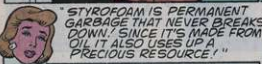
GOOD IDEA, ALEC!
ARE THERE ANY OTHER
SUGGESTIONS?



WE CAN RECYCLE CANS
FROM THE SODA MACHINE
IN THE TEACHERS'
LOUNGE!

AND WE CAN RECYCLE GLASS, CANS
AND THINGS FOOD SUPPLIES COME
IN FROM THE CAFETERIA!







OUR PRINCIPAL, MR. KLINE, SURE LIKED YOUR IDEA OF VIDEO TAPING THE CLEAN-UP PROCESS, SHANNA!

I KNOW, HE PLANS TO SHOW THE TAPE TO OTHER CLASSES AND SCHOOLS IN OUR DISTRICT!

ALL OF THAT PLANNING MADE ME HUNGRY! LET'S STOP FOR A HAMBURGER!

BURGERS TO GO

I'LL BUY!

E-Z DISPOSAL



THANKS, JACK, BUT I DON'T THINK WE SHOULD PATRONIZE THIS PLACE, THEY USE STYROFOAM PACKAGING!



YOU'RE RIGHT, ALEC! LET'S GO TO THE PIZZA PLACE AROUND THE CORNER!



ARE YOU SURE YOU CAN HANDLE MY DISPOSAL NEEDS? I'VE HAD TROUBLE IN THE PAST BECAUSE SOME LANDFILLS WON'T ACCEPT STYROFOAM PACKAGING!

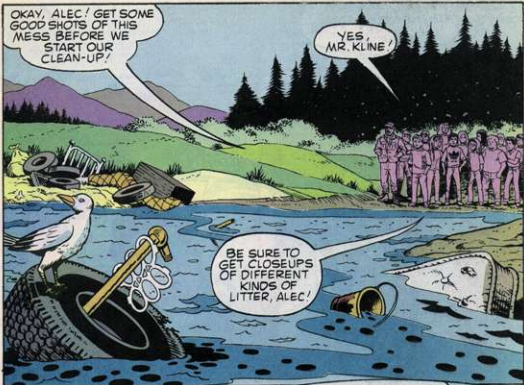
DON'T WORRY, I DON'T HAVE ANY TROUBLE WITH LAND-FILLS!



E-Z DISPOSAL WILL TAKE GOOD CARE OF YOU... AS LONG AS THE PRICE IS RIGHT!

OKAY, NICK! YOU'VE GOT YOURSELF A DEAL!

E-Z DISPOSAL



OKAY, ALEC! GET SOME GOOD SHOTS OF THIS MESS BEFORE WE START OUR CLEAN-UP!

YES, MR. KLINE!

BE SURE TO GET CLOSEUPS OF DIFFERENT KINDS OF LITTER, ALEC!



I WILL, SHANNA, THIS TANDY CAMCORDER MAKES VIDEO TAPING A BREEZE!

THERE SURE IS A LOT OF WORK TO DO AROUND HERE!

WHEN PEOPLE SEE THIS TAPE MAYBE THEY'LL THINK TWICE ABOUT LITTERING IN THE FUTURE!

SHORTLY...

THERE! I'VE GOT
PLENTY OF FOOTAGE!
NOW THE REAL WORK
CAN START!

OKAY, EVERYONE!
IT'S TIME TO
GET BUSY!

LET THE
CLEAN-UP
BEGIN!



THE VOLUNTEER CREW STARTS ITS CLEAN SWEEP OF TADPOLE CREEK!



IF PEOPLE KNEW HOW DANGEROUS
SIX-PACK RINGS LIKE THESE ARE TO ANIMALS
AND BIRDS THEY WOULD DISPOSE OF
THEM PROPERLY!



YOU'RE RIGHT,
SHANNA!



"BIRDS SOMETIMES GET THEIR BEAKS STUCK IN THE PLASTIC SIX-PACK RINGS AND END UP STARVING TO DEATH!"



"SMALL ANIMALS AND FISH OFTEN END UP GETTING TANGLED UP IN SIX-PACK RINGS, TOO!"



THERE'S ONLY ONE SAFE WAY TO GET RID OF SIX-PACK RINGS!



FIRST YOU CUT THROUGH EACH AND EVERY RING!



THEN YOU PUT IT IN A PLACE WHERE IT CAN BE DISPOSED OF PROPERLY!



HERE, SHANNA / LET'S TRADE PLACES
FOR AWHILE! / YOU VIDEO TAPE WHILE
I DO SOME CLEANING!

SURE, ALEC!
WE'LL TAKE
TURNS!

DON'T PEOPLE KNOW
THAT DEER AND OTHER
ANIMALS...

...CAN CUT
THEIR TONGUES
ON HALF-
OPEN CANS
LIKE THESE?

I GUESS
NOT JACK...
OR MAYBE
THEY JUST
DON'T CARE!

PEOPLE DON'T REALIZE
ALMOST ALL LITTER IS
DANGEROUS! SMALL
ANIMALS SEARCHING FOR
FOOD SOMETIMES GET
THEIR HEADS STUCK IN
CONTAINERS LIKE
THESE!

EVEN CIGARETTE BUTTS AND
SMALL PIECES OF STYRO-
FOAM ARE HARMFUL!
ANIMALS EAT THEM BY
MISTAKE AND END UP
CHOKING!

THE BEST
WAY TO
KEEP ALL
ANIMALS
SAFE IS
NOT TO
LITTER AT
ALL!

ALEC AND SHANNA TAKE TURNS WITH THE
CAMCORDER AS THE CLEAN-UP CONTINUES
THROUGHOUT THE DAY!

WOW! TADPOLE CREEK SURE LOOKS GREAT! UNFORTUNATELY, IT'S TOO DARK NOW TO TAPE THE FINISHED PROJECT! SHANNA AND I WILL HAVE TO COME BACK TOMORROW!

I'LL COME, TOO!

I JUST HOPE THIS CREEK STAYS CLEAN! SOME PEOPLE USE IT AS A PRIVATE DUMP!



BUT THAT'S ILLEGAL! THIS IS ALL PUBLIC LAND!



YOU'RE RIGHT JACK, BUT IT'S TOUGH TO PROSECUTE SUSPECTED ILLEGAL DUMPERS! YOU ALMOST HAVE TO CATCH THEM IN THE ACT!

MAYBE YOUR VIDEO WILL MAKE PEOPLE MORE AWARE OF THE PROBLEM!



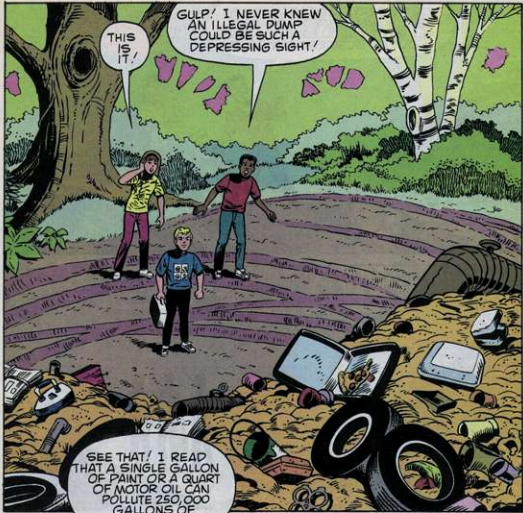
RIGHT NOW, I SUGGEST WE CALL IT A DAY!














A comic panel showing three people at a dumpsite. A man in a red shirt and green pants stands on the left, gesturing. A woman in a yellow shirt and purple pants stands on the right. A boy in a blue shirt is kneeling in the center, handling a white bucket. The ground is covered with trash, including several red and white soda cans, a black bucket, and a white box. Large black tires are visible in the background. A large yellow sun is in the sky.

DON'T WORRY, ALEC! TOMORROW
WE'LL MAKE A VIDEO TAPE THAT
WILL PUT THESE ILLEGAL DUMPERS
OUT OF BUSINESS FOR GOOD!

A comic panel showing three people walking away from the dumpsite. They are silhouetted against a large yellow sun. The man in the red shirt is on the left, the woman in the yellow shirt is in the middle, and the boy in the blue shirt is on the right. The ground is covered with trash, including several red and white soda cans, a black bucket, and a white box. Large black tires are visible in the background.

LET'S HEAD FOR HOME! IT'S
GETTING LATE AND WE'D BETTER
BE HERE EARLY TOMORROW!

YOU'RE RIGHT, SHANNA!
LUCKILY, TOMORROW IS
SATURDAY!

A comic panel showing three people walking away from the dumpsite. They are silhouetted against a large yellow sun. The man in the red shirt is on the left, the woman in the yellow shirt is in the middle, and the boy in the blue shirt is on the right. The ground is covered with trash, including several red and white soda cans, a black bucket, and a white box. Large black tires are visible in the background.

WHAT UPSETS ME SO MUCH IS... ILLEGAL
DUMPERS DON'T JUST COMMIT CRIMES AGAINST
A COMMUNITY OR ITS PEOPLE! THEIR CRIME IS
AGAINST THE ENTIRE PLANET!

NEXT MORNING AT
THE DUMP SITE...

WE HAD TO, JACK! THERE'S NO WAY OF KNOWING WHEN
THOSE ILLEGAL DUMPERS WILL SHOW UP!

YAWN!
WE SURE
GOT HERE
EARLY
ENOUGH!
I'M
BARELY
AWAKE.



SHANNA IS RIGHT! WE MIGHT
END UP WAITING HERE ALL
DAY!

IT'LL BE WORTH
IT TO GET SOLID
PROOF AGAINST
THOSE
CRIMINAL
POLLUTERS!

I JUST HOPE
YOUR BATTERY
IS CHARGED
ENOUGH, ALEC!



DON'T WORRY, JACK! I HAVE
PLENTY OF BATTERY POWER
TODAY!



WE'D BETTER FIND SOME-
PLACE TO HIDE WHERE WE
CAN SEE THE WHOLE
DUMP SITE!

THERE'S A GOOD
PLACE BEHIND THOSE
BUSHES! COME ON!



THIS SPOT IS PERFECT! WITH A CLEAR VIEW OF THE
ENTIRE DUMP! NOW TO GET THE CAMCORDER
READY FOR ACTION!









THANKS TO THE EVIDENCE PROVIDED BY ALEC, SHANNA AND JACK, AUTHORITIES QUICKLY CLOSED IN ON THE ILLEGAL DUMPING OPERATION!

BOSS! THE COPS ARE OUTSIDE!

HUH? WE'D BETTER FIND OUT WHAT THEY WANT!



NICK JOHNSON AND PETE GREEN, WE HAVE WARRANTS FOR YOUR ARREST ON THE CHARGES OF ILLEGALLY DUMPING HAZARDOUS MATERIAL!

WHA... WHAT? THERE MUST BE SOME MISTAKE! WHAT PROOF DO YOU HAVE?



THESE ARE YOUR RIGHTS...

YOU'RE THE ONE WHO MADE A MISTAKE BY OPERATING AN ILLEGAL DUMP ON PUBLIC LAND!

OH, NO! THEY FOUND THE DUMP, BOSS!

THAT'S RIGHT! WE HAVE MORE THAN ENOUGH EVIDENCE TO CONVICT BOTH OF YOU AND TO CLOSE DOWN THIS DUMPING OPERATION FOREVER!

GRRR...



LATER...
TADPOLE CREEK
IS SURE LOOKING
GOOD!

AND IT'LL LOOK BETTER AND BETTER NOW THAT
THE AUTHORITIES ARE CLEANING UP THAT
ILLEGAL DUMP SITE UPSTREAM!

THE SITE IS
BEING CLEANED!
THE ILLEGAL
DUMPERS ARE
OUT OF BUSINESS!
I GUESS WE CAN
CHALK UP A
VICTORY
FOR THE ENVIRON-
MENT!

YOU'RE RIGHT, JACK!
THANKS TO ALL THE
PUBLICITY, EVEN THE
BURGERS TO GO RESTAU-
RANT IN TOWN HAS
DECIDED TO STOP USING
STYROFOAM
PACKAGING!

I HOPE NOW TADPOLE
CREEK WILL STAY CLEAN
... GUM ANYONE ?

TADPOLE CREEK
WILL STAY CLEAN
ONLY IF WE
STOP
POLLUTION
... AT ALL LEVELS!

YIKES! I DIDN'T REALIZE
WHAT I WAS DOING!
SORRY ABOUT THAT!

TO SAFEGUARD OUR ENVIRONMENT,
WE ALL HAVE TO BE AWARE OF
THE GARBAGE WE CREATE...

AND ALWAYS
RECYCLE AS
MUCH AS
POSSIBLE!

Whizkids



12-POINT **RECYCLING** CHECK- LIST

ALEC SAYS... **DO**

- ☐ SNIP THROUGH ALL SIX-PACK CAN PLASTIC RINGS AND DISPOSE OF THEM AND ALL SOLID WASTE PROPERLY!
- ☐ START RECYCLING PROGRAMS AT HOME AND AT SCHOOL!
- ☐ SAVE AND BUNDLE ALL OLD NEWSPAPERS!
- ☐ ADOPT A PARK OR WILDLIFE AREA AND KEEP IT CLEAN OF LITTER!
- ☐ SAVE OLD CANS AND SEPARATE ALUMINUM CANS FROM STEEL ONES!
- ☐ RECYCLE GLASS BY REMOVING ALL CAPS, RINGS AND CORKS AND BY SEPARATING JARS AND BOTTLES BY COLOR!



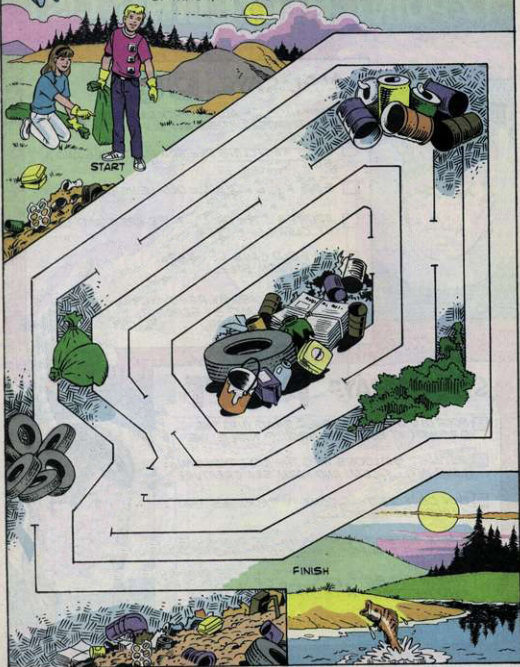
SHANNA SAYS... **DON'T**

- ☐ POUR OLD OIL OR LEFTOVER PAINT INTO THE GROUND (IT POLLUTES GROUND WATER!)
- ☐ RELEASE BALLOONS INTO THE AIR (THEY CAN LAND IN THE OCEAN AND HARM SEA CREATURES!)
- ☐ BUY OBJECTS THAT COME IN PACKAGES THAT CANNOT BE RECYCLED!
- ☐ WASTE WATER BY LETTING WATER RUN WHILE WASHING DISHES OR THE CAR!
- ☐ THROW OLD BOTTLES, CANS OR NEWSPAPERS INTO THE TRASH WITH OTHER GARBAGE!
- ☐ USE OR BUY STYROFOAM CUPS OR PLATES!



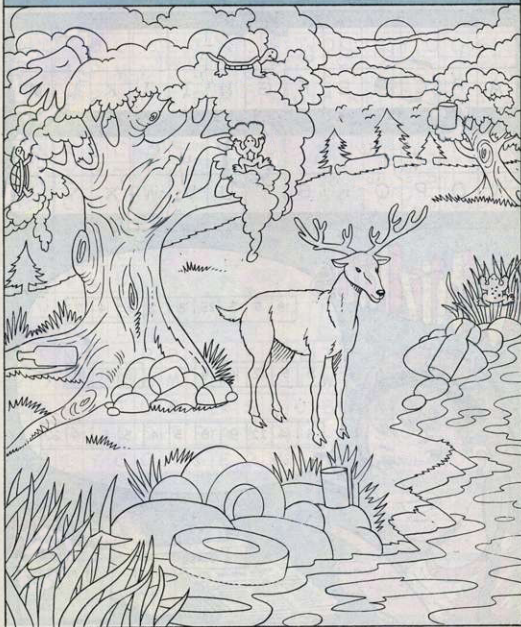
Whizkids LITTER MAZE

HELP ALEC AND SHANNA MAKE A CLEAN SWEEP OF THE LITTER MAZE BY FINDING A WAY TO THE POLLUTION-FREE FINISH! BEWARE OF PILES OF TRASH, GARBAGE AND SMOG BLOCKING YOUR PATH!



Whizkids™ HIDDEN PICTURE HUNT!

LOOK CAREFULLY AT THE PICTURE BELOW, HIDDEN AROUND THE PAGE ARE 5 BOTTLES, 3 LARGE CANS, 1 SMALL CAN, 2 FROGS, 2 TURTLES, 1 WHOLE TIRE, 1 HALF TIRE AND AN OLD GLOVE, HAVE FUN AND GOOD HUNTING! AFTER YOU FIND THE ITEMS, COLOR THE PICTURE!



Shanna's Secret Message

TO FIND OUT WHAT SHANNA'S SECRET MESSAGE IS, FIRST NUMBER THE LETTERS OF THE ALPHABET STARTING WITH 'A' AS THE NUMBER ONE AND ENDING WITH THE LETTER 'Z'. THEN USING THE NUMBER CODE, WRITE EACH LETTER ABOVE ITS MATCHING NUMBER IN THE BALLOON TO SPELL OUT THE WORDS OF SHANNA'S MESSAGE!

1													
A	B	C	D	E	F	G	H	I	J	K	L	M	
N	O	P	Q	R	S	T	U	V	W	X	Y	Z	

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18 5 3 25 3 12 9 14 7

8 5 12 16 19 15 21 18

5 14 22 9 18 15 14 13 5 14 20



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RECYCLING WORD SEARCH



HELP ALEC AND SHANNA FIND 19 WORDS THAT DEAL WITH THE ENVIRONMENT OR RECYCLING IN THE PUZZLE ABOVE. HUNT IN EVERY DIRECTION, SEARCH UP, DOWN, FORWARDS, BACKWARDS AND DIAGONALLY! HAVE FUN AND CROSS OFF THE WORDS BELOW AS YOU FIND THEM!

POLLUTION, SOLID WASTE, LITTER, ENVIRONMENT, BOTTLE, CANS, ILLEGAL DUMPING, RECYCLE, GARBAGE, PLASTIC, GLASS, PAPER, RECLAIM, PRECYCLE, CONSERVATION, ALUMINUM, LANDFILL, STYRO-FOAM, SIX PACK RINGS!

STILL FREE
WHILE THE SUPPLY LASTS!
(HEY, KIDS! COLOR THIS PAGE!)

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IN 1

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Radio Shack® PRESENTS...

Archie AND THE HISTORY OF *Electronics*



SCRIPT: MIKE PELLOWSKI
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LETTERING: BILL YOSHIDA
COLORING: BARRY GROSSMAN
EDITOR: VICTOR GORELICK

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IT LOOKS LIKE
WE'RE JUST IN
TIME FOR
ATTENDANCE, JUG!

HUMPH! ARCHIE AND JUGHEAD ARE THE LAST TO ARRIVE... AS
USUAL! OKAY! EVERYONE'S PRESENT! LET'S GET
ON THE BUS!



I CAN'T
WAIT TO
FIND OUT
ABOUT THE
MANY KINDS OF
POWER
SOURCES!

I CAN'T
WAIT TO
VISIT
THE
COMPUTER
EXHIBIT!

I CAN'T
WAIT TO
GET ON
THE BUS
AND SIT
NEXT TO
VERONICA!



WE'RE READY TO
ROLL! LET'S GO,
MR. SVENSON!



THIS RIDE
WON'T TAKE
LONG, CLASS!
THE MUSEUM
ISN'T VERY
FAR!

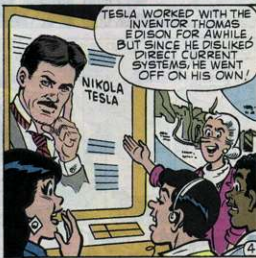
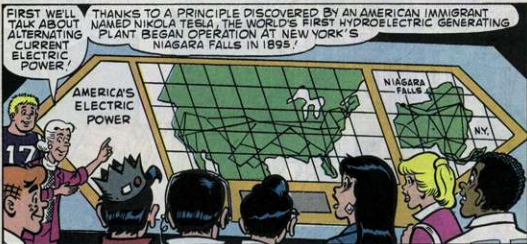


SOON...
HERE
WE ARE,
EVERYONE!

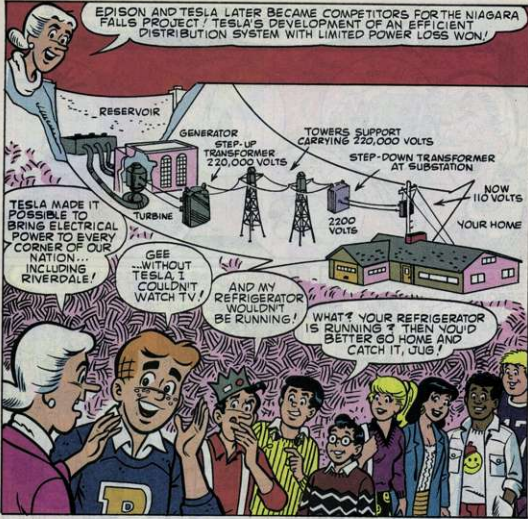
WOW!
WHAT
A BIG
PLACE!

AND IT'S FILLED WITH
EXHIBITS OF MAN'S
GREATEST
ACCOMPLISHMENTS!





EDISON AND TESLA LATER BECAME COMPETITORS FOR THE NIAGARA FALLS PROJECT! TESLA'S DEVELOPMENT OF AN EFFICIENT DISTRIBUTION SYSTEM WITH LIMITED POWER LOSS WON!



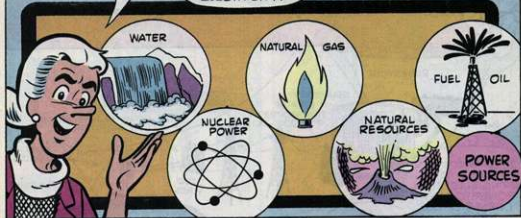
NIKOLA TESLA WAS A BRILLIANT MAN! HE ALSO INVENTED AN ARCH LIGHT SYSTEM AND REMOTE CONTROL RADIO DEVICES!

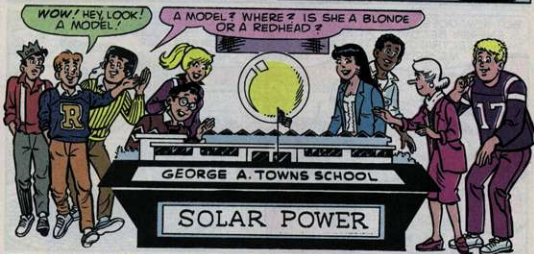
BUT TESLA'S MOST FAMOUS INVENTION IS THE TESLA CELL, AN ELECTRONIC TUBE INVALUABLE IN LONG DISTANCE WIRELESS COMMUNICATION!

POWER

OKAY, EVERYONE! LET'S MOVE ON TO THE NEXT EXHIBIT!

IN ADDITION TO HYDROELECTRIC GENERATING PLANTS, THE U.S. USES MANY DIFFERENT POWER SOURCES TO PRODUCE ELECTRICITY!





"SOLAR PANELS ARE MIRRORS OF MANY HOMES AND BUILDINGS TODAY! SOLAR ENERGY PROVIDES HOT WATER AND HEAT FOR ROOMS! IT'S ALSO A GREAT WAY TO CONSERVE ENERGY!"



BUT HOW DOES SOLAR ENERGY BECOME ELECTRICITY, MS. GRUNDY?



LOOK AT THIS NEXT EXHIBIT AND I'LL EXPLAIN, ARCHIE! WHAT YOU SEE IS "SOLAR ONE", A SOLAR POWER TEST PLANT NEAR BARSTOW, CALIFORNIA!

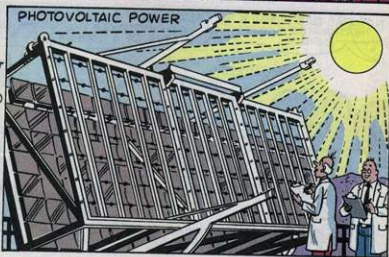


SOLAR ONE HAS 2,000 MIRRORS WHICH REFLECT SOLAR HEAT TO A CENTRAL RECEIVER, MAKING STEAM TO OPERATE A TURBINE THAT PRODUCES ELECTRICITY!



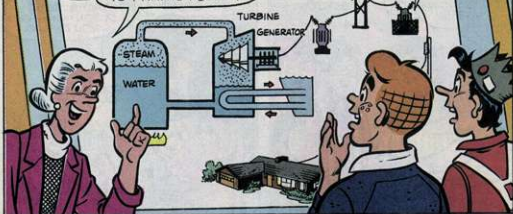


A ONE-KILOWATT ARRAY OF PHOTOVOLTAIC (GALLIUM ARSENIDE) CELLS THAT CONVERTS SOLAR ENERGY DIRECTLY INTO ELECTRICITY HAS BEEN BUILT IN CALIFORNIA BY VARIAN ASSOCIATES AS PART OF A RESEARCH PROJECT!



THIS IS A DIAGRAM OF HOW NATURAL GAS PRODUCES ELECTRICITY THAT IS CARRIED TO PRIVATE HOMES!

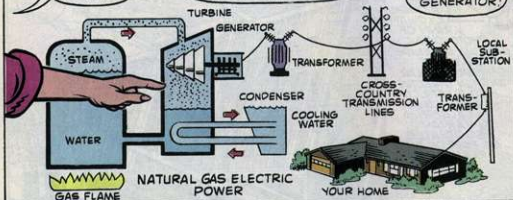
GEE!



NATURAL GAS FLAMES HEAT WATER IN A BOILER...

...TURNING IT INTO STEAM, WHICH STRIKES THE BLADES OF A TURBINE...

...CAUSING IT TO ROTATE AN ATTACHED ELECTRICAL GENERATOR!



ISN'T IT TRUE THAT COAL CAN BE USED TO PRODUCE STEAM, MS. GRUNDY?

THAT'S RIGHT, ARCHIE!

HEY, ARCH! YOU'RE PRETTY SMART... FOR A MINOR!



OTHER NATURAL RESOURCES CAN ALSO GENERATE ELECTRICITY!

THAT'S TRUE, BETTY! THERE ARE MANY SOURCES OF ELECTRICAL POWER ON EARTH!



CAN YOU GIRLS NAME SOME OF THOSE SOURCES? YOU GO FIRST, VERONICA!

OKAY, MS. GRUNDY!



"IN CALIFORNIA, PACIFIC GAS AND ELECTRIC PIPES STEAM FROM GEYSERS THROUGH A CLEANSING SYSTEM TO TURBINES THAT GENERATE ELECTRICITY! YOUR TURN, BETTY!"

GEYSER
POWER



"THE TENNESSEE VALLEY AUTHORITY USES HYDRO-ELECTRIC POWER TO GENERATE ELECTRICITY FOR OVER 2 MILLION HOMES, FARMS AND BUSINESSES."

HYDRO-ELECTRIC POWER



I'M IMPRESSED!

ME TOO! WHY AREN'T YOU CLAPPING, JUG?

I'M CONSERVING ENERGY!

CLAP!
CLAP!

CLAP!
CLAP!

CLAP!
CLAP!

CLAP!



DUH... WHAT'S NEXT, MS. GRUNDY?



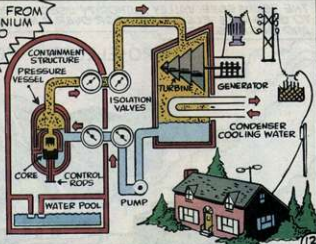
ALL WE DO IS PRESS THIS BUTTON FOR A DESCRIPTION OF HOW A NUCLEAR POWER PLANT WORKS!

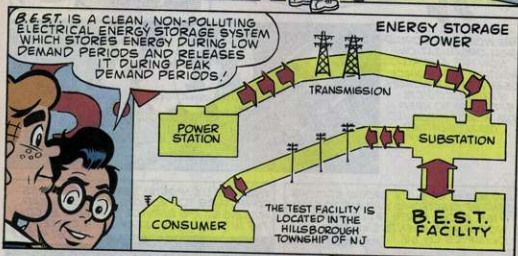
A NUCLEAR ELECTRIC POWER PLANT IS SIMILAR TO A STEAM-GENERATING SYSTEM!



A REACTOR CREATES STEAM FROM FISSIONING (SPITTING) URANIUM FUEL! WATER IS TURNED INTO STEAM, WHICH STRIKES TURBINE BLADES, ROTATING AN ELECTRICITY GENERATOR!

NUCLEAR ELECTRIC POWER





WHAT ARE WE GOING TO SEE NOW, MS. GRUNDY?



NOW WE'RE GOING TO LEARN ABOUT THE HISTORY OF ELECTRICITY AND ELECTRONICS!

THE HISTORY OF ELECTRICITY AND ELECTRONICS



ELECTRONICS IS AN EXCITING AND CHALLENGING FIELD!



DILTON'S RIGHT! THE FIELD OF ELECTRONICS IS HELPING TO MAKE OUR WORLD A BETTER AND SAFER PLACE!



THE WORLD METEOROLOGICAL ORGANIZATION NOW HAS A WORLD WEATHER WATCH WHICH USES A GEOSTATIONARY METEOROLOGICAL SATELLITE TO KEEP THE WORLD INFORMED ABOUT WEATHER MOVEMENTS!



AND MOBILE SATELLITE GROUND STATIONS SENDING ELECTRONIC SIGNALS TO SATELLITES ABOVE EARTH LET US VIEW WORLDWIDE EVENTS LIKE THE OLYMPICS ON T.V.!



EVEN THE U.S. POSTAL SERVICE NOW USES COMPUTERS TO PROMOTE LOW COST SPEED MAILINGS! THE SERVICE IS CALLED E-COM! THE INTERNATIONAL SERVICE IS CALLED INTELPOST!





WOW! ELECTRONICS IS SURE THE WAVE OF THE FUTURE!

ACTUALLY, ARCHIE, THE STORY OF ELECTRICITY ITSELF DATES BACK OVER 2,000 YEARS!



NO ONE KNOWS FOR SURE, BUT AS EARLY AS 600 B.C., THALES OF MILETUS, GREECE, THEORIZED A CONNECTION BETWEEN ELECTRICITY AND MAGNETISM!

GEE... I MEDIATE THAT!



THE ANCIENT GREEKS EVEN TRIED ELECTRIC SHOCKS FROM EELS AS A TREATMENT FOR RHEUMATIC DISEASES!

YEOW! CAN I GET A SECOND OPINION?



AN ANCIENT ELECTRIC BATTERY UNEARTHED IN IRAQ IN 1936 MAY HAVE BEEN USED FOR ELECTROPLATING METALS SOME 2,000 YEARS AGO!

THE GREAT JAPANESE ENCYCLOPEDIA OF 1712 SHOWS A PICTURE OF A "SOUTH POINTING CART" USED IN CHINA IN THE 5TH CENTURY! IT WAS SIMILAR TO A COMPASS USED BY SHIPS!

A MAGNET IN THE ARM OF THE PIVOTING MANNEQUIN CAUSES IT TO ALWAYS POINT IN THE SAME DIRECTION!





ALESSANDRO
VOLTA

ALESSANDRO VOLTA OF ITALY MADE THE FIRST PRACTICAL DESIGN FOR A BATTERY IN 1800!



MICHAEL
FARADAY

IN 1831, MICHAEL FARADAY OF ENGLAND DEvised THE FIRST MACHINE TO PRODUCE ELECTRICITY FROM MECHANICAL ENERGY!



ENGLAND'S JAMES CLERK MAXWELL STUDIED THE FINDINGS OF FARADAY AND OTHERS AND USED MATHEMATICS TO PREDICT "ELECTROMAGNETIC DISTURBANCES" IN SPACE!



THEN HEINRICH HERTZ PAVED THE WAY FOR THE INVENTION OF WIRELESS RADIO BY ACTUALLY CREATING THE DISTURBANCES STUDIED BY MAXWELL! HE PROVED THE DISTURBANCES ACTED THE SAME WAY AS LIGHT!



WILLIAM GILBERT OF ENGLAND WAS THE FIRST PERSON TO USE TERMS LIKE: ELECTRIC FORCE, ELECTRICITY AND ELECTRICAL ATTRACTION! THE TERM "GILBERT" TODAY MEANS A UNIT OF MAGNETISM!



AMERICAN INVENTORS ALSO PLAYED KEY ROLES IN ADVANCING ELECTRONICS! JOSEPH HENRY BUILT THE FIRST ELECTROMAGNET, WHICH WAS LATER USED FOR THE FIRST DIRECT CURRENT MOTOR!

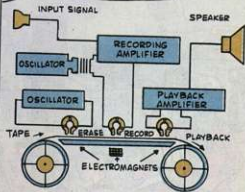




SPEAKING OF TAPES LEADS US TO OUR NEXT INVENTION! MAGNETIC RECORDING WAS INVENTED BY VALDEMAR POULSEN IN 1889!



ACTUAL TAPE RECORDING WASN'T INVENTED UNTIL THE 1930'S! THIS DIAGRAM ILLUSTRATES THE PRINCIPLE OF TAPE RECORDING!



THOSE EARLY INVENTIONS LED TO THE CREATION OF OUR MODERN TAPE RECORDERS AND EVEN PRESENT-DAY VIDEO CASSETTE RECORDERS!



I'D BE LOST WITHOUT MY VCR! I TAPE ALL THE SOAP OPERAS!

I'D BE LOST, TOO! I TAPE ALL THE COOKING SHOWS!



I THINK THE GIRLS WILL FIND THE NEXT EXHIBIT MOST INTERESTING!



THESE ARE DIFFERENT TYPES OF
TELEPHONES, PAST AND
PRESENT!

WOW! THERE ARE ALMOST AS
MANY PHONES HERE AS VERONICA
HAS IN HER HOUSE!



TELEPHONES HAVE SURE
COME A LONG WAY SINCE
ALEXANDER GRAHAM
BELL INVENTED THE
FIRST ONE
IN 1876!

THAT'S FOR
SURE,
VERONICA!

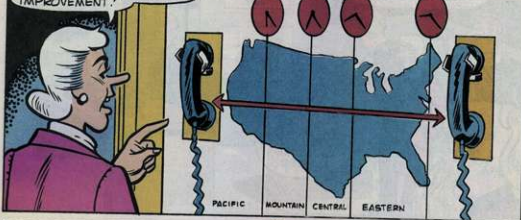


ALMON B. STROWGER MADE ONE OF
THE MOST IMPORTANT IMPROVEMENTS
TO BELL'S TELEPHONE! HE DESIGNED
THE DIAL PHONE AND THE FIRST DIAL
TELEPHONE SYSTEM THAT
BEGAN OPERATING IN
1892 IN INDIANA!



LEE DE FORREST'S AMPLIFYING RADIO TUBE, KNOWN AS THE AUDION, WAS THE NEXT BIG IMPROVEMENT!

IT MADE BETTER LONG DISTANCE CALLS POSSIBLE!



THIS IS A PAINTING OF THE CABLE SHIP *HMTS MONARCH*! DOES ANYONE KNOW WHY IT IS A FAMOUS SHIP?

I KNOW, MS. GRUNDY!

"THE *MONARCH* LAID A TELEPHONE CABLE THAT SPANNED THE ATLANTIC OCEAN! THE CABLE STRETCHED 2,500 MILES FROM NEWFOUNDLAND TO SCOTLAND!"



THE CABLE CARRIED ITS FIRST VOICE COMMUNICATION ON SEPTEMBER 25, 1956!

EXCELLENT, ARCHIE! THAT CABLE ORIGINALLY HAD A CAPACITY OF 37 CALLS! A NEW SUPER-CABLE OF THE FIBER-OPTIC TYPE NOW USES PULSES OF LASER LIGHT AND CAN CARRY 40,000 SEPARATE CALLS!



AMAZING!!

WHAT'S EVEN MORE AMAZING IS THAT A TELEGRAPH CABLE LINKING THE U.S. AND EUROPE WAS LAID WAY BACK IN 1869!



THIS EXHIBIT SHOWS SAMUEL MORSE IN 1837 WHEN HE BUILT THE VERY FIRST TELEGRAPH!



SAMUEL MORSE



IN 1861, STEPHEN FIELD SENT THE FIRST TRANS-CONTINENTAL MESSAGE—FROM CALIFORNIA TO PRESIDENT LINCOLN IN WASHINGTON, D.C.!



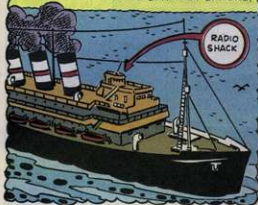
DURING THE CIVIL WAR, THE FIRST TELEGRAPH PRINTER WAS INVENTED BY ROYAL HOUSE OF VERMONT!



HEY, LOOK! IT'S MARCONI'S WIRELESS!



YEARS LATER, SHIPS ADDED SMALL ROOMS ON THEIR TOP DECKS AS COMPARTMENTS FOR MARCONI'S WIRELESS! THAT ROOM WAS CALLED A "RADIO SHACK" BY SAILORS!



I GUESS WE HAVE MARCONI TO THANK FOR RADIO PROGRAMS!

ACTUALLY REGGIE, A CANADIAN-AMERICAN INVENTOR NAMED REGINALD FESSENDEN SENT THE FIRST MUSIC, BY WIRELESS, FROM BRANT ROCK, MASSACHUSETTS ON DECEMBER 24, 1906!

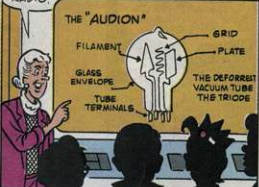


MS. GRUNDY, DIDN'T THE DEFOREST AUDION TUBE MAKE A BIG CONTRIBUTION TO RADIO BROADCASTING?

YOU'RE ABSOLUTELY RIGHT, DILTON!



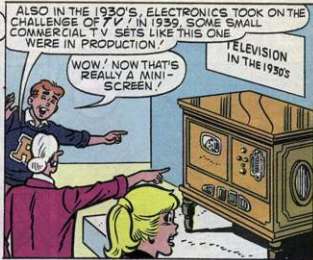
THIS IS A DIAGRAM OF THE AUDION! THE TUBE MADE LOUDER SOUND POSSIBLE EVEN FROM FARAWAY STATIONS! IT CONTRIBUTED TO THE BIRTH OF MODERN RADIO!



OF COURSE, EARLY RADIOS LIKE THIS ONE HAD HUGE, FUNNY-LOOKING LOUD SPEAKERS!

I'LL TAKE MY HEADSET OVER THAT ANYTIME!





THIS IS A "HANDS ON" EXHIBIT, CLASS, SO DON'T BE AFRAID TO TOUCH THINGS! THIS COMPUTER IS A TANDY 1000!

COMPUTER EXHIBIT



THE USES FOR COMPUTERS ARE ENDLESS! AT AIR TERMINALS, THEY SPEED UP THE PROCESSING OF RESERVATIONS AND TICKETS!

FLIGHT



IN SCHOOLS, THEY ARE USED AS TEACHING AIDS FOR A VARIETY OF SUBJECTS!

UNDERSTAND NOW, JUG?

I SURE DO, BETTY!

THE COMPUTER MADE IT EASY!

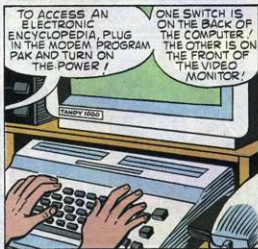


SMALL BUSINESSES USE COMPUTERS TO SAVE TIME AND REDUCE PAPERWORK!



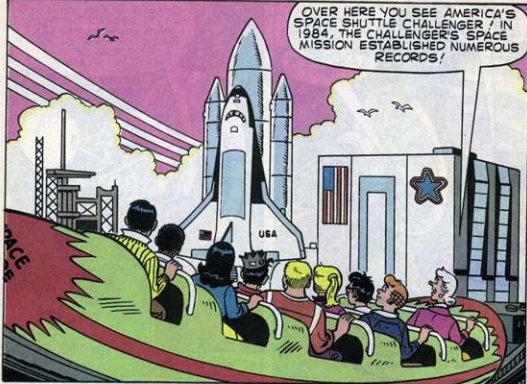
LARGER COMPUTERS HELP WITH SCIENCE RESEARCH, METEOROLOGY, AND EVEN WITH MANUFACTURING!







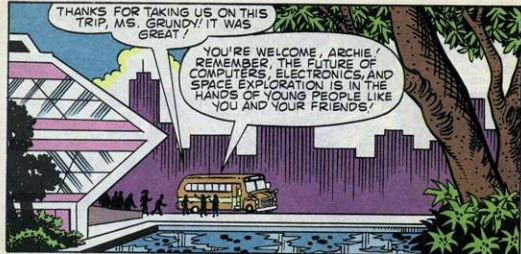






THANKS FOR TAKING US ON THIS TRIP, MS. GRUNDY! IT WAS GREAT!

YOU'RE WELCOME, ARCHIE! REMEMBER, THE FUTURE OF COMPUTERS, ELECTRONICS, AND SPACE EXPLORATION IS IN THE HANDS OF YOUNG PEOPLE LIKE YOU AND YOUR FRIENDS!



TO ADVANCE MANKIND AND MAKE THE WORLD A BETTER PLACE, YOU HAVE TO STUDY HARD AND LEARN ALL YOU CAN!

WE WILL, MS. GRUNDY! WE KNOW THAT...



...KNOWLEDGE IS POWER AND THE FUTURE BELONGS TO US!!!

RIGHT ON!



32

THE END

THIS COMIC IS RECYCLABLE!

LEARNING CAN BE FUN WITH THESE GREAT PROJECT KITS!

130 Project Lab Kit

- Start a Great Hobby In Electronics
- No Prior Knowledge Needed to Assemble

29⁹⁵



Everything you need to discover electronics—the exciting way! Build a radio, AM broadcast station, electronic organ, timer, logic circuits and dozens more. With built-in speaker, 7-segment LED display, two integrated circuits and rotary controls. Safe, simple coil-spring connections. Includes fully illustrated step-by-step manual. Requires 6 "AA" batteries. 28-259



60-in-1 Project Lab Kit

19⁹⁵

Teaches youngsters the basics of electricity, physics, electronics. Build a radio, metal detector, other projects. Earphone. Solderless. Requires 4 "AA" batteries. 28-261

AM and Shortwave Radio Kit

12⁹⁵

Hear BBC, Voice of America, WWV time, much more! Covers 3 bands: standard AM, 5.5-10 and 9-16 MHz shortwave. With earphone. Requires 2 "AA" cells. 28-176



Tune in the World



AM/FM Project Kit

12⁹⁵

Hear local AM and FM radio stations.

Preassembled tuner. Coil-spring assembly. Requires 2 "AA" batteries. 28-175



AM/VHF Project Kit

12⁹⁵

Perfect "First" Radio Kit

6⁹⁵ "Plays Forever"

Plays without tubes, transistors or batteries. Like the first radios, a crystal converts RF to audio. Covers 550-1600 kHz. 28-177



Listen to police, aviation and weather bands, plus the 550-1600 kHz AM band. Preassembled tuner. 108-135/148-174 MHz. Coil-spring assembly. Requires 9V battery. 28-163

Radio Shack
AMERICA'S
TECHNOLOGY
STORE SM

Prices apply at participating Radio Shack stores and dealers in the continental USA. Prices are subject to change without notice.

OUR ENVIRONMENT

Who is Responsible for Keeping it Clean?

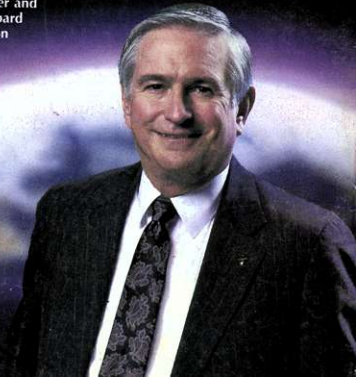
We frequently hear comments and questions regarding the environment. What effect will global warming have? Will we be able to drink our tap water in 20 years? Who is responsible for a clean environment? What will a clean environment cost?

As far as responsibility is concerned, everyone is responsible—individuals, groups and businesses. We at Tandy Corporation are vitally concerned with the protection of the environment. We continually look for methods to minimize the waste we generate, to manufacture using non-hazardous materials, to use degradable packaging, and to recycle as much material as possible.

I encourage everyone to get involved in this process, at home and at school. Concern for a healthy environment is not only good for our country, it is a sound business practice.



John V. Roach
Chief Executive Officer and
Chairman of the Board
Tandy Corporation



68-2015