



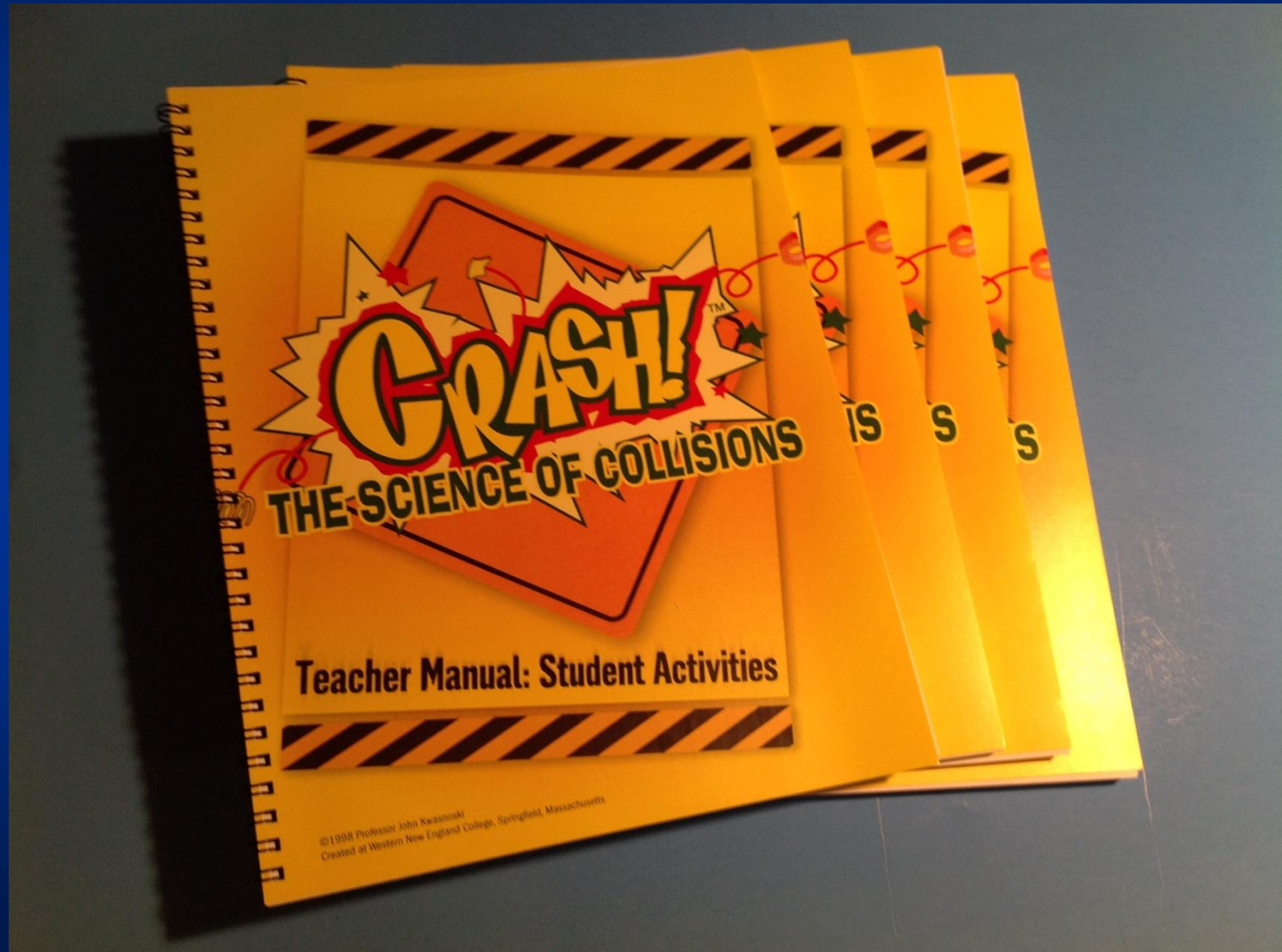
Activities Samples



This presentation and
this Power Point are archived at

www.legalsciences.com/about

Where do you start?

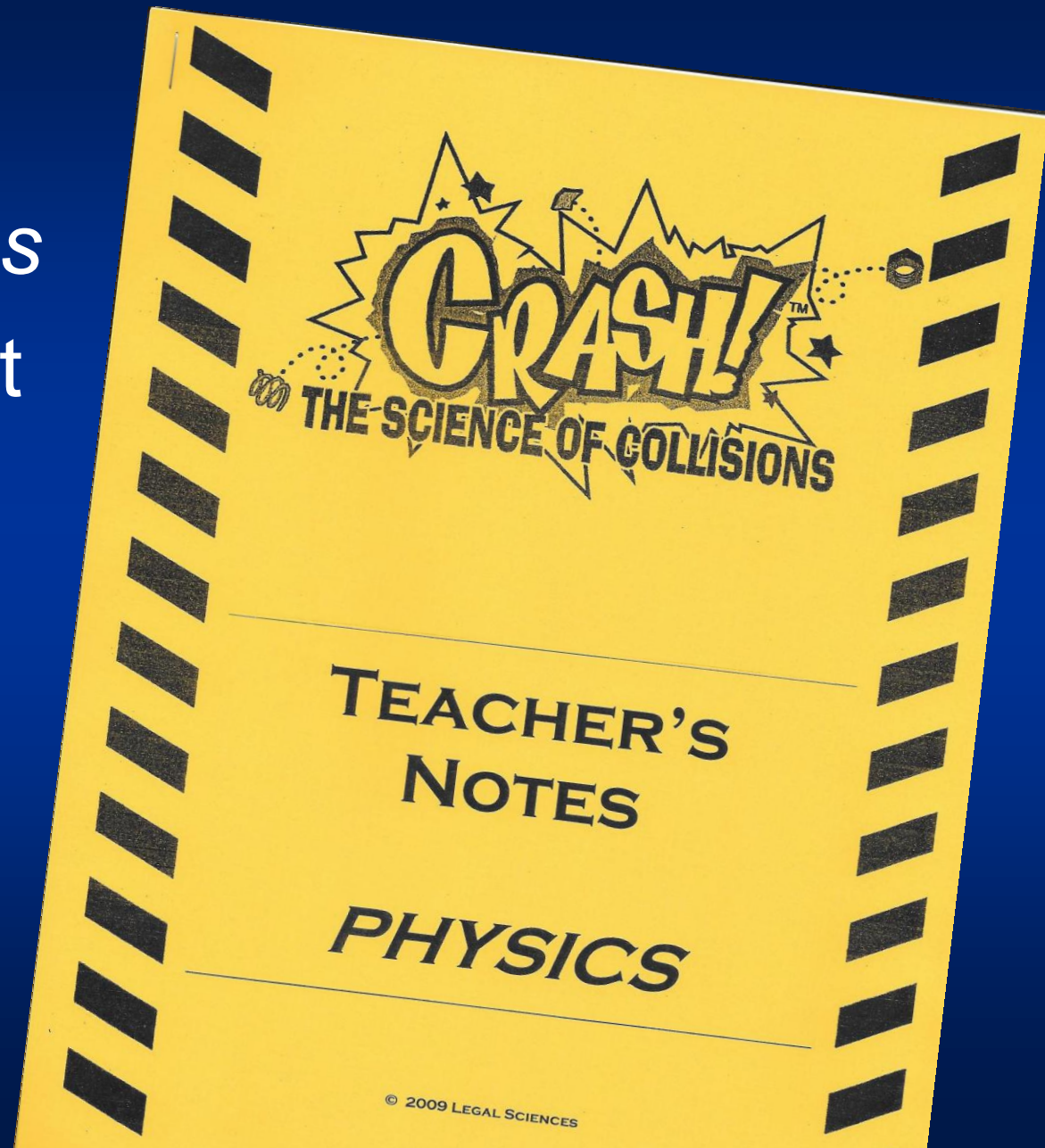


Each Teacher's
Manual has a
table of contents.

Science Manual,
p.4

Page	CRASH ACTIVITIES-SCIENCE	NEWTON'S LAWS	PROPERTIES OF MATERIALS	ENERGY	CSI	PERCEPTION - REACTION TIME	LINEAR MOTION	STATISTICS
5	Examining Lamps for ON/OFF at Impact	●	●					
11	Investigating a Motor Vehicle Homicide Case				●			
14	Was It Safe to Cross?					●	●	●
17	Driver Perception-reaction Time					●	●	
24	Distractions Can Be Deadly!					●	●	
27	Skateboards and Cars Don't Mix					●	●	
30	People Can't Fly!			●				
32	Vehicle Kinematics	●						
38	Does Speeding Really Save Time?						●	

There are
Teacher's Notes
for each subject



Sample activities

The CRASH! activities easily
adapt to *remote learning*.

science activity:

Distractions can be deadly!

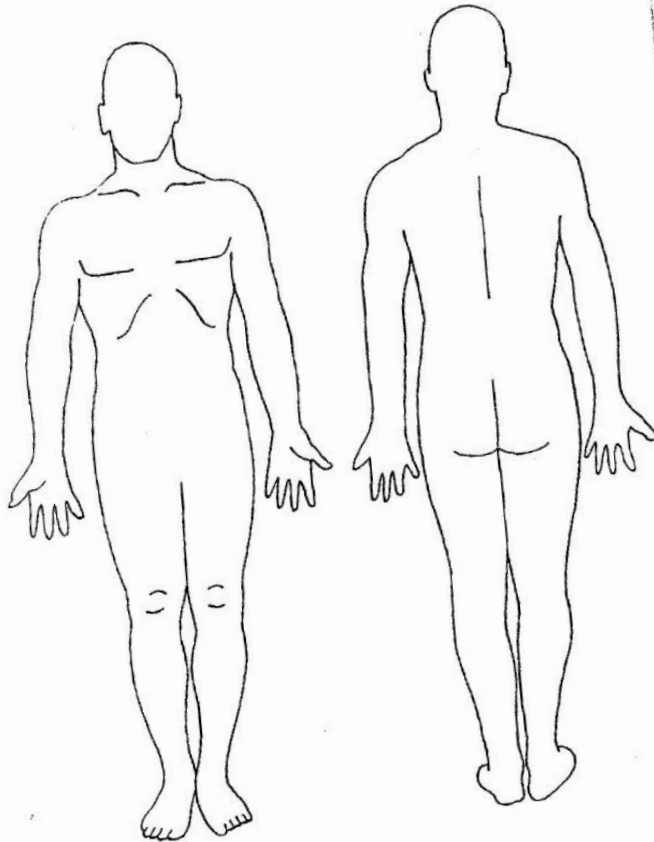


Science manual
p. 24



NAME _____ DATE _____

INJURY "MAPPING" WORKSHEET

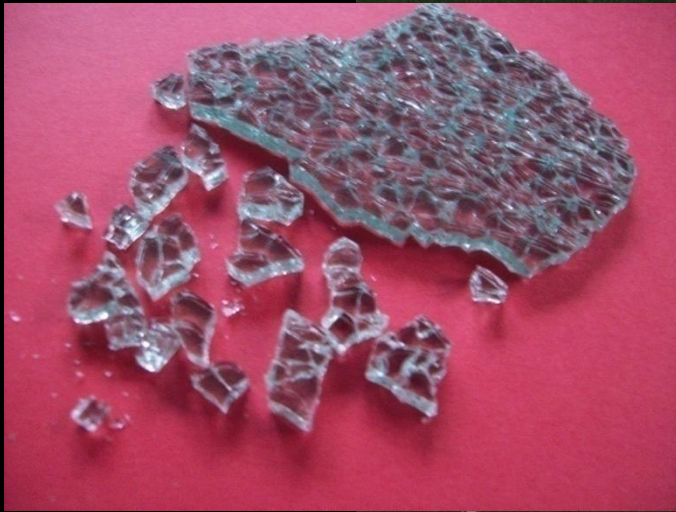


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biology activity:

Learning anatomy
from an autopsy report

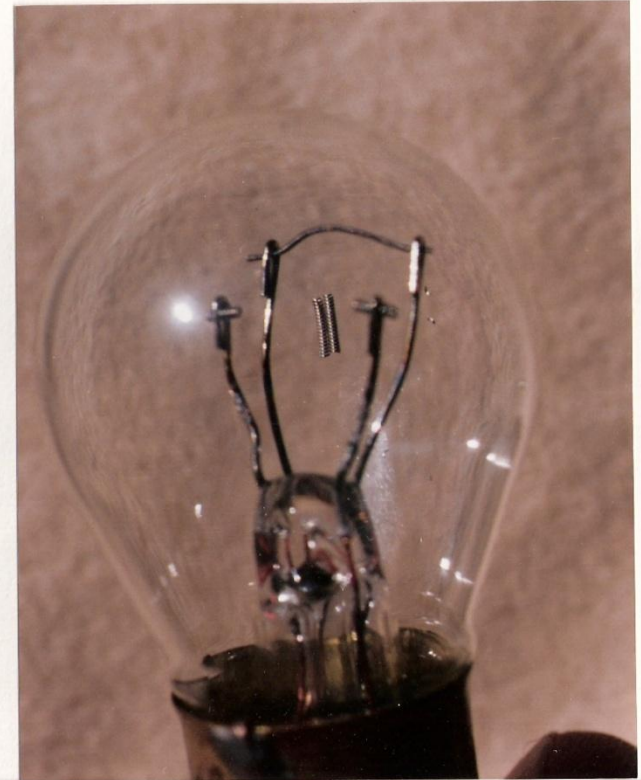
Biology Manual, p. 5
autopsy report p. 7



science activity:

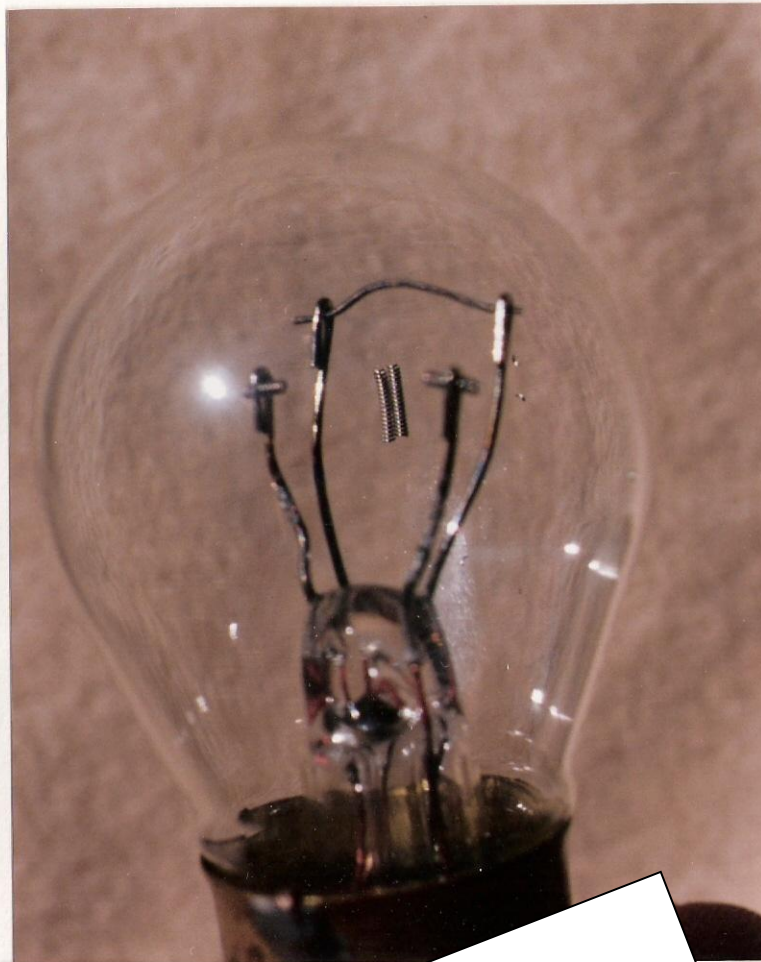
Examining lamps for
ON/OFF at impact

Science Manual, p.5
forensic photo's



Evidence #7218A5

Case: State v. William Dufree
Location: Broadway/49th
Date: 8/2/99 Time: 1945
Secured by: Tpr. Barnes



Evidence #

OFF

C. ... three
Loc. ... roadway/49th
Date ... 99 Time: 1945
Secured by: Tpr. Barnes



Evidence # 26

ON

Drive.
Time: 0250
by: Off. Parnell

biology and math activity:

Using the **BACSim**
reaction time simulation software

BACSim

Enter personal information (weight, sex)

Select a drinking scenario

BACSim calculates resulting BAC

Student performs the on-screen PRT test

actual PRT shows on screen

alcohol-impaired PRT shows on screen

reaction distance, $X_r = 1.47 (S)(t)$

total stopping distance = $X_r + X_b$

braking distance chart

VEHICLE BRAKING DISTANCES		
Vehicle speed	braking distance (ft) on dry asphalt	braking distance (ft) on wet asphalt
20	18	24
25	28	38
30	40	54
35	54	74
40	71	97
45	90	123
50	111	151
55	134	183
60	160	218
65	187	256
70	217	297
75	250	341
80	284	388

outside demo ?

biology activity: The cough
medicine defense

Biology Manual, p. 46

Driver claims alcohol in Sudafed
cough syrup caused a high BAC

STATEMENT FORM

Page 1 of 1

DR No. 078-15370

Date of Interview 05/13/07

City [redacted]

Age 21

Height 175

Weight 130

DOB 11/28/35

Location of Interview Centinella Hospital

12F Code 90844

Phone 323 418-8933

State CA

Driver Lic. No/Other ID D6011638

Serial No. (s) 30808/26281

Division 870

Subdiv No.

Name Harley Darnell Daniels

Residence Address 1215 W 90th Pl

Business Address Adams / Boyce

Sex M

Race B

BLK

Eye BRO

Officer Completing

Interviewing Officer(s) Adams / Boyce

MIRANDA ADMONITION

1. You have the right to remain silent.
Do you understand?

2. Anything you say may be used against you in court.
Do you understand?

3. You have the right to the presence of an attorney before and during any questioning.
If you cannot afford an attorney, one will be appointed for you before any questioning if you want.
Do you understand?

If a waiver is desired:
Do you want to talk about what happened?

Statements: Use S&P person. Include who, what, where, when, why and how.

On 5/13/2007 at approx 0750hrs my partner officer Boyce #26281 and I, Officer Adams #30808 were working South Traffic Division. We were assigned 12M51 and 12M52 working Traffic Enforcement. We rec'd a request by STD supervisor (Sgt Cato) to respond to Vermont / Century for Fatal T/C.

Upon my arrival I meet with Sgt Cato. Cato directed me to respond to Centinella Hospital and meet with Driver of P-1 (later identified as Susp-Daniels).

Upon my arrival to Centinella Hospital I was directed by Hospital staff to Bed 7C. I observed Daniels laying on a Gurney and nurse was attending to his injuries. Daniels complained of pain to his side and face. I observed Daniels to have multiple lacerations on his face.

I then began to conduct my T/C investigation. Daniels stated that he has not been feeling good the last couple of days. Daniels took some Nyquil last night (5/12/07) in hopes to make him feel better. Daniels, a couple of hours later, was driving home. Daniels stated that when he woke up he was in the hospital. I asked him the only thing he took was some Nyquil. I then asked if he was on any type of medication and he said "no". A couple of hours later Daniels told me that he had seizures when he was a child but did not think it was related to this incident. 12:35pm we left Hospital.

"The only thing he took was some Sudafed."

Operator's BAC was 0.242

defendant male weighed 160 lbs

Sudafed facts:



2.4% ETOH

1 bottle = 4.0 oz

cost: \$9.79

Widmark formula:

$$\text{BAC} = \frac{\text{ounces (\% ETOH)}}{\text{body weight (13.1)}}$$

Widmark factor for men



Widmark formula:

$$0.242 = \frac{\text{ounces (2.4)}}{160 (13.1)}$$

Widmark formula:

$$0.242 = \frac{\text{ounces (2.4)}}{160 (13.1)}$$

$$\text{ounces} = 211 \text{ oz}$$

Widmark formula:

$$0.242 = \frac{\text{ounces (2.4)}}{160 (13.1)}$$

$$\text{ounces} = 211 \text{ oz}$$

$$211 \div 4 \text{ oz/bottle} = 52 \text{ bottles}$$

Widmark formula:

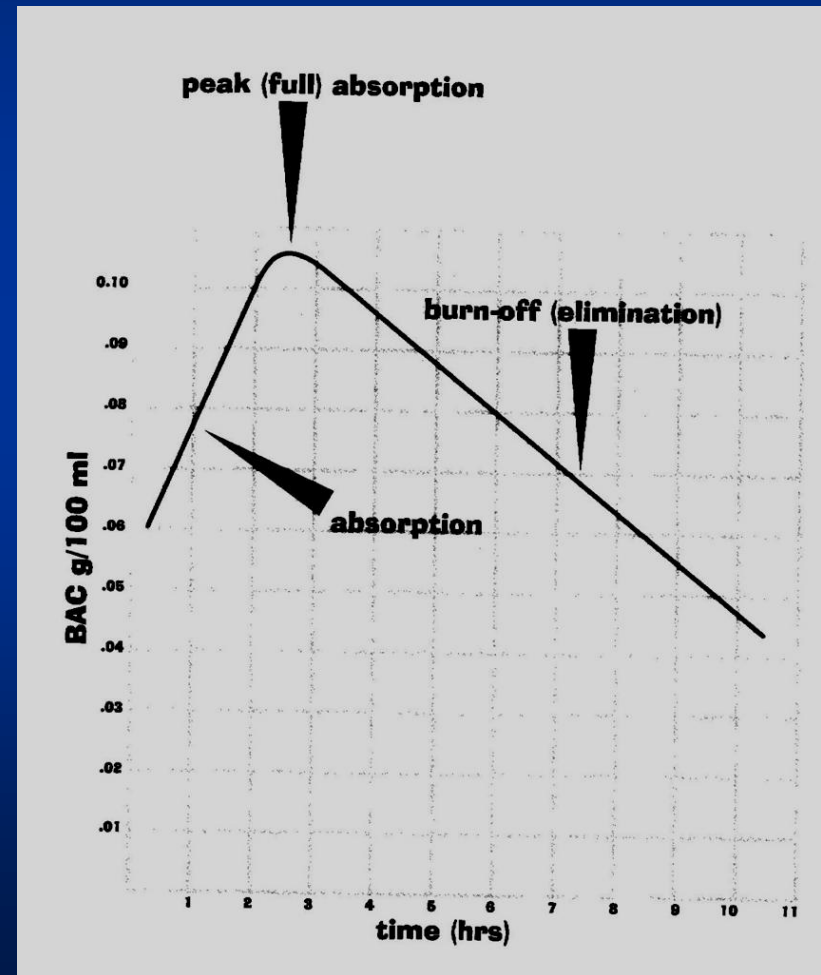
\$ 509.08

2144 oz/bottle = 52 bottles

math activity:

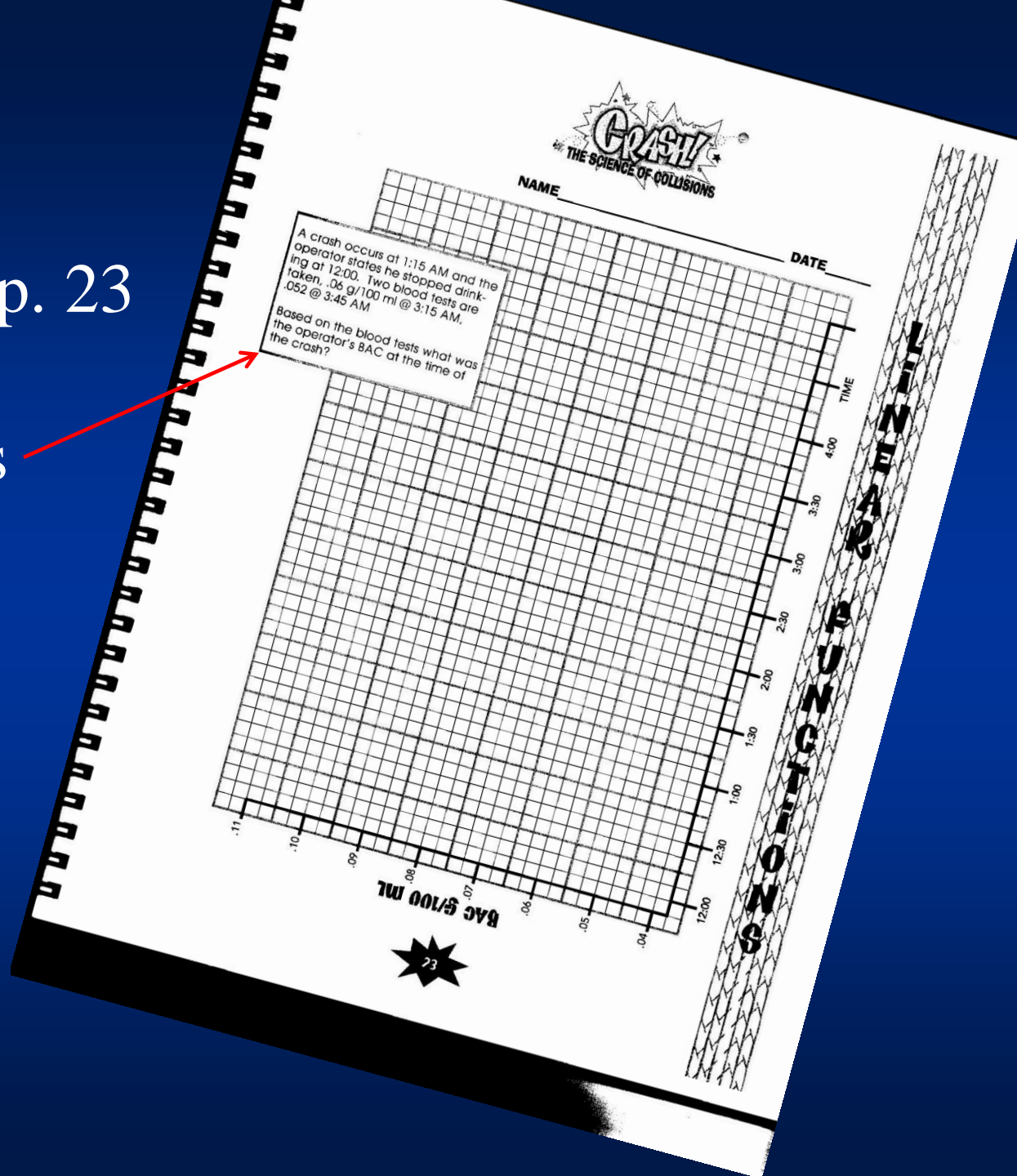
Alcohol and driver performance,
BAC at time of crash

Math Manual, p. 20



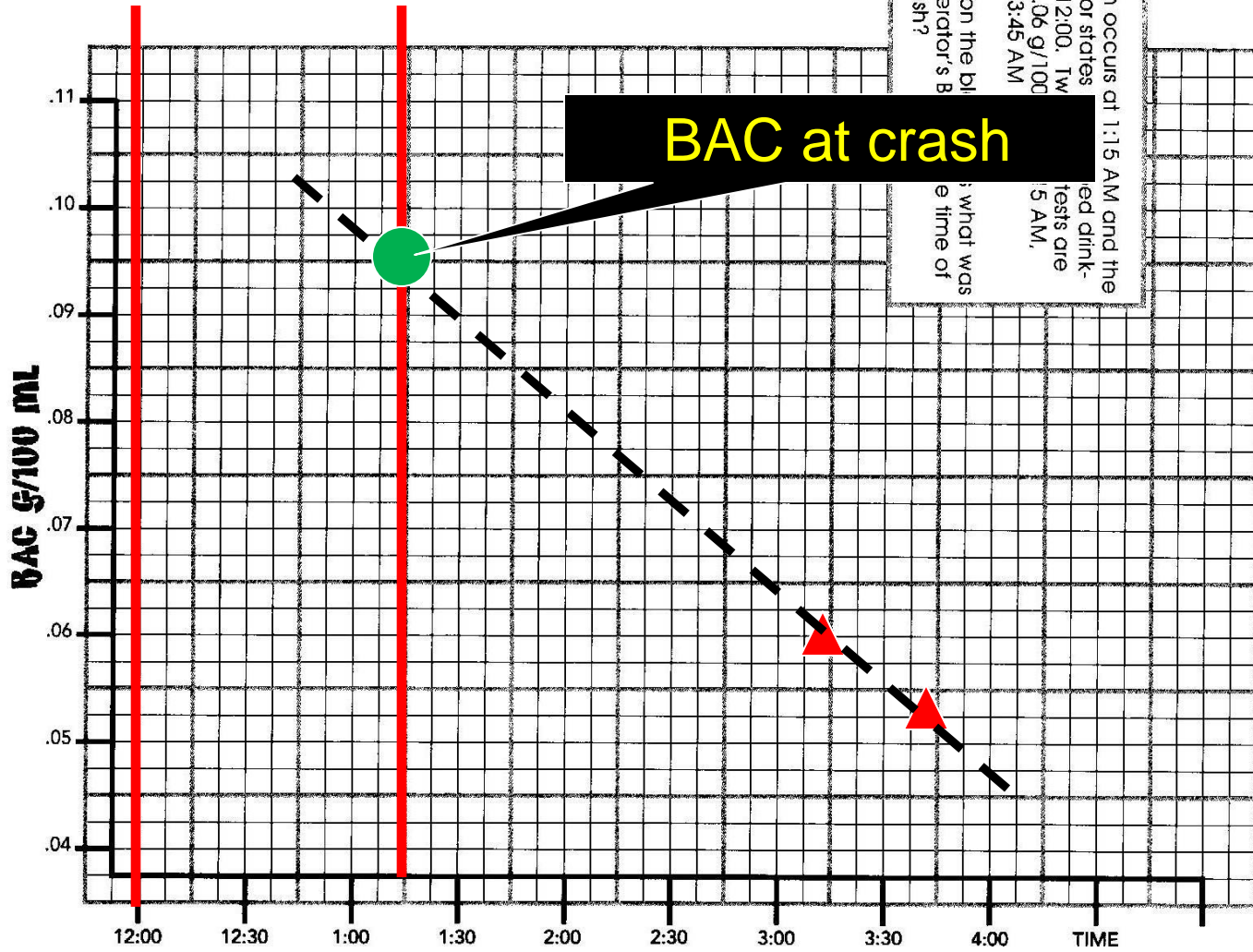
Math Manual, p. 23

case facts



last drink

crash



A crash occurs at 1:15 AM and the operator states that he was drinking at 12:00. Two tests are taken, .06 g/100 at 3:15 AM, .052 @ 3:45 AM. Based on the blood test results, what was the operator's BAC at the time of the crash?

NAME _____ DATE _____

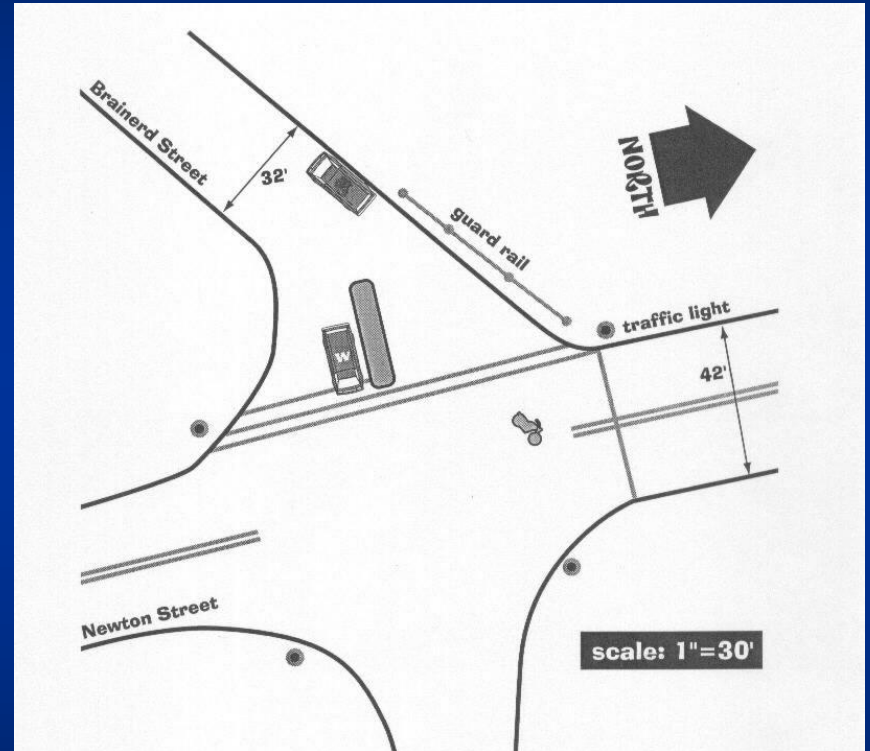


FOURTH - THE SCIENCE OF COLLISIONS

physics activity:

Newton's Laws in Court

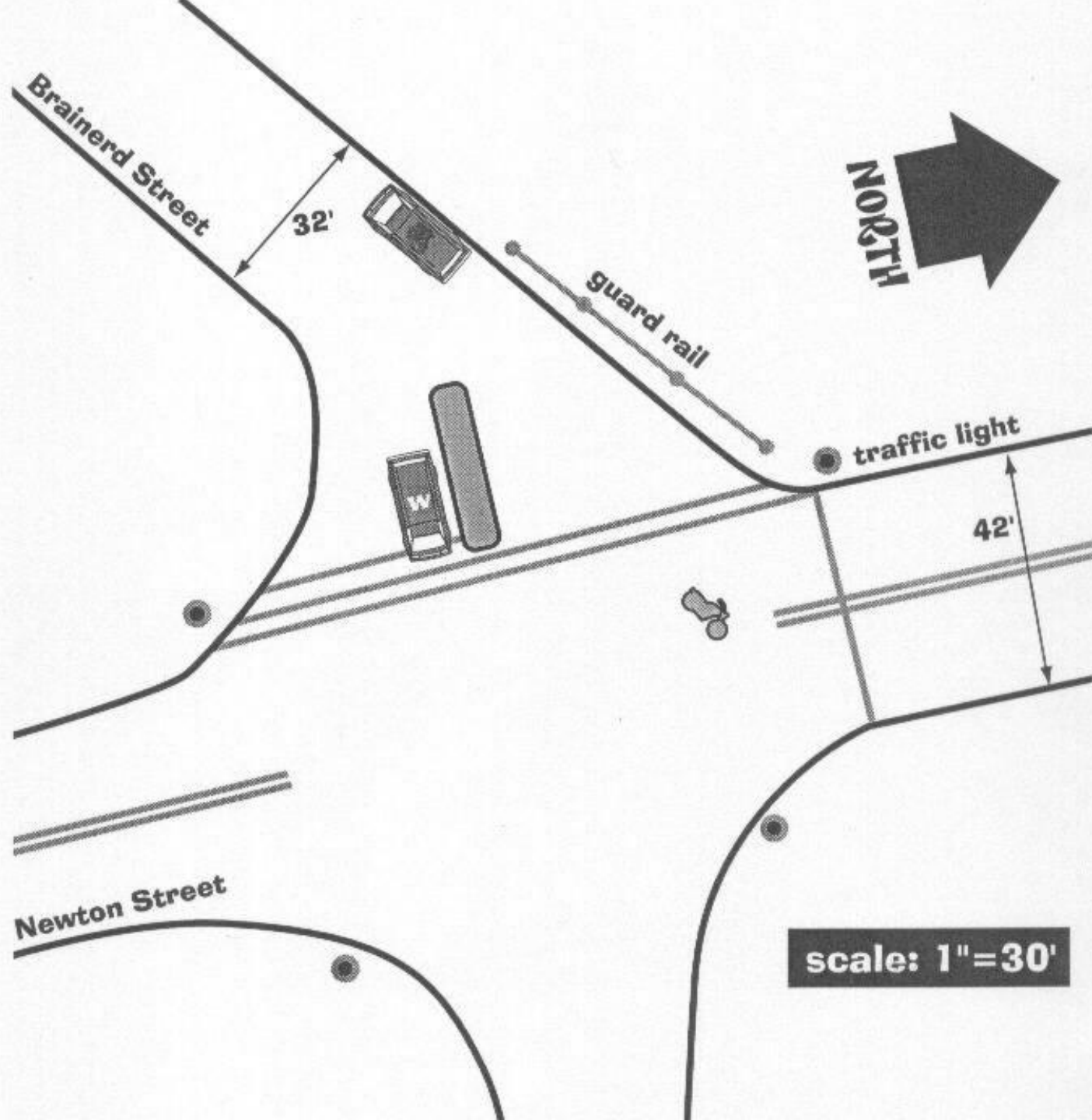
Physics Manual, p. 63



Who was at fault?

Newton's 1st Law:

An object at rest tends to stay at rest, and an object in motion tends to maintain its motion.



Assignment:

Investigate to determine
who caused the crash.

Evidence ?

Photographs ?

Operator questions ?

Witness questions ?

Police report:

“Vehicle #1 was making a left turn from Newton onto Brainerd, Vehicle #2 was going straight when they came in contact with each other.”

“Citation to operator of MV#1 for improper left turn.”



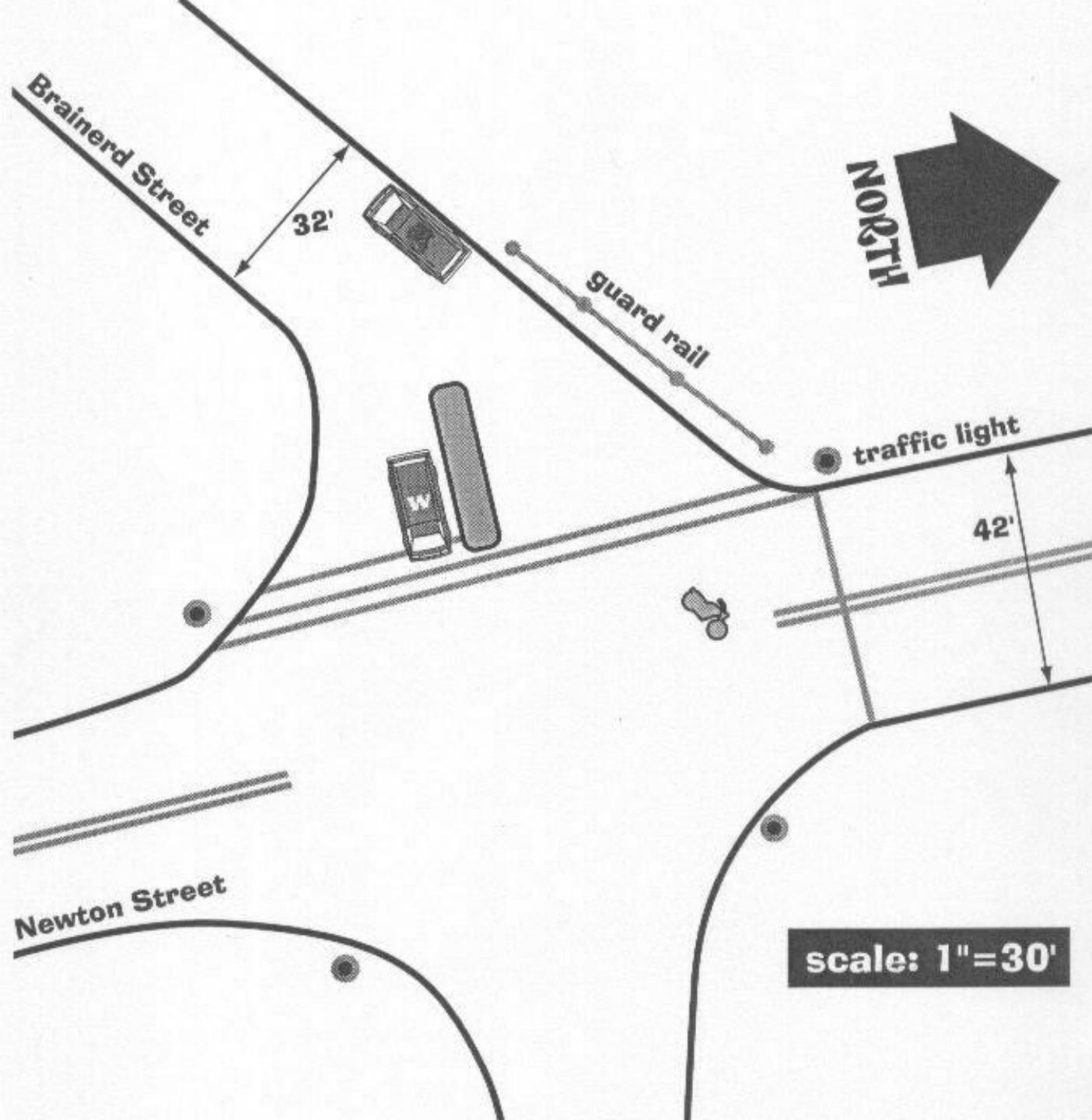




MASSACHUSETTS
574-348
COMMERCIAL

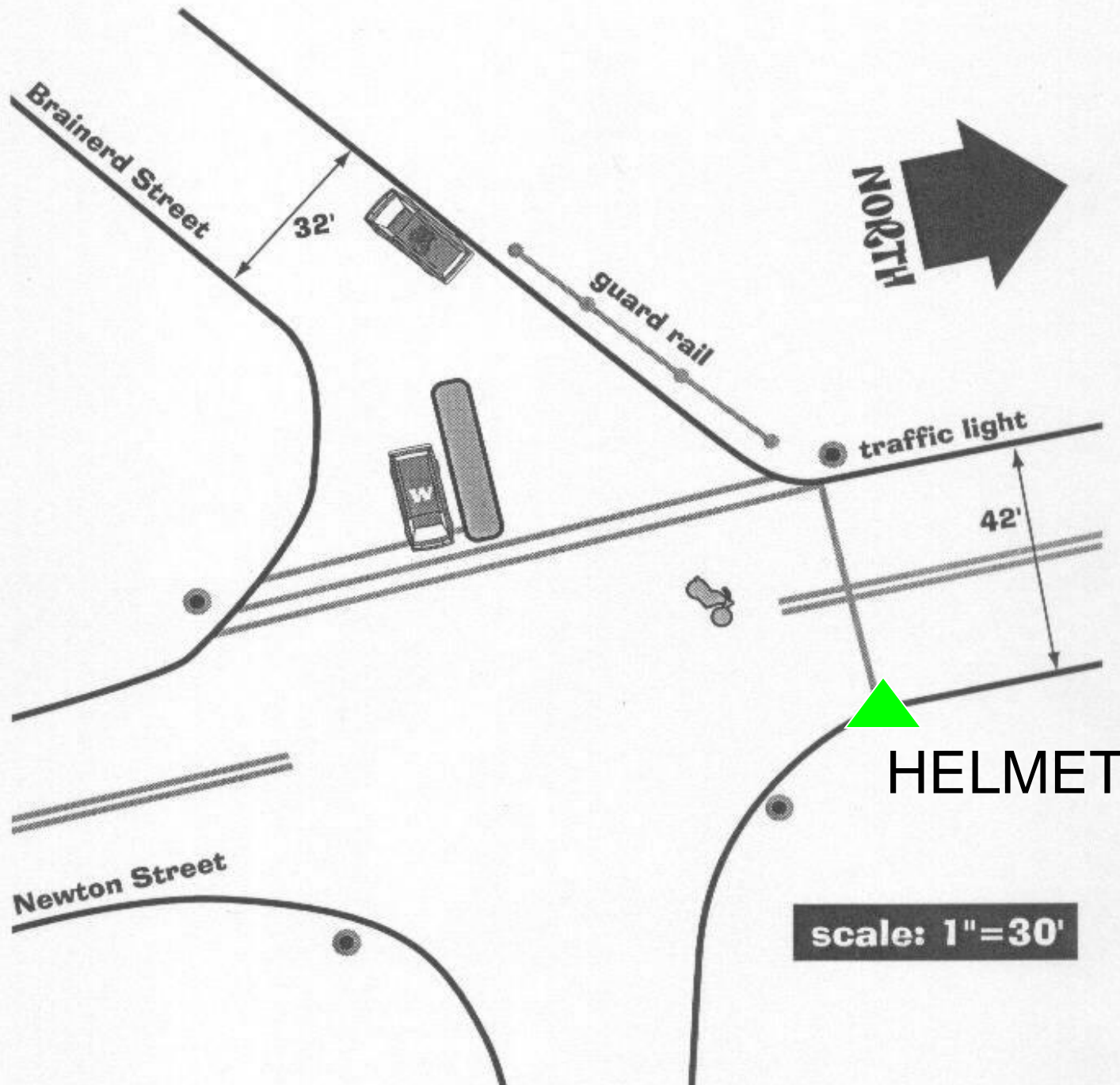


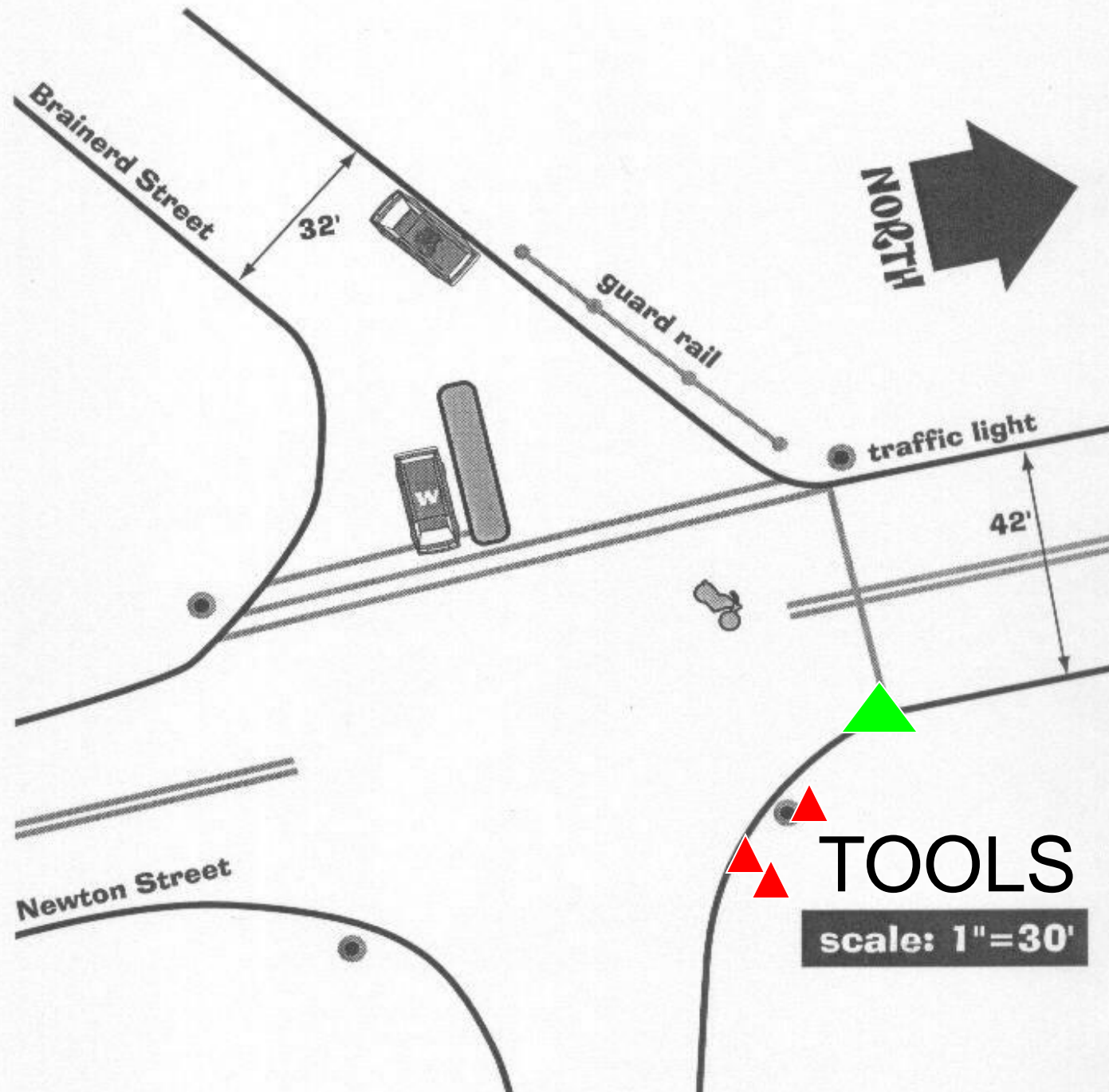


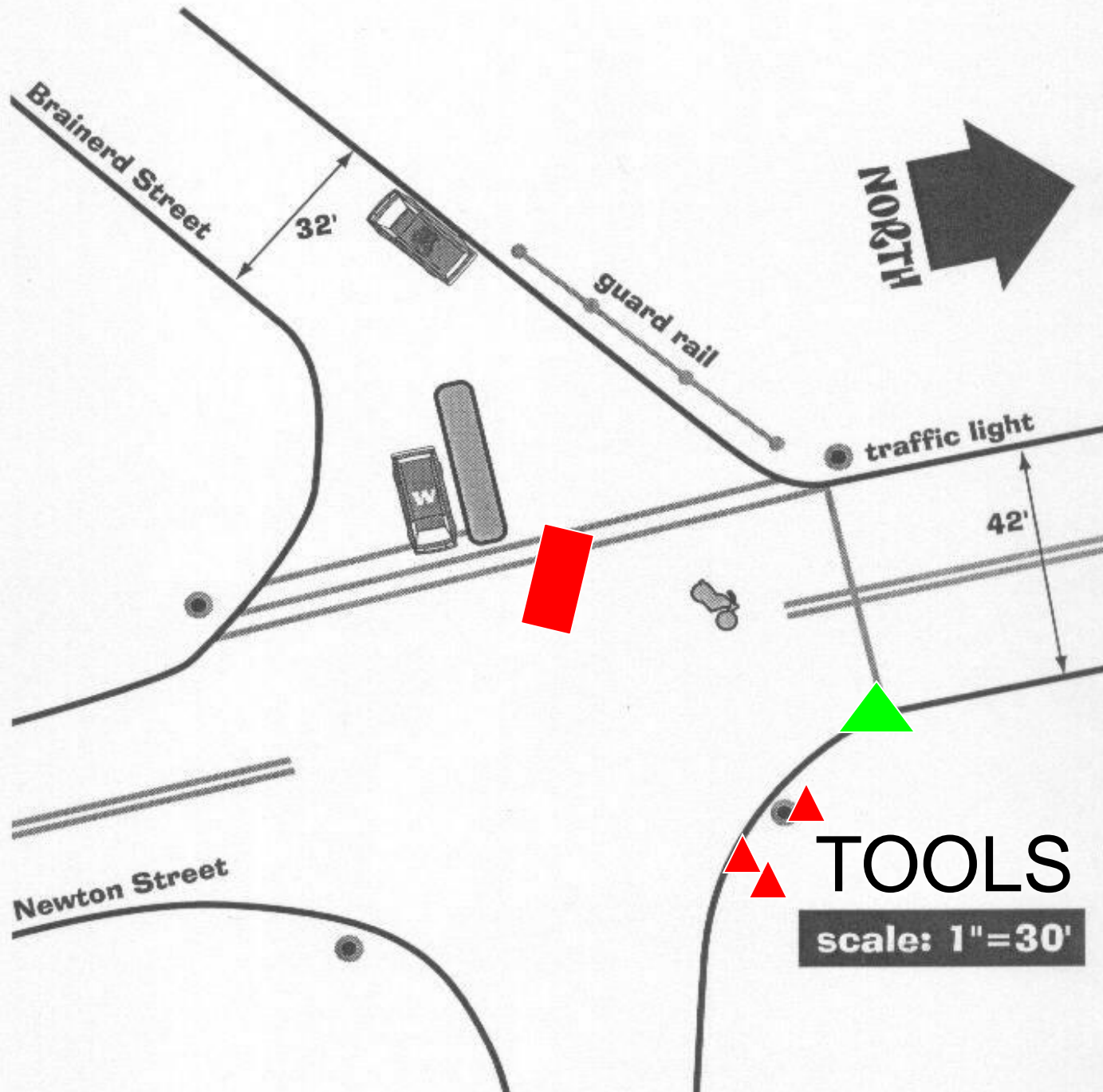


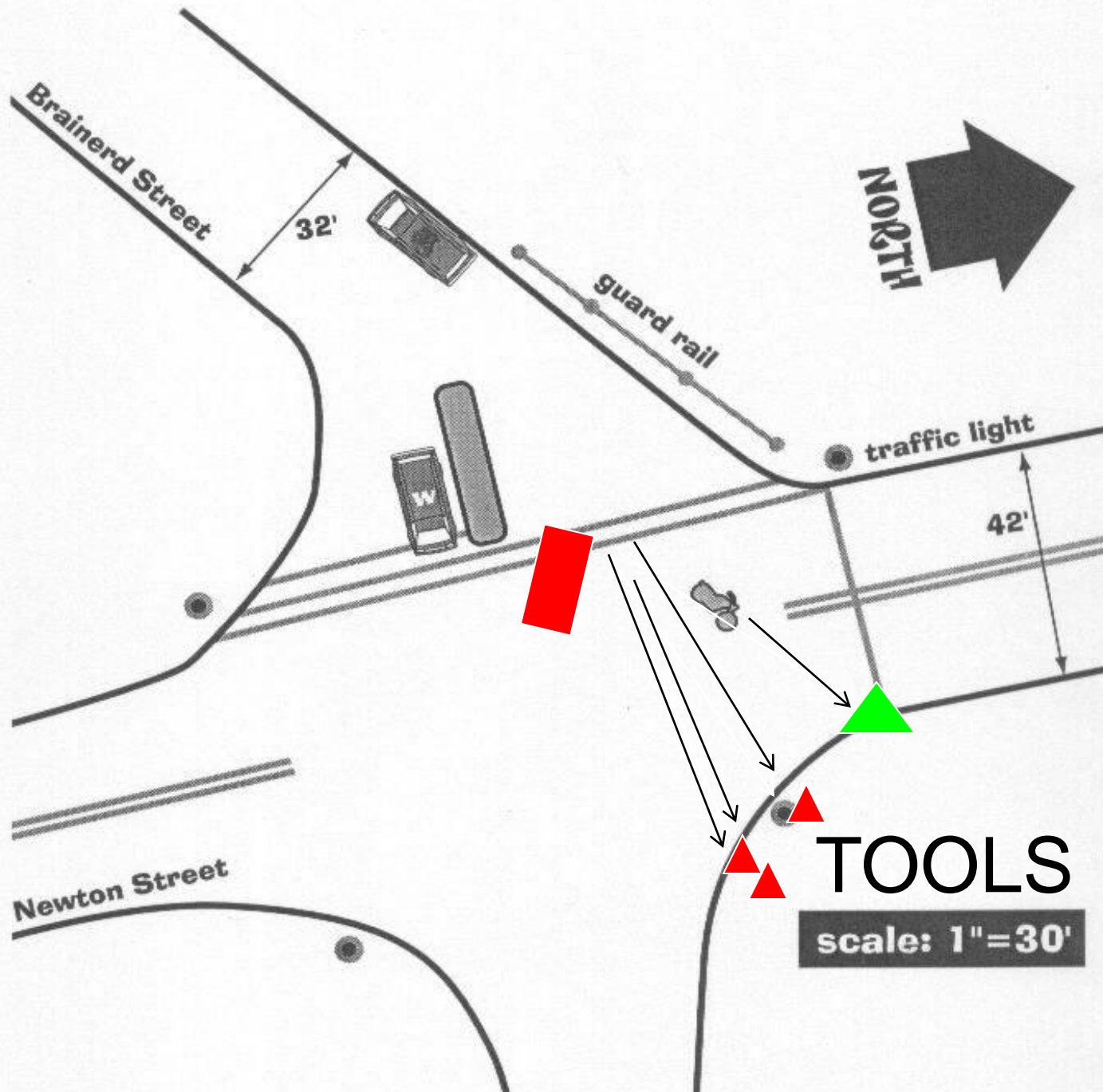
ADDITIONAL INVESTIGATION

- INFORMATION FROM MEDICAL, AMBULANCE TEAM, EMS, ETC.
- INFORMATION FROM THE BAR









Information from the bar?

time the check was paid

MC operator was with his girlfriend

science activity:

Investigate the crash.

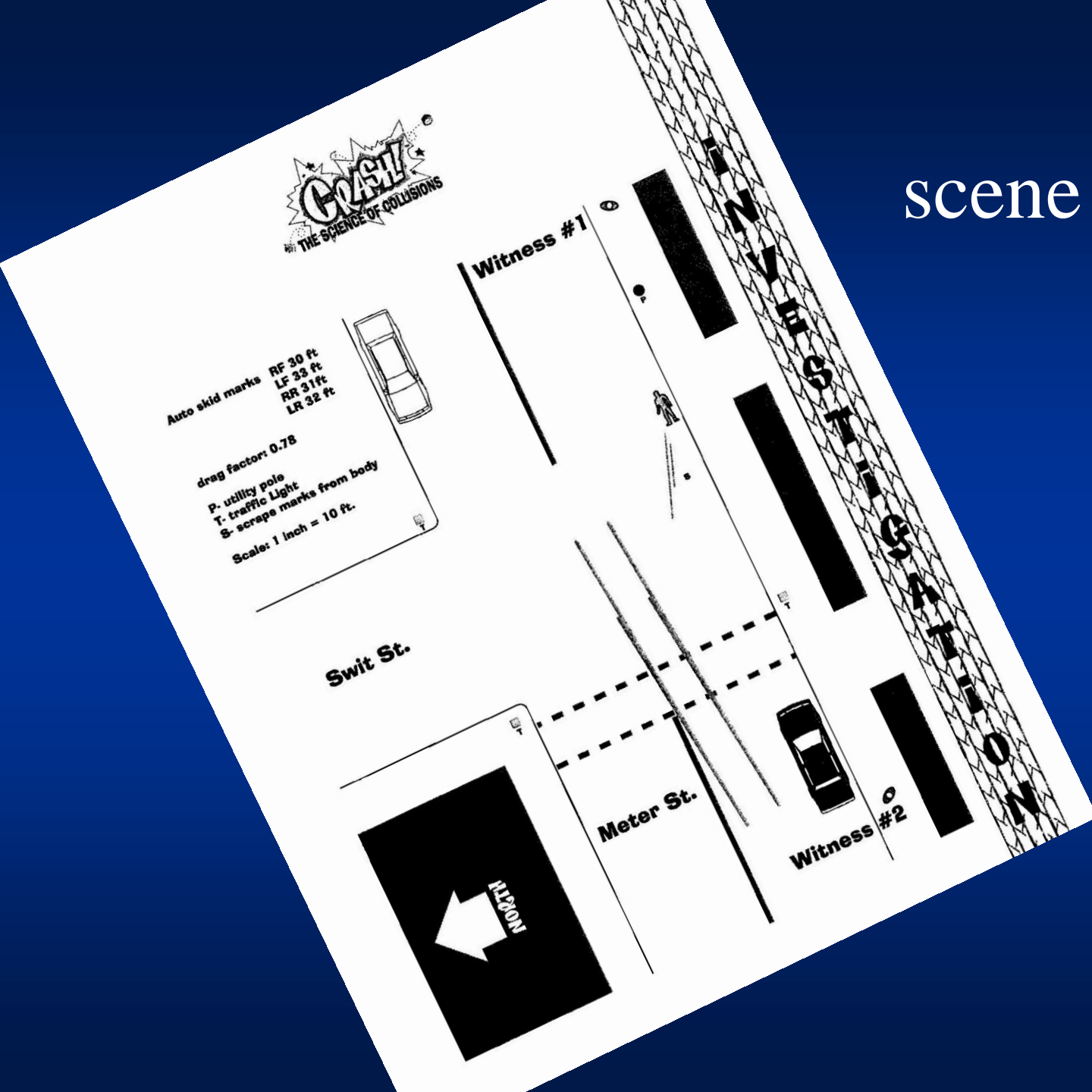
Evidence ?

Photographs ?

Operator questions ?

Witness questions ?

scene diagram



Investigate the crash.

Evidence

The INVESTIGATOR

Operator questions ?

Witness questions ?



Take Home Activities

© 2013 Legal Sciences

sponsor's message

Take-home activity:

You Can't Afford a DWI

Students and parents are asked
to tabulate the costs of a DWI



YOU CAN'T AFFORD A DWI!

CONCEPTS: YOUR STATE'S DWI LAW
CONSEQUENCES OF DWI

MATERIALS: LIBRARY
INTERNET

BACKGROUND:

If you drink and drive you can be cited for DWI, fined after a court appearance, have your license suspended, be required to attend remedial DWI driving school, etc., etc., etc. The fine may not seem like a large amount of money, but when you total all the costs that result from driving while impaired, it just doesn't pay.

STUDENT ACTIVITIES:

1. Have students make a list of all the consequences of being stopped and convicted of DWI, and then consolidate all the lists. This usually makes for extended discussion and student input, and may require outside research of the costs of DWI school, court costs, lawyer's fees, etc.
2. Have each student apply the list to him/herself and make a list of the specific costs if he/she were convicted of DWI. Don't forget any lost wages for time spent in DWI school or time lost when the driving license is suspended.
3. Have students make a poster showing the cost of a DWI, or even better, submit an article to a local newspaper showing the cost. TV and radio stations might also be interested in your local research, as would S.A.D.D. or M.A.D.D. groups.

sponsor's information

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Cost of a DWI - Sample

DWI fine

Court cost

Retrieve car from police impound

Towing charge

Enrollment in DWI school

Loss of wages - court appearance

Loss of wages to attend driving school

Attorney fee

Bail expense

Insurance surcharge (3 yrs)

Transportation to/from work during license
suspension (6 months)

Reinstatement of license

\$ 200.00

125.00

50.00

75.00

150.00

100.00

400.00

1000.00

200.00

1500.00

600.00

50.00

Total

\$ 4450.00

There are 12 alcohol-impaired
driving activities...

**STOP DWI funding can be
used to purchase CRASH!**

3 DVD's

are included in the CRASH! Toolbox

(Impaired Driver Testing, Sheridan Animation, Crash Testing)

3 CD's

are included in the CRASH! Toolbox\

(The INVESTIGATOR, BACSim, Resources CD)

the Resources CD

is a backup, with

all police reports, forensic photos,
videos, and computer softwares

The message for teachers:

CRASH! *motivates* kids
using real applications
of math and science



- aligns with NY state learning guidelines and supports mandated testing
- is used within existing lessons (no new topics are introduced)
- no special teacher training is needed
- ***no additional time is required***

www.legalsciences.com/crash!/

CRASH! overview video (2 min.)

[www.legalsciences.com/crash!//](http://www.legalsciences.com/crash!/)

What they say video (2 min.)
(students and teachers)

www.legalsciences.com/crash!/

List of activities – *handout and online*

[www.legalsciences.com/crash!/*!*](http://www.legalsciences.com/crash!/)

FAQ's – *handout and online*

[www.legalsciences.com/crash!/*!*](http://www.legalsciences.com/crash!/)

Sheriff's letter – *handout and online*

www.legalsciences.com/crash!/

Today's presentations – video



Chief Reggie Redfern, Past President
New England Assoc. of Chiefs of Police

“When a young driver is
killed, the whole
community grieves...

now we can do something

before it happens.”

Questions?

www.legalsciences.com/crash!/

Do we need a CRASH! kit
for each school?

Yes. Each senior and junior high
school needs their own
CRASH! kit.

Can more than one teacher
use the CRASH! kit
at the same time?

Yes. Each teacher can print
whatever materials they need
from the Resources disc.

How long does
the CRASH! kit last?

None of the CRASH! materials
are consumable, and additional
copies can be made from the
Resources disc.

What do we do if we
lose a video or software disc?

Make another copy from the
Resources disc.

kwasnoski@aol.com

www.legalsciences.com/CRASH!