



10th Grade Evaluation





Agenda

- ◆ Introductions and Overview
- ◆ 10th Grade Test
- ◆ Scoring
- ◆ Database
 - Practice data entry
- ◆ Feedback

Purpose of S.A.F.E. Evaluation

◆ To answer these questions:

- To what extent have students learned and retained what they need to know to be safe?
- What do we do well in teaching fire and life safety?
- What can we improve in teaching fire and life safety?

◆ To document the effectiveness of the S.A.F.E. Program



Goals of Training

◆ Participants will:

- Be familiar with 10th grade test content
- Know how to score the test
- Know how to administer the test
- Know how to use the database to record information
- Know how to use the results for planning

S.A.F.E. Evaluation System: Overview

◆ WHERE WE ARE:

- ❑ Complete implementation of 3rd grade system, launched 2010
 - 3 years of data
 - X number of departments using system
- ❑ Complete implementation of 6th grade system, launched 2012
 - X years of data
 - X number of departments using system
- ❑ Launch of 10th Grade System



S.A.F.E. Evaluation System: Overview

◆ WHERE WE ARE:

- National exposure:
 - Presentation at American Public Health Association Annual Meeting, Scientific Session
 - Listed in FEMA Library Resource Center
 - Listed in National Children's Safety Network



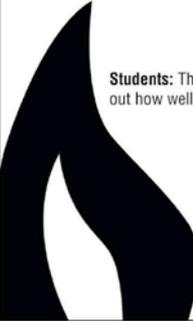
10th Grade Test

School Name: _____
 Date: _____
 Booklet #: _____

Tenth Grade
 Evaluation

SAFE

STUDENT AWARENESS OF FIRE EDUCATION



Students: Thank you for helping the firefighters find out how well they did teaching.

Student Awareness of Fire Education (S.A.F.E.) Program
 A partnership between
 Local Fire and School Departments &
 the State Department of Fire Services
 Commonwealth of Massachusetts
 P.O. Box 1025 • Stow, MA 01775
 (978) 567-3380 • 1-877-9NO-FIRE

Tenth Grade Evaluation Guidebook

SAFE

STUDENT AWARENESS OF FIRE EDUCATION

Raising a fire safe generation of children™



Commonwealth of Massachusetts
 Department of Fire Services
 Division of Fire Safety
 P.O. Box 1025
 Stow, Massachusetts 01775
 (978) 567-3380

TEST DATE: _____	BOOKLET NUMBER _____	Score
Question		1A (max = 2)
1A. Fire dynamics: Score '1' for each correct answer.	B _____ D _____	1B (max = 2)
1B. Smoke: Score '1' for each correct answer.	A _____ C _____	1C (max = 2)
1C. Firefighters: Score '1' for each correct answer.	B _____ C _____	Q 2 (max = 3)
2. Three liquids that burn safe: In student's own words, any hot liquid that causes scald burns or any caustic liquid that causes chemical burns. Score '1' for each correct answer.		Q 3 (max = 3)
3. Three degrees of burns: Score '1' for each correct answer.	A = 3 rd _____ B = 2 nd _____ C = 1 st _____	Q 4 (max = 3)
4. First aid for burns Score '1' for each correct answer.	Run cool water _____ for at least 10 minutes. _____ Then put a bandage on the burn. _____	Q 5
5. Electrical burn: In student's own words: get medical help		Q 6
6A. Three characteristics of carbon monoxide	Answer = 3	Q 6B
6B. Effect of carbon monoxide if you breathe it: In own words, student shows understanding that CO is deadly, e.g., toxic, fatal, can kill. Vague answers such as 'it's bad for you' or 'it can hurt you' are not acceptable.		Q 6C (max = 2)
6C. Two things in homes that produce CO: In student's own words: stoves, heaters, generators, fireplace, wood stove, auto running in garage, etc. Score '1' for each correct answer.		Q 7A
7A. Age group most likely to receive burns.	Answer = B	Q 7B
NOTE: IF 7A IS INCORRECT, 7B and 7C MUST ALSO BE SCORED INCORRECT		
7B. The way this age group is most likely to be burned	Answer = A	Q 7C (max = 2)
7C. List two ways to prevent burns to this age group: In student's own words: keep water heater at 120 degrees; use circle of safety around stove; keep young children out of kitchen; do not hold a cup of hot liquid (e.g. coffee) while holding a baby, and other strategies covered in the classroom. Score '1' for each correct answer.		Q 8
8. Correct statement re: driving	Answer = C	Q 9
9. Best description for 911	Answer = B	Q10A
10A. Path smoke will take	Answer = 2	Q 10B
10B. Cause of fire: In student's own words: space heater left on igniting curtains		

SAFE 10th Grade Evaluation Score Sheet FINAL JULY 2013



10th Grade Test

Cells shaded in orange and yellow contain formulas. Do not alter these formulas.

The number of test booklets listed in column C will be automatically calculated in the cell to the right.		43	40%	9%	79%	74%
ENTER SCHOOL NAME HERE	Central High School	Number answering correctly	17	4	34	32
ENTER DATE OF TEST HERE	12/19/12	The row to the right summarizes the question topic	Q18 Injured & unconscious	Q19 four Steps: family escape plan	Q20 One way escape plans keep people safe	Q21 Friend who texts while driving
Maximum Scores		Max = 2	Max = 4	Max = 1	Max = 1	
Enter test booklet number in column at left (Column C)	1	2	4	1	1	
	2	0	0	0	0	
	3	0	1	0	1	
	4	2	1	1	1	
	5	2	2	1	1	





10th Grade Test

◆ **Consists of 24 questions** (some with several parts) **testing 19 concepts:**

1. Fire dynamics
2. Reporting fires and other emergencies
3. Candle safety
4. Smoke alarms and responding to smoke
5. Flammable liquids and vapors
6. Escape plans
7. Heating sources
8. First aid for burns



10th Grade Test

◆ **Consists of 24 questions (some with several parts) testing 19 concepts:**

- | | |
|-------------------------------------|---|
| 9. First aid | 15. Safe babysitting and care of younger children |
| 10. Kitchen safety | 16. Motor vehicle safety |
| 11. Electrical safety | 17. Alcohol, tobacco and drugs safety |
| 12. Sports and recreation safety | 18. Own responsibility for safety |
| 13. Carbon monoxide and toxic gases | 19. Stop-drop-cover-and-roll |
| 14. Fireworks safety | |





10th Grade Test & Scoring

◆ The test uses a variety of question formats:

- Multiple choice
- Fill-in
- Open response
- True-false



10th Grade Test & Scoring

◆ Let's review the test:

- ❑ What is in the test
- ❑ How students answer
- ❑ Correct answers and scoring guidance

See Scoring Section pages 16 – 17 in the Guide



10th Grade Test & Scoring

◆ Question 1:

□ Multiple choice testing:

- Fire
- Smoke
- How firefighters work

Answer these questions about what the movie makers got wrong about fire behavior, smoke behavior and firefighters.

A. Which **TWO** of the following statements **CORRECTLY** describe the ways the film makers are wrong about fire and fire behavior? *CIRCLE the letter next to the correct answer.*

- A. Fire travels horizontally, and would have spread across the floor before going up the walls.
- B. During the short time the firefighters were talking, the fire would have grown by at least 50%.
- C. When fires are growing, the flames are usually both blue and orange, and not only orange.
- D. The air heated by the fire would have burned the firefighter's lungs when he tried to take a deep breath.

B. Which **TWO** of the following statements **CORRECTLY** describe the ways the film makers are wrong about smoke and smoke behavior? *CIRCLE the letter next to the correct answer.*

- A. Smoke contains soot which would make the firefighter's white shirt dirty.
- B. Smoke is heavier than air and usually collects close to the floor.
- C. The fire would have produced smoke, making it difficult to see and breathe.
- D. There would be smoke, but only in the areas where there are flames.

C. Which **TWO** of the following statements **CORRECTLY** describe the ways the film makers are wrong about how firefighters work? *CIRCLE the letter next to the correct answer.*

- A. Firefighters would enter the building through a window or the roof, and not come up the stairs.
- B. Firefighters would be carrying SCBA Tanks and other protective gear.
- C. Firefighters would not enter a burning building alone.
- D. Firefighters would have removed the young boy through a ladder at the window, and not down the stairs.

10th Grade Test & Scoring

◆ On page 2 an array of questions:

□ Burns and first aid for burns in general

2. Name **THREE** liquids that burn the skin.

1. gasoline
2. Boiled water
3. acid

3. Fill in the blanks in the sentences below so that each sentence correctly describes a specific degree of burn (1st, 2nd or 3rd degree burns).

A. Charred white skin with loss of skin layers is a 1 degree burn.

B. A red, sore, small burned area is a 2 degree burn.

C. A blistered, painful burn is a 3 degree burn.

4. What is the correct first aid care for a small first degree burn? Complete the sentences below so that they correctly describe the steps you should take:

First, cold water
on the burn for at least 10

minutes. Then, put a Bandage on the burn.

5. What is the **MOST IMPORTANT** thing you should do if you receive an electrical burn?

go to the hospital



10th Grade Test & Scoring

◆ Also on p. 2:

- ❑ Questions about carbon monoxide.
- ❑ NOTE: 6B MUST include reference to deadly effect of CO. 'Bad for you' is not acceptable.

6. A. Which **ONE** of the statements below **CORRECTLY** describes three characteristics of carbon monoxide? *CIRCLE* the number next to the correct answer.

1. It is made of tiny gray particles, has no smell, and is heavier than air
- ②. It is colorless, invisible and smells like smoke
3. It is odorless, colorless and invisible

6B. What effect does carbon monoxide have if you breathe it?

Bad for you

6C. List **TWO** things in people's homes that produce carbon monoxide:

1. car
2. _____

10th Grade Test & Scoring

◆ Question 7 also tests burn and burn injury knowledge:

- Focuses on children under 5
- If 7A is incorrect, 7B and 7C are also scored incorrect = 0

7A. Which age group listed below is most likely to receive burns? CIRCLE the letter next to the correct answer.

- A. Adults over 70 years of age
- B. Children under the age of 5 years
- C. Children between 6 and 12 years of age
- D. Teenagers

7B. Which of the following CORRECTLY describes the way this age group is most likely to get burned? CIRCLE the letter next to the correct answer.

- A. Hot liquids spilled on them
- B. Steam from hot microwaved food
- C. Not using sunscreen
- D. Not watching what they are doing

7C. List TWO ways to prevent burns to this age group.

1. where sunscreen
2. don't stay in the sun too long

10th Grade Test & Scoring

◆ Also on p 2:

Motor Vehicle Safety

Emergencies:
NOTE 'BEST'
description

8. Which of the following statements is correct? *CIRCLE the letter next to the correct answer.*

- A. If you hear a siren while you are driving, but do not see an emergency vehicle, you do not have to pull over.
- B. If you have a junior operator's license, you are allowed to use a cell phone while you are driving, if you use it 'hands free'
- C. Three out of every ten 16 ½ year old drivers will be involved in a serious car crash.
- D. Junior operator license holders must have a licensed driver over 21 in the car, except when they are driving a car pool to and from school.

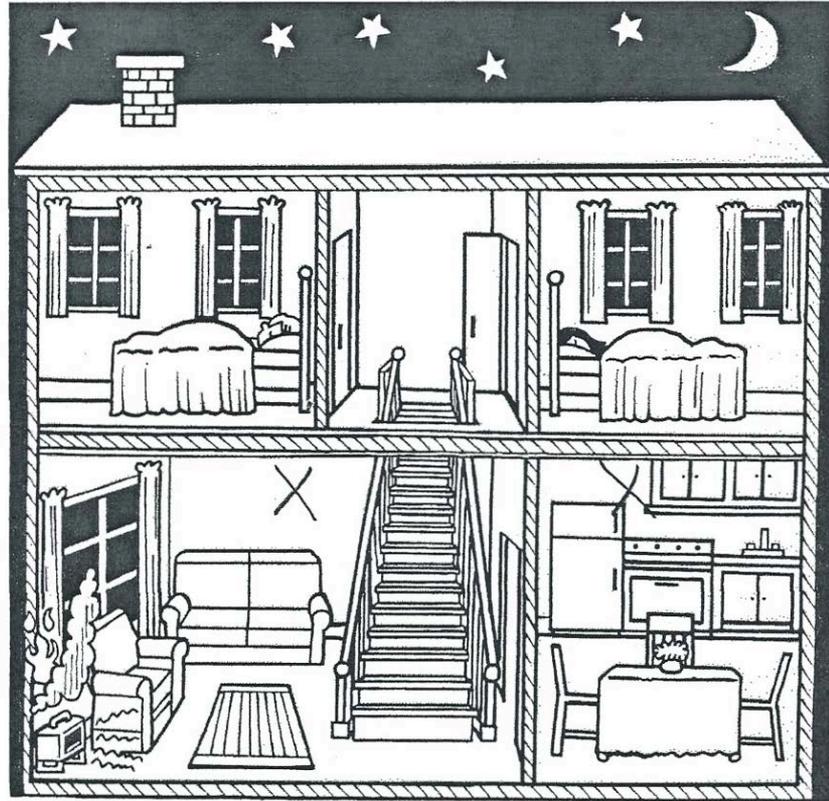
9. Which of the following statements **BEST** describes what you should tell the 911 dispatcher when you call 911? *CIRCLE the letter next to the correct answer.*

- A. How the emergency started; where the emergency is; where you are; if anyone is hurt.
- B. Where the emergency is; what kind of emergency it is; your name; where you are; whether anyone is injured.
- C. How bad the emergency is; your name; where you live; your phone number

10th Grade Test & Scoring

◆ On p. 3, several questions based on one illustration:

☐ Smoke



A. The fire produces smoke. Which of the following **CORRECTLY** describes the **FIRST THREE** places the smoke will go? **CIRCLE** the number next to the correct answer.

1. The smoke will fill the living room, then the kitchen and then go up the stairs.
2. The smoke will go up to the living room ceiling, then up the stairs and into the bedroom on the right.
3. The smoke will fill the living room and then go up the stairs and into both bedrooms.

10th Grade Test & Scoring

◆ 10B and C ask about:

- Circle of safety/space heaters

B. What is the cause of the fire?

the curtain is near the space heater

C. Describe two actions that could have prevented the fire.

1. turn off before going to bed.
2. turn it down so it won't be so hot

10th Grade Test & Scoring

◆ Page 4 contains set of questions about

The fire triangle, and

Correct responses to fires

11. Which of the items below **CORRECTLY** lists the three parts of the fire triangle? *CIRCLE the letter next to the correct answer.*

- A. Flame, fuel and heat
- B. Heat, oxygen and fuel
- C. Flame, oxygen and air
- D. Heat, hydrogen and carbon

12. For each of the two fires shown, **FIRST** describe briefly the correct way to put the fire out. **THEN** list which part of the fire triangle you would be removing when you put the fire out.



A. The correct way to put out the clothing fire is: _____

B. This action would remove the _____ from the fire triangle.



C. The correct way to put out the stove top fire is: _____ and _____

D. These actions would remove the _____ and the _____ from the fire triangle.

10th Grade Test

◆ Also on p. 4:

- Circle of safety
- Flammable liquids

13. Choose the **MINIMUM** safe distance from heat sources listed below. Put a **CIRCLE** around the correct answer for each.

A. Minimum safe distance flammable objects should be from a candle is at least:

6 inches 12 inches 18 inches

B. Minimum safe distance young children should be from a stove is at least:

1 foot 3 feet 5 feet

C. Minimum distance flammable materials and liquids should be from heat sources other than candles is at least:

1 foot 3 feet 10 feet

14. List **THREE** flammable liquids.

1. gasoline
2. _____
3. _____

10th Grade Test & Scoring

◆ Also on p. 4:

- Cigarettes, matchers and lighters;
- Motor vehicle safety; and
- Responding to emergencies

15. List **TWO** safety rules about cigarettes.

1. put it out when done
2. don't touch hot end

16. List **ONE** safety rule about matches and lighters.

17. What is the **FIRST** thing you should do when you get in a car?

put seat belt on

18. If someone is injured and unconscious (and not in a place that is on fire):

What should you **DO**? call cops

What should you **NOT** do? just stand there

10th Grade Test & Scoring

◆ P5 also covers several topics:

- Home escape planning

19. If you were creating a fire escape plan for your family, what **FOUR** steps would you include?

1. run!
2. call 911
3. _____
4. _____

20. Why is it important to have a family emergency fire escape plan?

so we don't die in a fire

10th Grade Test & Scoring

◆ P5 also covers several topics:

□ Motor vehicle safety:

21. Suppose you have a friend who has a driver's license and a car. Whenever she drives, she has her cell phone in her hand to send and read text messages. She has offered to give you a ride to the mall to meet some friends. Think about how you would keep yourself safe. Which of the following answers would **BEST** make sure you are safe?
- A. Tell her no, unless she promises not to text while she is driving.
 - B. Tell her no, unless she turns off her phone and lets you keep it while she drives.
 - C. Tell her no, unless she lets you text for her.
22. Suppose you are at a party with older students, who are drinking. One student who has been drinking offers you a ride home after the party is over. Think about how you would keep yourself safe. Which of the following answers would **BEST** make sure you are safe?
- A. Say no, unless you can have the keys and drive
 - B. Say no, and don't get in the car.
 - C. Say no, and tell them you'll call the police

10th Grade Test & Scoring

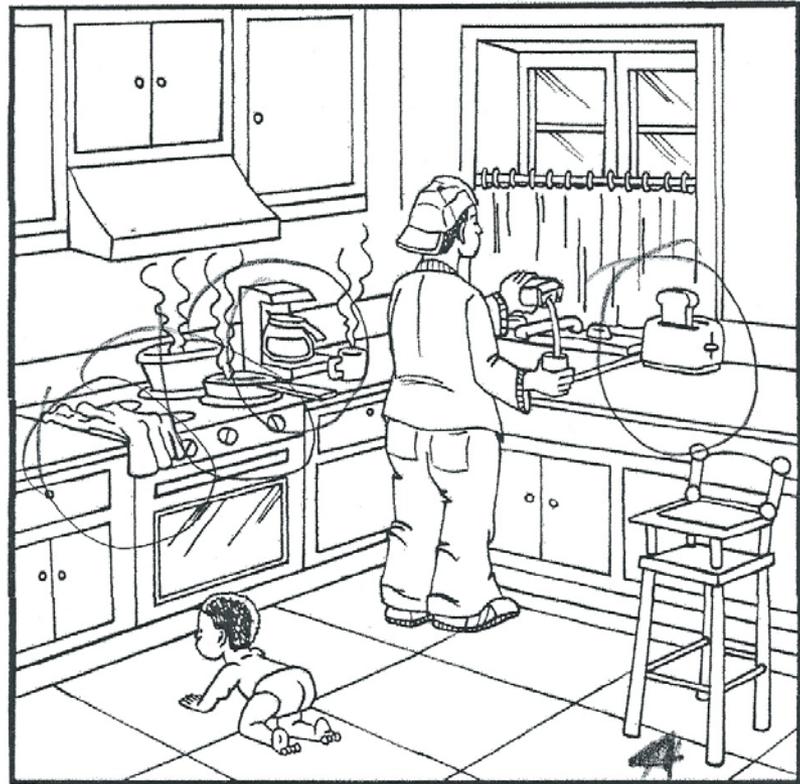
- ◆ P5 also covers several more topics in the true-false statements of question 23:

23. Which of the statements below are true and which are false? *CIRCLE the correct answer.*

A. Surge protector power strips prevent circuit overloads.	<input checked="" type="radio"/> TRUE	<input type="radio"/> FALSE
B. All fireworks, including sparklers, fire crackers and small fireworks are illegal in Massachusetts.	<input type="radio"/> TRUE	<input checked="" type="radio"/> FALSE
C. Smoke detectors that are 'hard wired' do not need batteries.	<input checked="" type="radio"/> TRUE	<input type="radio"/> FALSE
D. Water is a poor conductor of electricity.	<input type="radio"/> TRUE	<input checked="" type="radio"/> FALSE
E. Light bulbs get hot enough to start a fire.	<input checked="" type="radio"/> TRUE	<input type="radio"/> FALSE
F. You don't need a helmet if you are riding a bike 'off-road' (not on a street).	<input type="radio"/> TRUE	<input checked="" type="radio"/> FALSE
G. Sparklers are not hot enough to cause burns.	<input type="radio"/> TRUE	<input checked="" type="radio"/> FALSE
H. All smoke detectors also detect carbon monoxide.	<input type="radio"/> TRUE	<input type="radio"/> FALSE

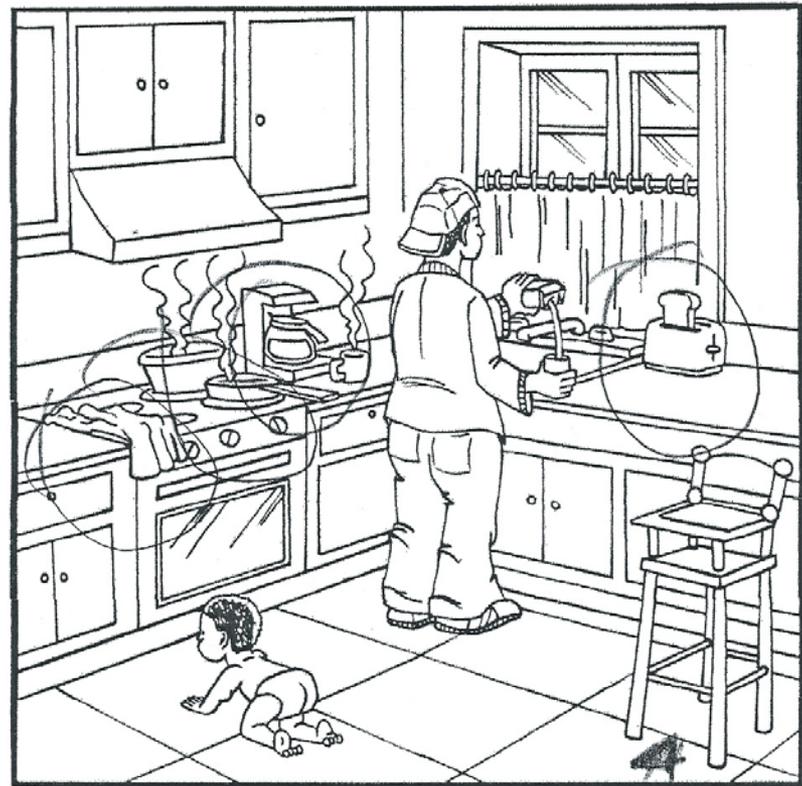
10th Grade Test & Scoring

- ◆ Page 6 focuses on kitchen safety, using an illustration.



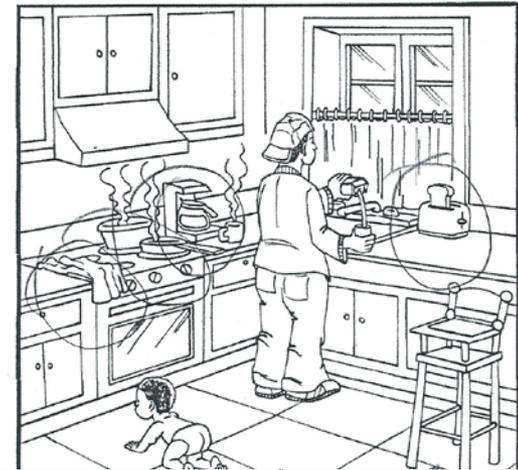
10th Grade Test & Scoring

- ◆ There are six dangers.



10th Grade Test & Scoring

- ◆ This student has written three things but only two are related to the existing dangers.



Be sure to write what he should **DO** to make the kitchen safer.

1. put baby in chair
2. take hot towel off the stove
3. when done turn all things off



10th Grade Test & Scoring

◆ Check-in:

- Are you familiar with the contents of the test?
- Do you understand how the different types of questions are scored?
- What questions do you have?



Administering the Test

- ◆ **Strategies:** You do not need to test all students every year
 - ❑ Target specific schools
 - ❑ Engage the school system
 - ❑ Select a sample
 - ❑ Use your knowledge of the community

Administering the Test

◆ Administering the test:

- ❑ AFTER MCAS in June of 10th grade OR September for 11th grade.
- ❑ Prepare booklets ahead of time
- ❑ Test time: 25 minutes, plus allow for introductions, instructions, collection.
- ❑ Explain:
 - This is not a test of the students;
 - Students should skip questions if they do not know the answer

10th Grade Test

◆ Using the database:

Home							Layout	Tables	Charts	SmartArt	Formulas	Data	Review
AM52													
A	B	C	AG	AH	AI								
S.A.F.E. 10th Grade Test Scores & Analysis													
Cells shaded in orange and yellow contain formulas. Do not alter these formulas.													
The number of test booklets listed in column C will be automatically calculated in the cell to the right.		43	40%	9%	79%	7							
ENTER SCHOOL NAME HERE	Central High School	Number answering correctly	17	4	34								
ENTER DATE OF TEST HERE	12/19/12	The row to the right summarizes the question topic	Q18 Injured & unconscious	Q19 four Steps: family escape plan	Q20 One way escape plans keep people safe	Q21 F tex d							
Maximum Scores			Max = 2	Max = 4	Max = 1	Max =							
Enter test booklet number in column at left (Column C)		1	2	4	1								
		2	0	0	0								
		3	0	1	0								
		4	2	1	1								
		5	2	2	1								
		6	2	0	0								
		7	2	0	1								
		8	1	0	0								





10th Grade Database

Insert you links to the MASTER database and
the database with DATA



10th Grade Database

◆ Check-in:

- Any questions, concerns about understanding the database?
- Comments?

10th Grade: Using the Data

◆ Using evaluation results:

- Planning and improving teaching:

	Kitchen S
	12C
	Stove top fire: lid on it and turn off heat
	14%

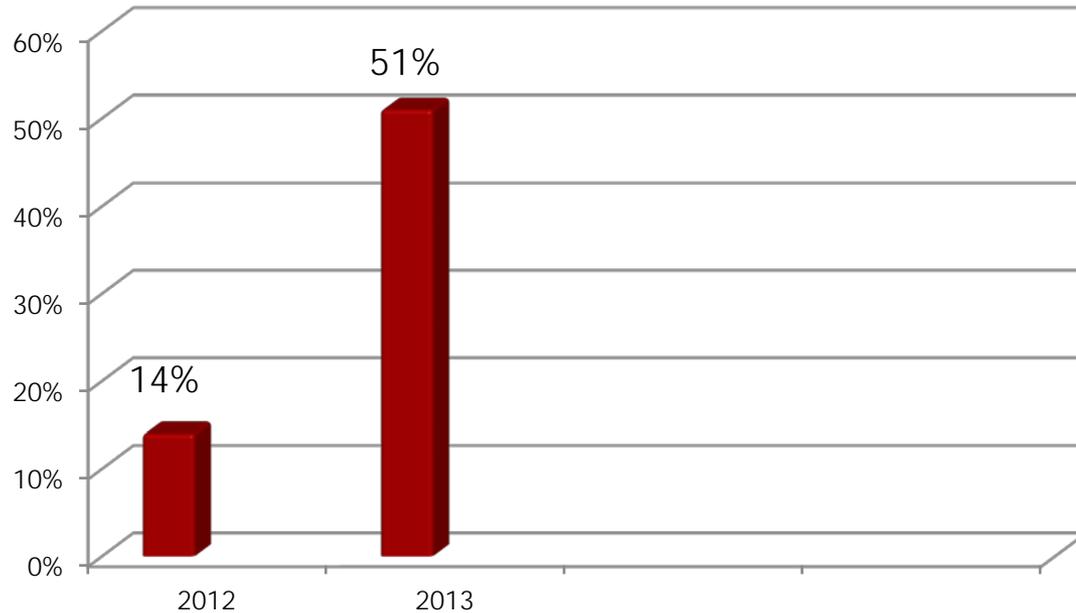
10th Grade: Using the Data

- ◆ Suppose you targeted understanding stove top fires and showed improvement:

Kitchen
12C
Stove top fire: lid on it and turn off heat
51%

10th Grade: Using the Data

Improvement in Understanding Stove Top Fires 2012-2013



10th Grade: Using the Data

◆ Check-in:

- How have you used data from the 3rd and 6th grade systems?
- Do you understand ways you could use the data to your benefit?

Feedback

- ◆ Overall: Do you know the basics of the 10th grade system?
 - Did you have enough opportunity to ask questions? And get answers?
- ◆ Amount of information: too much, too little, just right?
- ◆ PowerPoint slides: did they help or hinder understanding?
- ◆ Time frame: Enough, too much, too little?
- ◆ Other comments:

10th Grade Evaluation

THANK YOU!

