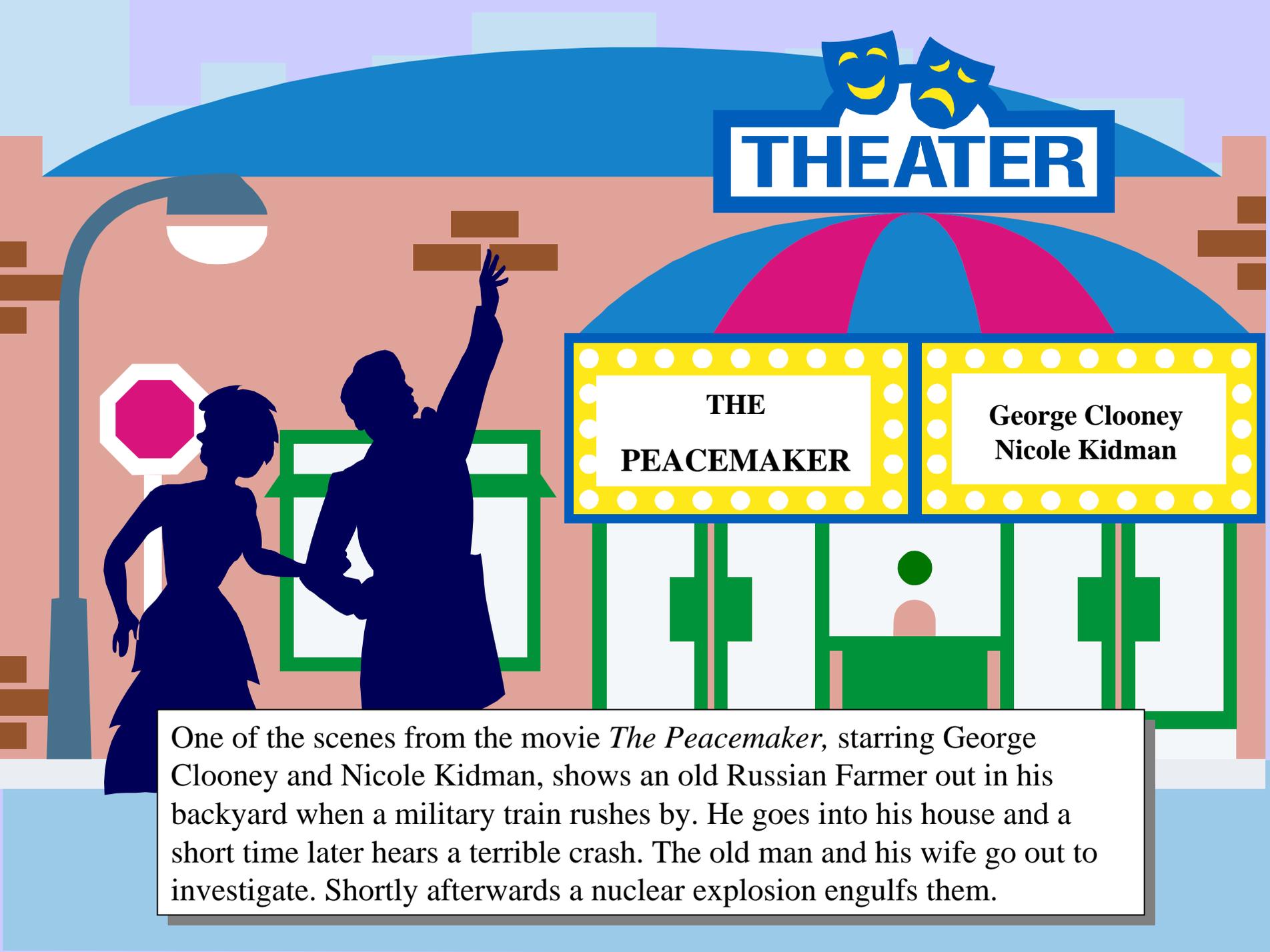


# PROBLEM SOLVING

07

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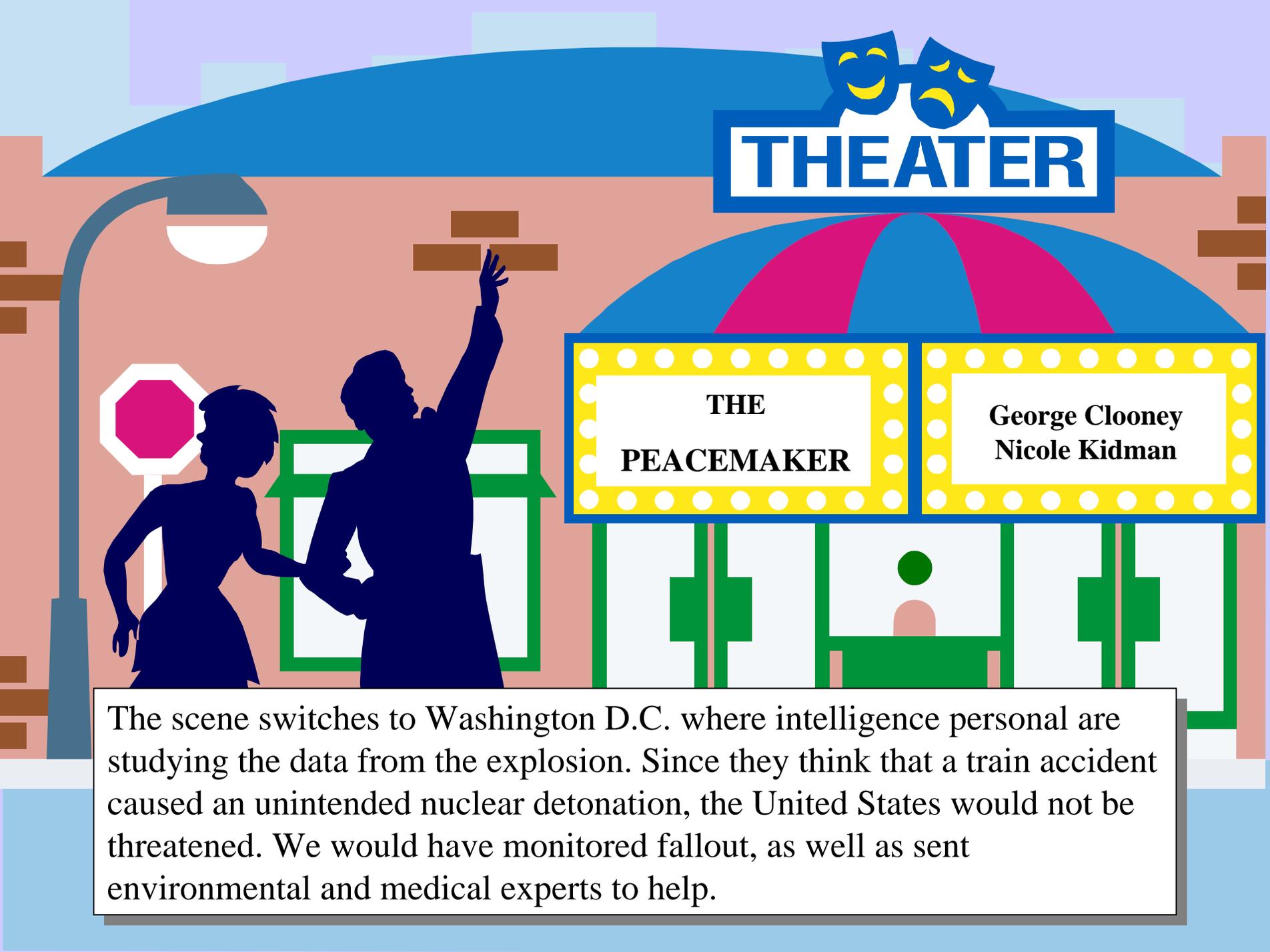


# THEATER

**THE  
PEACEMAKER**

**George Clooney  
Nicole Kidman**

One of the scenes from the movie *The Peacemaker*, starring George Clooney and Nicole Kidman, shows an old Russian Farmer out in his backyard when a military train rushes by. He goes into his house and a short time later hears a terrible crash. The old man and his wife go out to investigate. Shortly afterwards a nuclear explosion engulfs them.

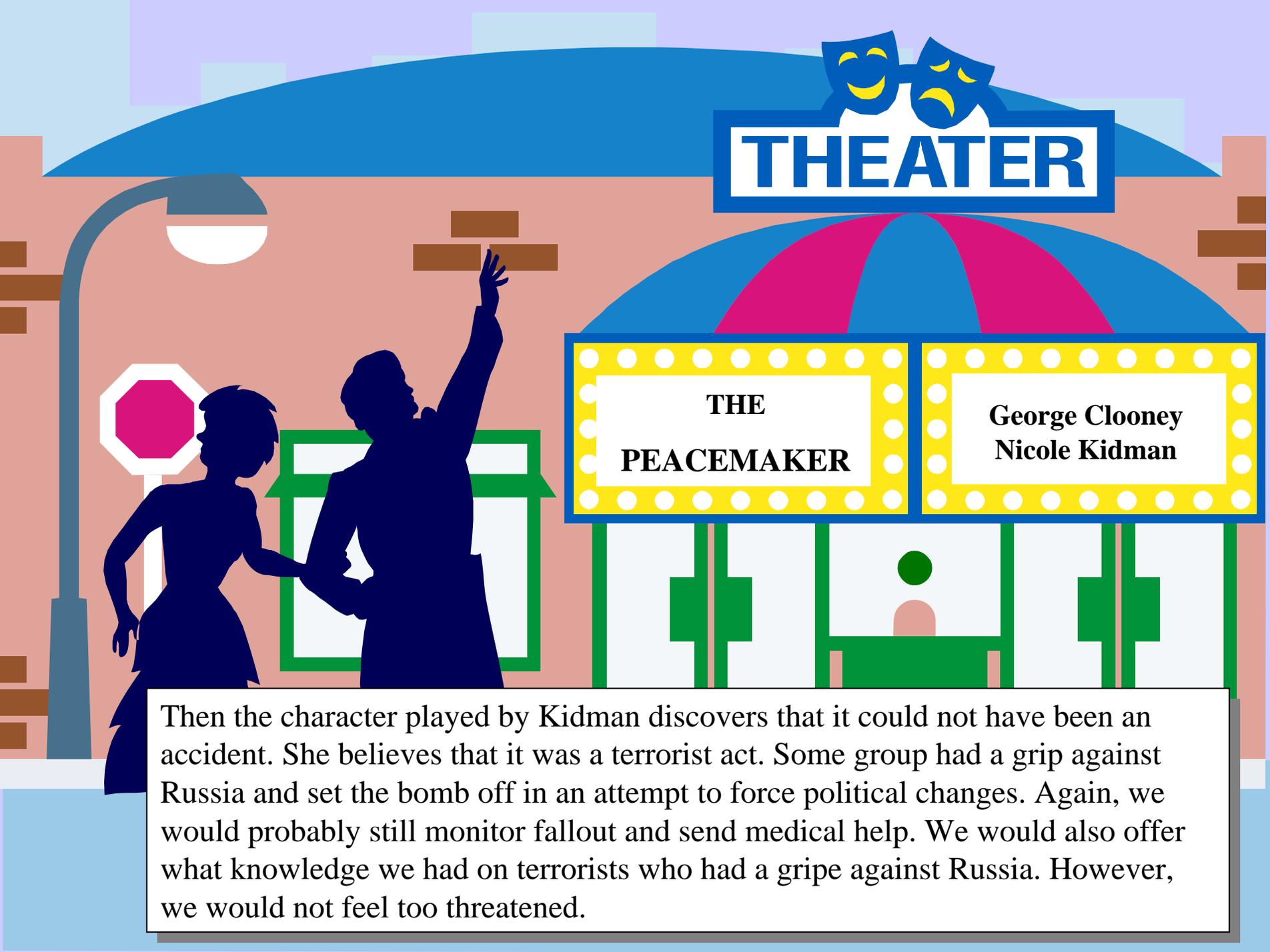


# THEATER

**THE  
PEACEMAKER**

**George Clooney  
Nicole Kidman**

The scene switches to Washington D.C. where intelligence personal are studying the data from the explosion. Since they think that a train accident caused an unintended nuclear detonation, the United States would not be threatened. We would have monitored fallout, as well as sent environmental and medical experts to help.



# THEATER

**THE  
PEACEMAKER**

**George Clooney  
Nicole Kidman**

Then the character played by Kidman discovers that it could not have been an accident. She believes that it was a terrorist act. Some group had a gripe against Russia and set the bomb off in an attempt to force political changes. Again, we would probably still monitor fallout and send medical help. We would also offer what knowledge we had on terrorists who had a gripe against Russia. However, we would not feel too threatened.



# THEATER

**THE  
PEACEMAKER**

**George Clooney  
Nicole Kidman**

Then at a debriefing, Clooney's character rather brazenly takes over. He points to pictures of the train collision and shows that no one had jumped off the train carrying the nukes, while people were jumping off the other train. He concludes that someone killed all of the people on the nuke train and stole several nuclear bombs. The explosion was just to throw everyone off track. Suddenly, the United States was in a threatening situation. Many people would like to get their hands on a nuclear bomb and exploded one in the United States.



# THEATER

**THE  
PEACEMAKER**

**George Clooney  
Nicole Kidman**

In fact, that is the plot. A Bosnian terrorist has bought one of the bombs and plans to blow it up in downtown Manhattan on Friday during rush hour - killing millions of people. Suddenly the problem to be solved is tracking down the thieves and getting our hands on the bombs. If they had focused their problem solving on the environmental and humanitarian issues, as they did at first, many Americans would have died. Getting our problem solving skills correct is very important – not only for anti-terrorist forces, but for every day people.



Some people might think that they do all right with problem solving.”My life is not that complicated. I don’t have to chase terrorists.” Maybe so, but let me ask you something. Are you a parent? Are you worried about your children being kidnapped by strangers? A solution many people take for this problem is to drive their kids to and from school.



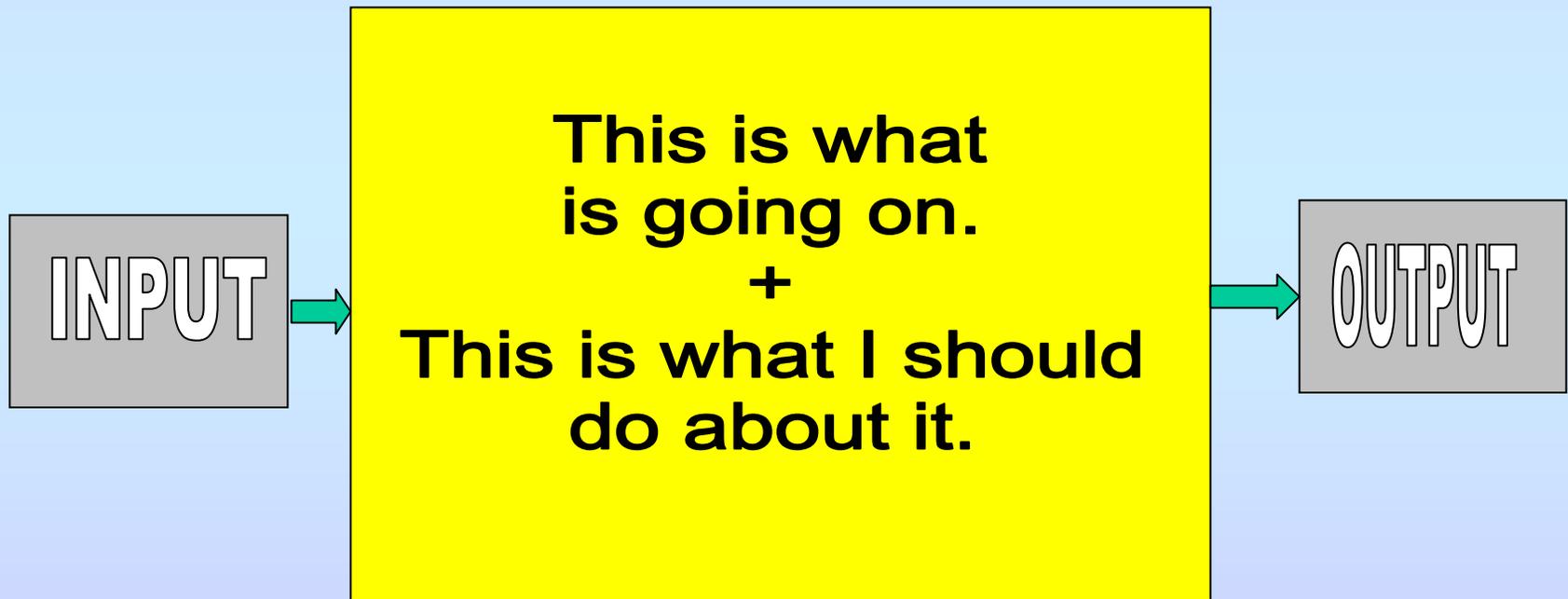
Well the reality is that kidnappings by strangers is very rare. 95% of all missing children are runaways. The other 5% is almost all kidnappings by non-custodial parents. Kidnappings by strangers is very rare. In a small town of 30,000 people, if they had one missing kid a week, which would be a lot, it would be 100 years between kidnappings by strangers. We know about kidnappings when they happen, because it makes all the papers. Nevertheless, most parent would rather be safe than sorry. We wouldn't want our child to be the statistic.



Have you ever been by a middle school when it lets out? There are cars two and three layers deep, all jockeying for position. Kids are weaving in and out of all this trying to get to their cars. You can be sure that more kids are hurt or killed by our solution to the kidnapping problem than will ever be hurt by kidnapers. So, we really do have to take a good look at how we solve problems if we want our lives to go well.

If you remember the way the emotional mind makes decisions and solves problems is by automatically telling us:

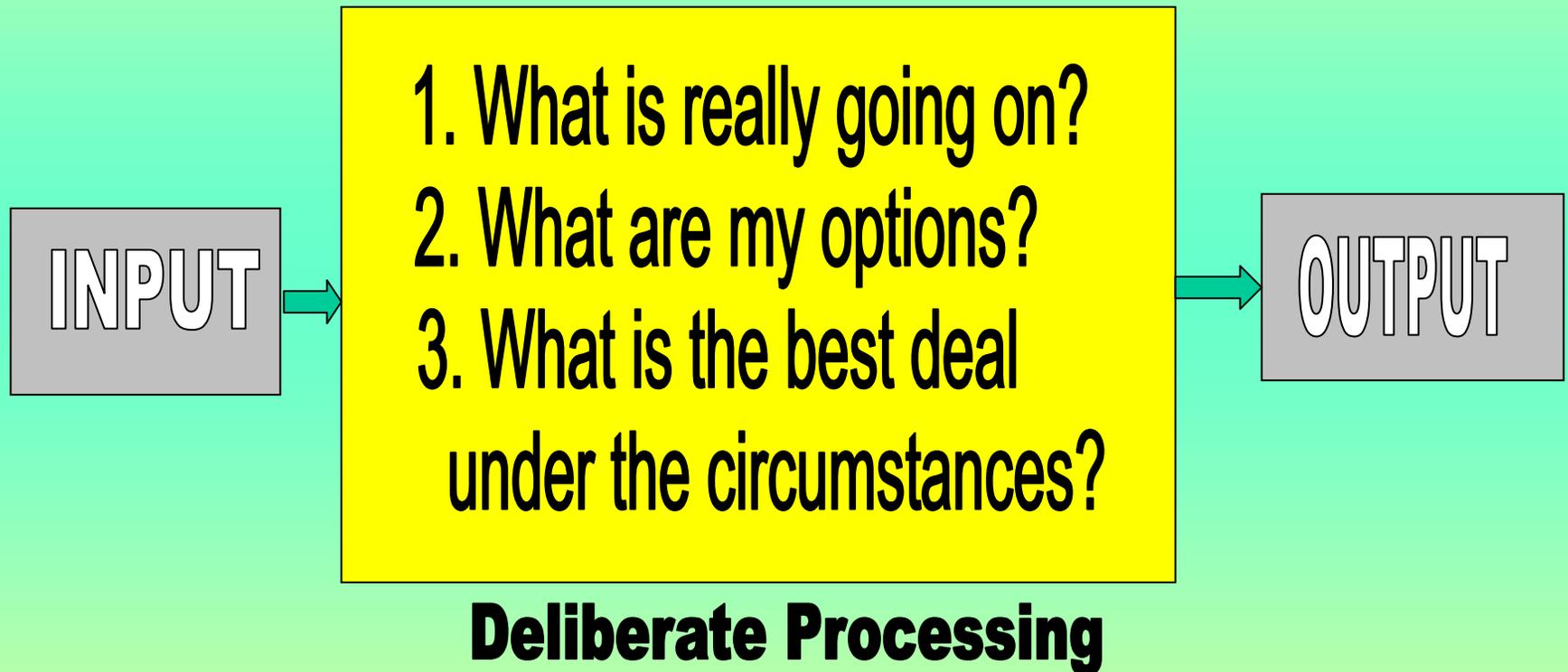
## **Emotional Mind**



There is no thinking. There are no choices – things just flow. The emotional mind solves short-term, surface problems without consideration for anything else that may be important to you..

On the other hand, your reasoning mind makes decisions by asking:

## **Reasoning Mind**



This is what we will be studying - problem-solving using your reasoning mind and how to keep your emotional mind from interfering.

**1. What is really going on?**

**2. What are my choices?**

**3. What is the best deal  
under the circumstances?**

The first step in this problem-solving skill is to ask What is really going on. You'll remember that your emotional mind automatically tells you what is going on. But it doesn't always get things right.

There are three sub-steps to What is Really Going On that will help you be more accurate: How do you know when you have a problem? How to identify the main problem? And how to separate facts from assumptions.

# **1. What is really going on?**

**A. How do you know when you have a problem.**

**B. How to identify the main problem.**

**C. How to gather the facts.**

How do you know when you have a problem? “What do you mean? I know when I have a problem. I don’t need to mess around thinking about it.” Ok, let me tell you something that evil scientists found out.

# 1. What is really going on?

**A. How do you know when you have a problem.**

B. How to identify the main problem.

C. How to gather the facts.

## A. How do you know when you have a problem.



If you take a frog, put it in a pot of water and then put the pot on the stove, the frog will boil to death. By the time the frog's little brain realizes that it is in trouble, its system is all ready paralyzed and it cannot jump out. People sometimes act like frogs. We wait until we are in hot water before we decide we need to act. In other words we wait until our problems are bad before we recognize that we need to do something. It is much easier to take care of things early before they get bad. But how do we know early on that a problem is brewing? Write the number 1 on a piece of paper and then write how you know when you have a problem.



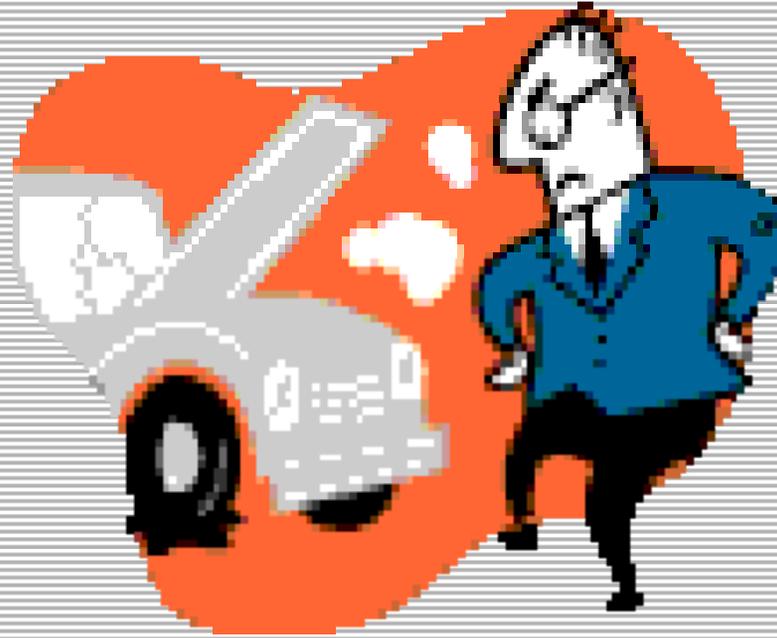
Next we need to identify the main problem. Rather than explain what this means, let me give an example.

# 1. What is really going on?

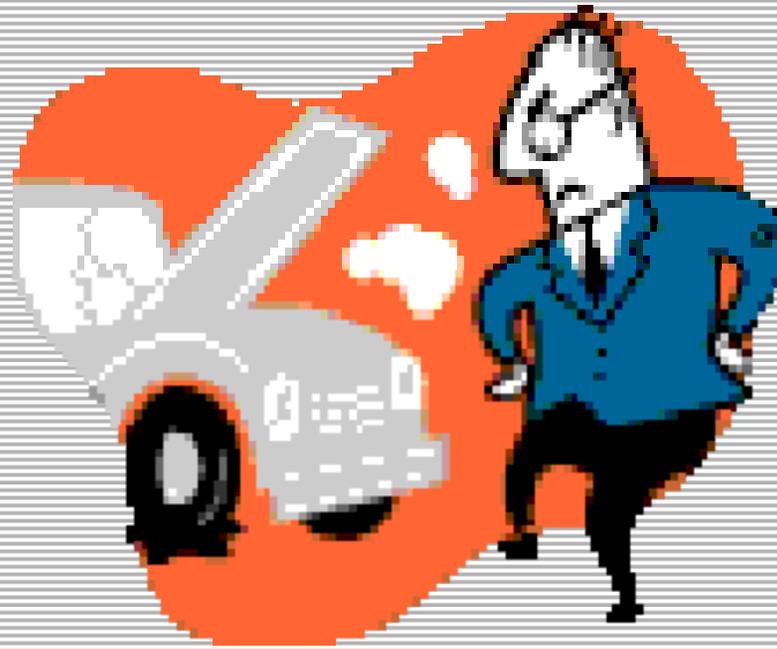
A. How do you know when you have a problem.

**B. How to identify the main problem.**

C. How to gather the facts.



Imagine you went to college and got a degree in, let's say, computer programming. You did well and had high hopes. Then you found out there were no jobs for computer programmers in your town and you ended up working at a minimum wage job. You are really bummed out. Then one day you saw an ad for a programmer at the local plant. It pays real good. You called them up and told them your qualifications. They said you were a good candidate and set you an appointment. On the way there, your car broke down. Write the number 2 on your paper and then write what the problem is.



If you thought the problem was that your car was broken, you would have focused on fixing your car. In reality, you want to fix your car so you can get to the interview on time. Fixing your car is only one option for getting to the interview on time. Your emotional mind is short-term focused and you have to deliberately look at the big picture for good problem-solving. If you fix the car, you might get to the interview on time, but be a mess. Or, you might fix it but be late. Or, you might not be able to fix it at all.



If you focus on how to get to the interview on time, you might come up with options that will accomplish your goal and do not have these drawback. So when you have a problem, ask yourself what is really import here and focus on solving that.

# 1. What is really going on?

A. How do you know when you have a problem.

B. How to identify the main problem.

**C. How to gather the facts.**

**1. Careful Observation**

**2. Asking the Right Questions**

**3. Separating Facts from Assumptions**

The next step is gathering facts. It has three sub-steps: Careful observations, asking the right questions and separating facts from assumptions.

# 1. What is really going on?

A. How do you know when you have a problem.

B. How to identify the main problem.

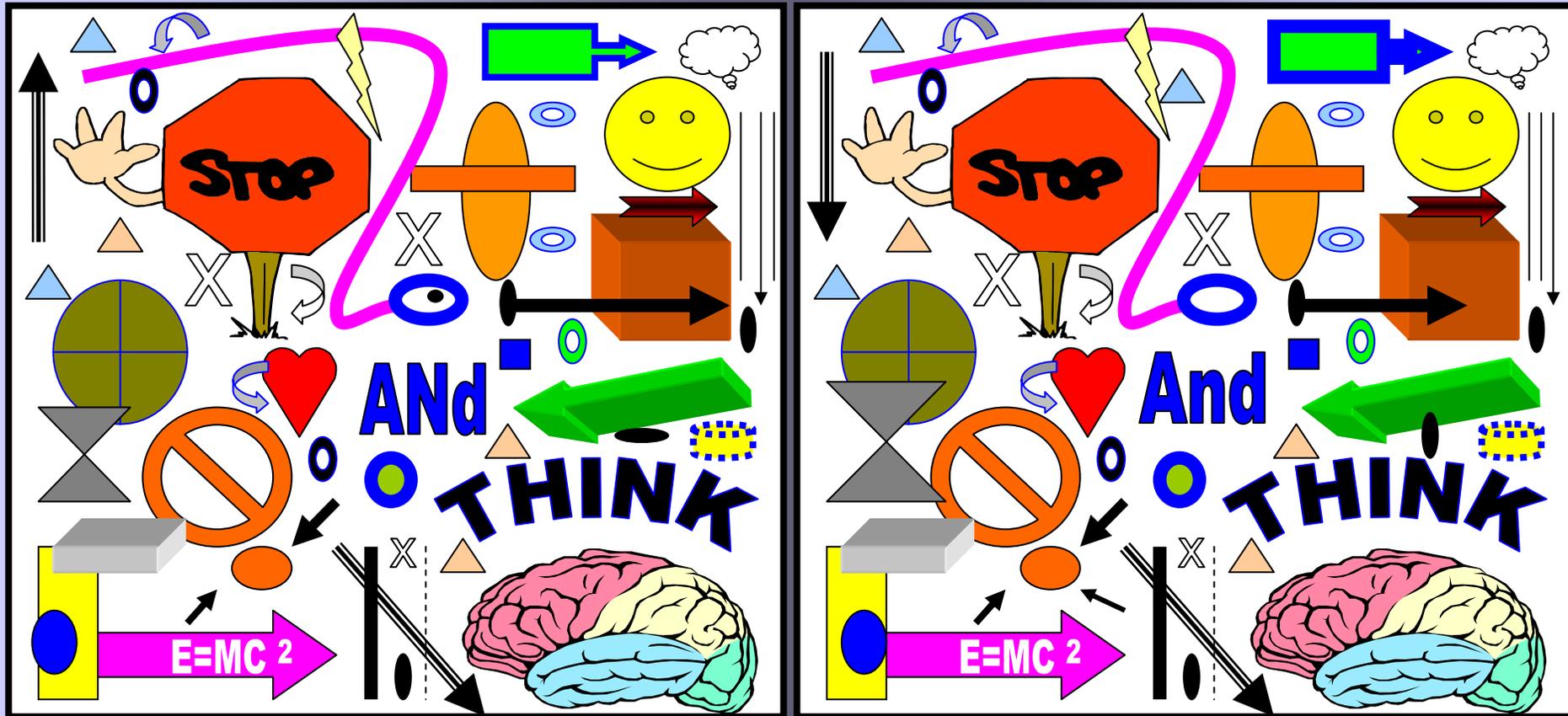
C. How to gather the facts.

## 1. Careful Observation

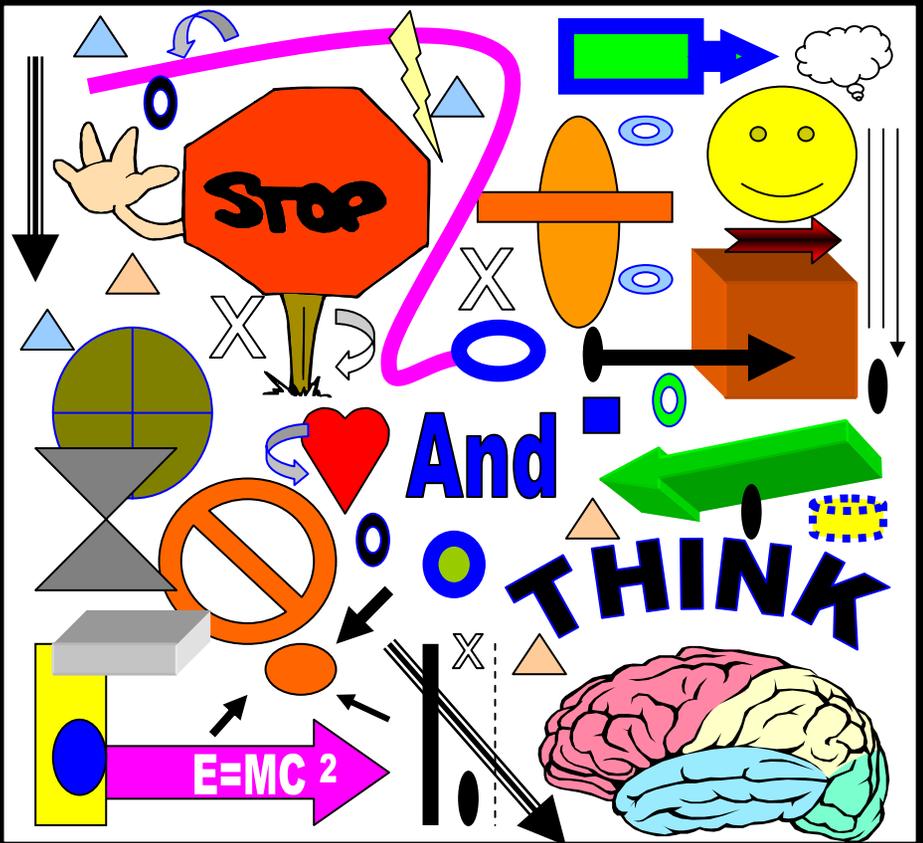
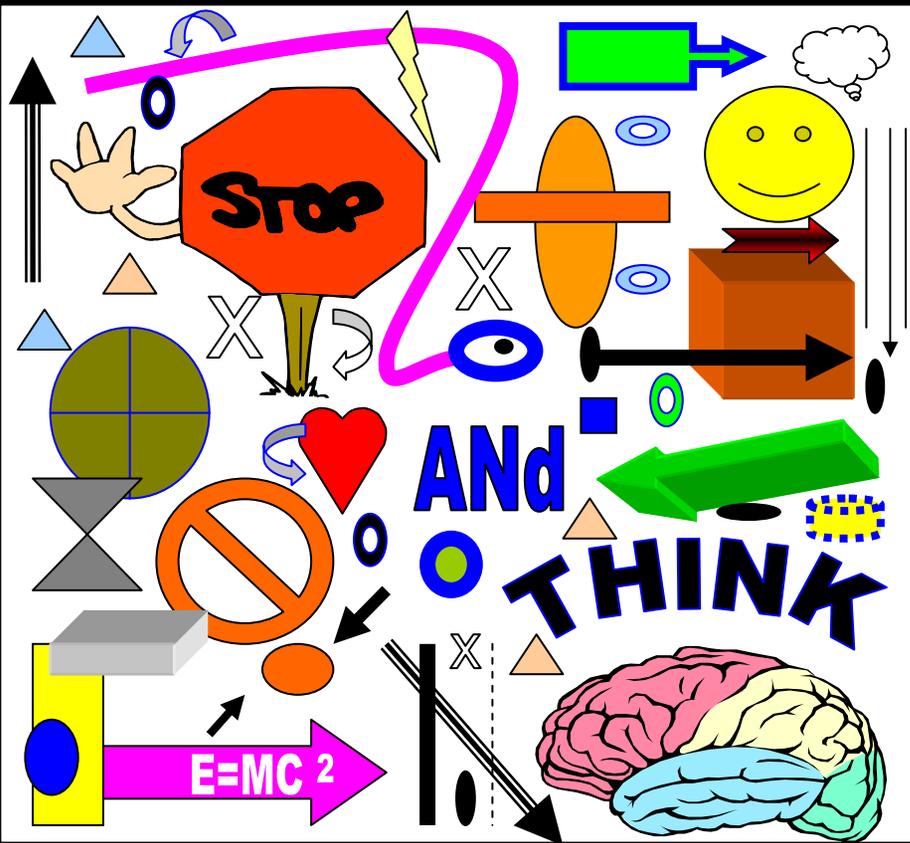
2. Asking the Right Questions

3. Separating Facts from Assumptions

In the movie, only George Clooney look at the pictures close enough to notice that no one was jumping off the train carrying the nukes. Your emotional mind sees what it thinks is there - not always what is really there. The good problem solver takes a second and a third systematic look at things to decide what is really going on.



At first glance, these two pictures are the same, but a close look shows 11 differences. What are they? Write the number 3 on your paper and then list the differences.



**Picture on left:** 1) arrow on upper left points up, 2) triangle near lightning in upper center missing, 3) arrows in lines on upper right is in the middle, 4) lasso with loop in middle has a dot in it, 5) arrow to right of lasso loop is longer, 6) the *N* in *and* is capitalized, 7) hourglass on lower left is smaller, 8) oval in block on lower left is on left side of block, 9) arrow pointing to oval in center bottom is missing, 10) oval above *think* is horizontal, 11) box with arrow, at the top center, has a thinner border.

# 1. What is really going on?

A. How do you know when you have a problem.

B. How to identify the main problem.

C. How to gather the facts.

1. Careful Observation

**2. Asking the Right Questions**

3. Separating Facts from Assumptions

Next you ask the right questions. Remember, ask the person who is most likely to have the correct information. Don't ask your plumber about a heart problem or your doctor about problems with your pipes.

Melissa's dead naked body lay on the floor. She is in a puddle of water. The window is open and the breeze is blowing the curtains about. There is broken glass everywhere. What happened to Melissa? Write the number 4 on your paper and write what questions you would ask to get the answer.

Melissa was a fish. The wind blew over her fish bowl and it broke on the floor. She suffocated..

Most of the time people make guesses about what happened rather than ask questions that gather information. That's the way the emotional mind works. It jumps from idea to idea - in a hurry. It doesn't like to go slow and systematically.

Catholic colleges and universities

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## Pennsylvania man arrested with 141 pounds of pot

The Associated Press

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Next we will do another story and ask specific fact finding questions.

Did you take journalism in school? What are the specific types of questions reporters are taught to ask? Write the number 5 on your paper and then answer the question (if you don't know – write *don't know*)

Catholic colleges and universities

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Pennsylvania man  
arrested with 141  
pounds of pot  
The Associated Press

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Write the number 6 on your paper and then write down some: who, what, where, when, why and how questions that – if answered – would tell the story of this newspaper article.

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**WHO**

**WHAT**

**WHERE**

**WHEN**

**WHY**

**HOW**

Catholic colleges and universities

## Pennsylvania man arrested with 141 pounds of pot

The Associated Press

MUSCATINE 01/05/99 A Pennsylvania man accused of transporting more than 100 pounds of marijuana will be arraigned on drug charges later this month. John Doe 44, of Hermitage, Pa., is charged with possession of a controlled substance with the intent to deliver. Doe was arrested during a routine traffic stop near Wilton Monday after the Iowa State Patrol found 141 pounds of marijuana in his car. If convicted, Doe faces up to 10 years in prison on the possession charge.

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**WHO**  
**WHAT**  
**WHERE**  
**WHEN**  
**WHY**  
**HOW**

Would answers to your questions have given you the gist of the story?

# 1. What is really going on?

A. How do you know when you have a problem.

B. How to identify the main problem.

C. How to gather the facts.

1. Careful Observation

2. Asking the Right Questions

**3. Separating Facts from Assumptions**

Next we will look into separating facts from assumptions.

Imagine you are a school teacher. You walk out onto the play ground and find two kids fighting. One is black and one is white. If you think to yourself, “why is that black kid picking on the white kid?” you would be making an assumption. A racist assumption that black people are trouble makers. On the other hand, you might think, “why is that white kid picking on the black kid?” also an assumption - that white people are racists and go out of their way to harm black people. Either way, the assumptions will color your judgment and get in the way of finding out what actually happened. Write the number 7 on your paper and then write the known facts of this story?



The only facts we have so far are that two kids are fighting in the playground – one is black and one is white. Any other ideas are assumptions.

By the way did you think in you mind that they were boys? Most people assume that.





Here is a picture. Write the number 8 on your paper and then write facts about it - no assumptions.

The man on the left has a prosthesis (an artificial arm).

He is black. Is he an African American? We don't know he could be French.

He is wearing an Army shirt. Was he in the Army? We don't know. Anyone can buy a used army shirt.

Is his name Franks? We don't know for the same reason.

The little black girl is holding his hand. What is their relationship? We don't know. He could be her father, brother or even baby sitter.

She is wearing bibs.

There is a little girl in the lower right hand corner holding a doll.

The older man has glasses on. Is he old? Old is relative.

He has what some call an overseas cap on. Was he in the military? We don't know.

He has a bow tie and a jacket on.

Are the two men saluting? This is real technical, but we don't know. To salute you have to be saluting at something and we cannot see that they are. The best we can say is that they have their hands to their forehead in a saluting position.

Are they at parade? We don't know.

There is a lawn chair behind the black girl.

The number 8 and balloons behind the older man.

Your emotional mind assumes that what it decides is fact and then doesn't continue to check things out. It often ignores evidence that is inconsistent with its assumptions. That is why it is so important to make yourself take a second or third check on what you think is really the situation. While it is impossible to gather all of the facts. Sometimes you have to work with assumptions, but at least label them as such in your mind so that you are not blinded by them and ignore the possibility that they might be wrong.

After you've got a good handle on what is really going on, you need to give yourself some options. Your emotional mind does not give you options. It automatically tells you what is going on and automatically tell you what to do about it. Your reasoning mind however, is creative. It can think of many things you can do and you can pick form them to get the best deal under the circumstances.

**1. What is really going on?**

**2. What are my choices?**

**3. What is the best deal  
under the circumstances?**

## 2. What are my choices?

A. Brainstorming

B. Short term and long term  
consequential thinking

There are two sub-steps for What are my options: brainstorming and short-term and long-term consequential thinking.

## 2. What are my choices?

**A. Brainstorming**

**B. Short term and long term  
consequential thinking**

Brain storming is a way to way to take advantage of your creativity. But let's do something before we get into that.

# Food R Us

Buffalo Wings.....order of 12.....\$4.99  
Breadsticks.....order of 5.....\$1.80  
    order of 10.....\$2.99  
    extra sauce.....\$ .85  
Garlic Bread.....order of 2.....\$ .95  
    with cheese.....\$1.20  
    order of 4.....\$1.60  
    with cheese.....\$2.40  
Salad Bar.....with a meal.....\$2.80  
    as a meal.....\$3.45  
Soft Drinks.....glass.....\$ .99  
    pitcher.....\$2.90  
Beer.....glass.....\$1.30  
    pitcher.....\$4.90  
Coffee/Tea.....glass.....\$ .60

Pizza.....1 topping.....small.....\$6.85  
    medium.....\$9.95  
    large.....\$12.15  
additional toppings:  
    small...\$ .90 each  
    medium..\$1.10 each  
    large...\$1.35 each  
Toppings: Pepperoni Sausage Hamburger Ham  
    Mushrooms Onions Olives Green Peppers  
Spaghetti.....\$3.85  
    with meat sauce \$4.50  
Lasagna.....\$4.75

Are you hungry? Following is a menu.  
Figure out what you want to eat. Write the  
number 9 on your paper and then place your  
order.

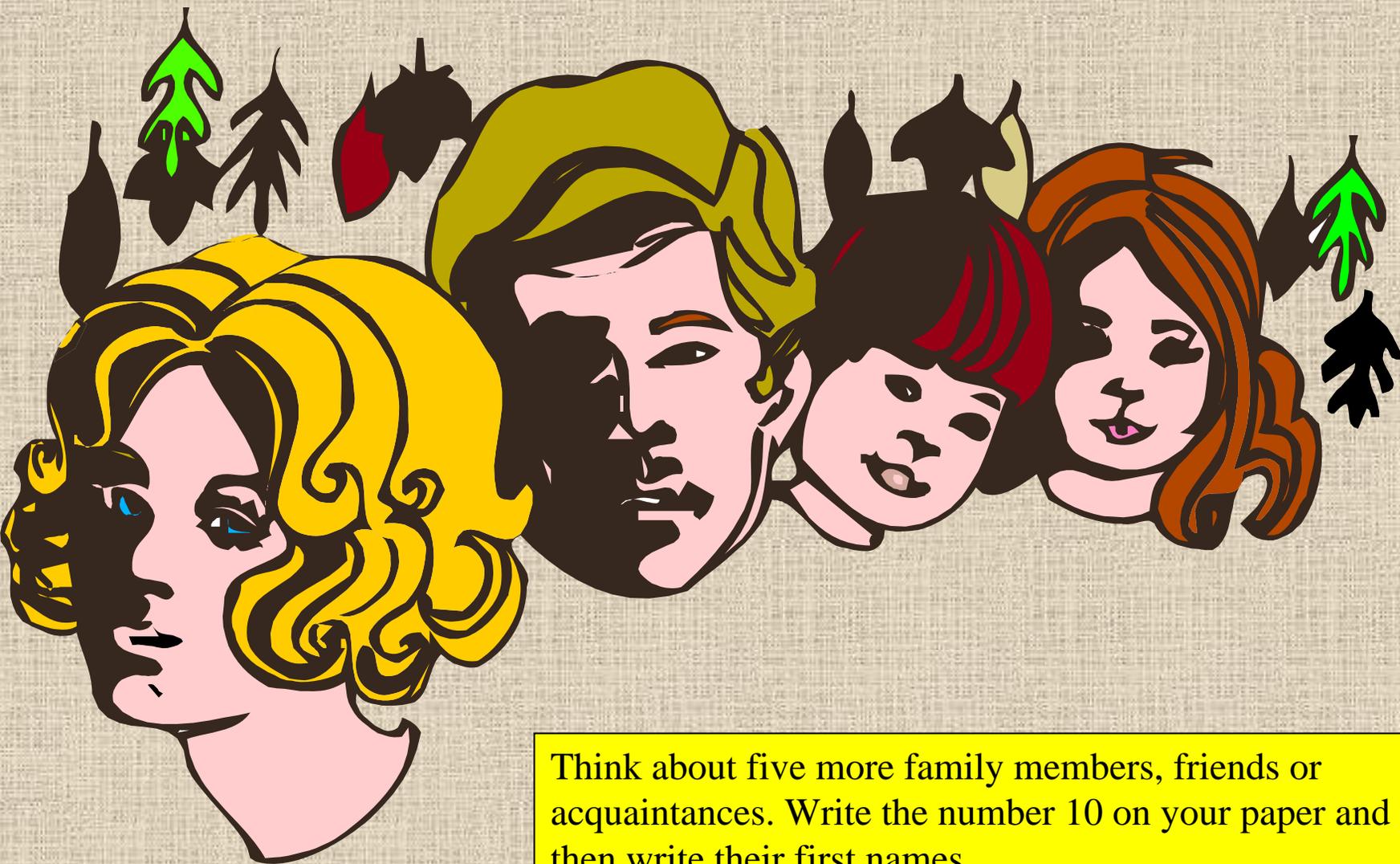
Most people study the menu, look at all of the choices and then order. Surprisingly, however, many people tackle problems by thinking of possible solutions, evaluating each solution as they came up with them and then stopping once they come up with an idea that seems good.

If you did this, it would be like reading the menu and stopping at Buffalo Wings because you like Buffalo Wings, then later kicking yourself when you found out that you could have had pepperoni pizza instead. And you love pepperoni pizza more than anything.

If you are trying to come up with ideas, just come up with ideas. Do not evaluate them until you cannot come up with any more. Stopping to evaluate as you go disrupts creativity and tempts you to stop before you have explored the options thoroughly. You can evaluate your ideas later, but at first just brainstorm.



There is one more thing you should know about brainstorming before you try it. Think of the names of five family members, friends or acquaintances.



Think about five more family members, friends or acquaintances. Write the number 10 on your paper and then write their first names.



Now write five more.

And now write five more.



After you came up with the first few names, you probably thought you were out of names. However, if you kept at it, you came up with more. You tapped into your creativity. Do not give up when you first run out of ideas while brainstorming. Keep at it, even if it seems silly. New and creative ideas are just waiting to pop out, if you stick with it.



Now, think back to the job interview and broken car problem. Brainstorm "How can I make it to the interview on time?" Remember, just come up with ideas. Do not stop to think if they are good or bad. Write the number 11 on your paper and then write them down, even if they seem silly.

**fix the car**

**take a cab**

**hitch hike**

**call a friend**

**call an enemy**

**run**

**walk**

**steal a bike**

**steal a car**

**hop**

**skip**

**jump**

**use a pogo stick**

Here is a list some  
brainstormers came up  
with.

**take a plane**

**take a bus**

**take a jet**

**ask somebody to carry you**

**call 911**

**call the interviewer and tell him you will be late**

**call a tow truck**

**ask people on the street for help**

**stand on the corner and hope the interviewer walks by**

**take the subway**

**take a train**

**take a boat**

**fax the interviewer**

**e-mail the interviewer**

**have Scotty beam you there**

**borrow a horse**

**steal a horse**

**buy a horse**

**buy a car**

**buy a bike**

**pray**

**make an animal sacrifice**

**call your minister**

**call your mom**

**call your dad**

**call your brother**

**call your sister**

**call your wife**

**call your ex-wife**

**call a doctor**

**wish yourself there**

**ask a cop for help**

**call your mechanic**

**call AAA**

**call AA**

**call an old drinking friend**

**call one of your coworkers**

Many of these are just plain stupid. But some of them are good. We would have missed the good ones if we had just stopped with “fix the car.”

After you’ve got your list – cross off the dumb ones.

## 2. What are my choices?

A. Brainstorming

**B. Short term and long term consequential thinking**

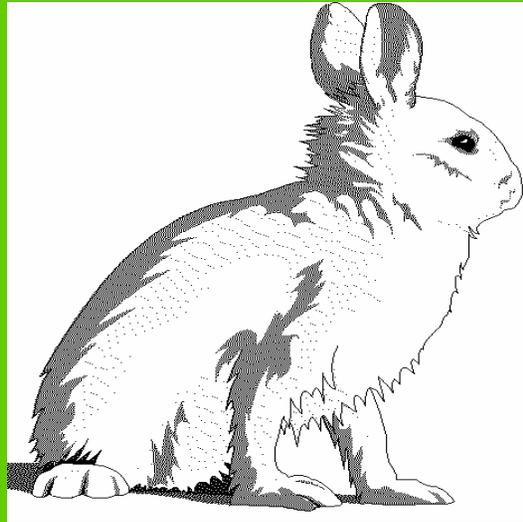
Now were ready to do some long term-short term consequential thinking.

While some ideas might solve the problem in the short term, they can cause problems over time.

For example, you might have gotten to the interview on time if you had stolen a car. But what good would all of that be, if you were shortly thereafter sent to prison?

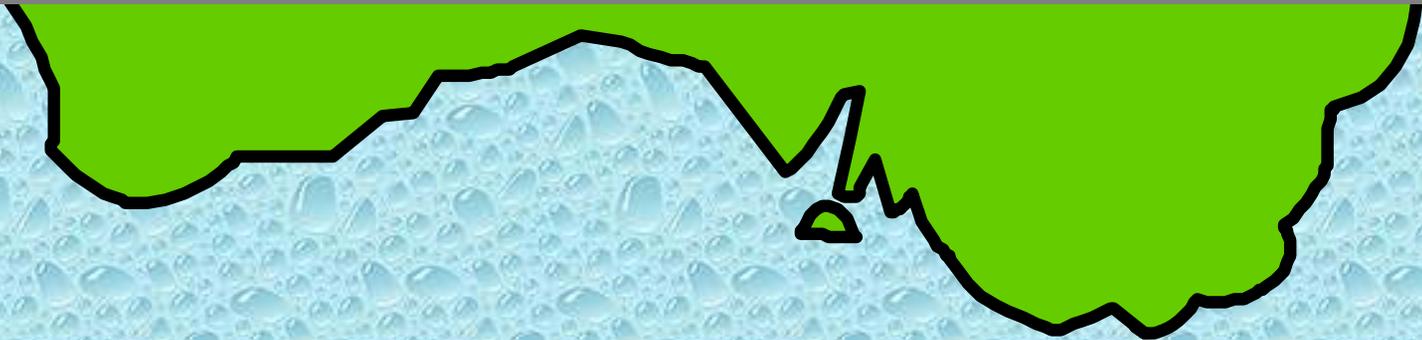


A good real life example is what happened to Australia. In the late 1600's the British colonized Australia. They set up huge plantations and were getting rich. But the English gentlemen were bored,. Back home they liked to fox hunt and shooting kangaroos didn't seem cricket. They brought over some rabbits for hunting and food. They solved their problem in the short run.





Unfortunately, there were no natural predatory enemies for rabbits in Australia, so they breed and breed until their numbers nearly destroyed the economy. In the long run, their solution was disastrous.. Today's solutions should not become tomorrow's problems. And they won't be, if we stop and think of the consequences before we decide what to do.



1. What is really going on?

2. What are my choices?

**3. What is the best deal  
under the circumstances?**

The last step is What is the best deal under the circumstances.

Most people think they know what they want and often they do. However, approaching this question carefully makes sure that you do not skip anything before you decide what you want to do. You can do this with two thinking skills:

### **3. What is the best deal?**

**A. Considering Other People**

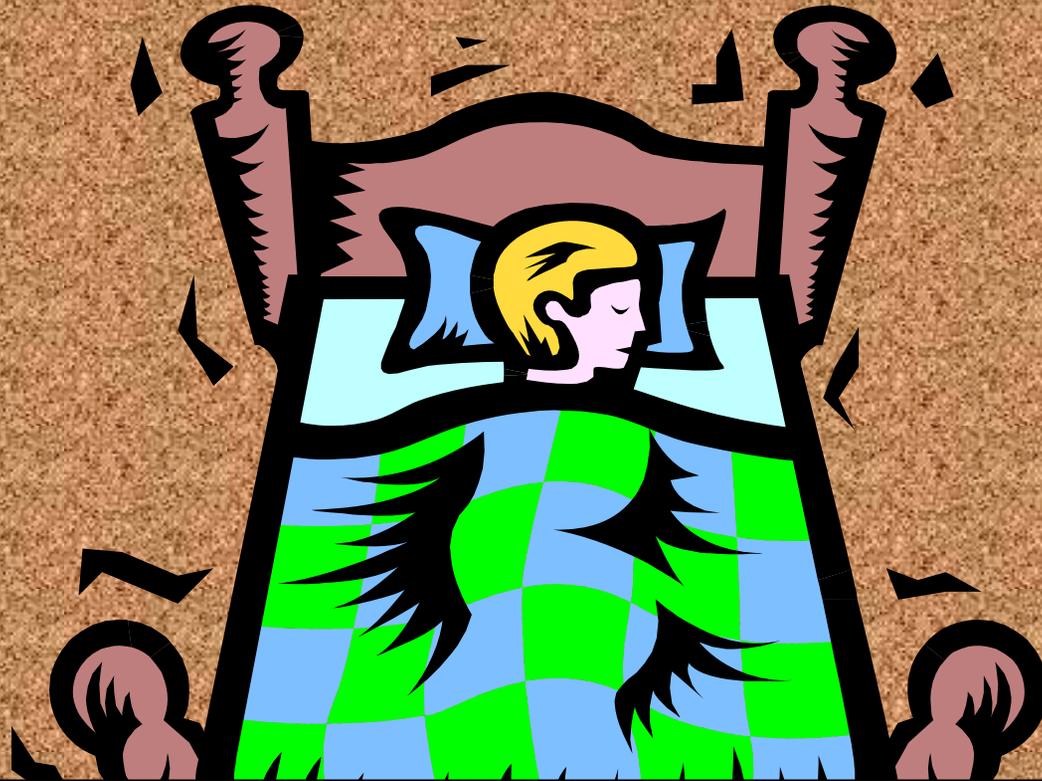
**B. Pluses & Minuses**

# 3. What is the best deal?

## A. Considering Other People

## B. Pluses & Minuses

Most of the problems you face involve other people. You might think a good plan would make other people's views unimportant. After all, a good plan is a good plan. However, people think, feel and want differently than each other and if you want to get other people to cooperate, on this and other problems, you have to add that to your plan.



In the extreme, a bad solution might create enemies that will sabotage you now and even later on. For example, if your car broke down on the way to an interview, one possible solution is to call your brother. He could come and give you a ride. That would certainly solve your problem. However, it is 1 PM and he works nights. This is the middle of his sleeping time. He might help, but he might also feel he was being pestered. Maybe another solution would just as well and not create new problems..

# 3. What is the best deal?

## A. Considering Other People

## **B. Pluses & Minuses**

The last thinking tool is Pluses and Minuses. It is easy to get stuck on a solution that you like and only think of why it is good. It is just as easy to reject an idea that you do not like and only look at the negative side. Doing Pluses and Minuses forces you to intentionally look at both the good side and the bad side. Pluses and Minuses keeps you from deciding the value of an idea based on your initial feelings rather than on the value of the idea.

After you looked at both sides of the issue, your original feelings might be the same. Then again, they might have changed. You would never have known which position was best if you had just stopped thinking after you initially thoughts.

Let's try this with marijuana. Write the number 12 on your paper and then write 5 reasons marijuana should be legalized and 5 reasons why it should not. The idea is to think about both sides of the issue (whether you agree with the other side or not)

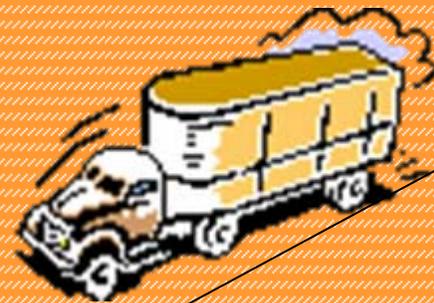




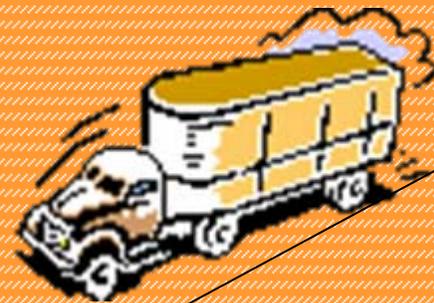
Now it is a simple step to look over the choices and pick the one that has the most to gain at the least costs.

You might be thinking that positive problem solving is OK, but "who has time to go through all of this?" Or maybe you are thinking, "this is just too much work."

If a truck is zooming at you 70 miles per hour, you don't have time to "Hey what is really going on here?" You do not have time to do all of this and it is too much work. You are better off relying on your gut reactions under these circumstances. But how many times a day do you have to make split second decisions concerning important matters? How much time do you have to make most of the decisions you face daily? Few of your problems really require split second decisions. Most of the time we have, minutes, hours and days to make decisions.



Write the number 13 on your paper and write about something that happened in your life that would have turned out better if you had done just a little of this problem solving first – before you acted.



# 1. What is really going on?

A. How do you know when you have a problem.

B. How to identify the main problem.

C. How to gather the facts.

1. Careful Observation

2. Asking the Right Questions

3. Separating Facts from Assumptions

# 2. What are my choices?

A. Brainstorming

B. Short term and long term consequential thinking

# 3. What is the best deal under the circumstances?

A. Considering Other People

B. Pluses & Minuses

Remember –  
Don't burn  
your bridges!

