

# The Knowledge Compass



## Question Toolkit

Your guide to effective question development

Leonie McIlvenny  
(Studyvibe and Research Safari )

## Introduction

*The art and science of asking questions is the source of all knowledge.*

**Thomas Berger**



Always start with a question.....

Developing **powerful questions** allows you to expand your thinking about the idea or topic you wish to explore. Used in conjunction with a mindmap or graphic organiser it can also help guide where the research will take you.



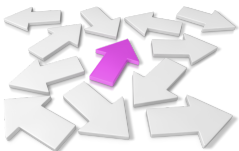



You may have been given a question to answer for your research task OR if you have just been given a topic you will need to ASK SOME QUESTIONS to help you think more broadly about your topic. Use the ideas and question frameworks in this guide to help you ask those powerful questions.

This booklet is designed to be used in conjunction with the websites **Studyvibe**, **The Knowledge Compass** and **Research Safari**.

**Leonie McIlvenny (Director, Studyvibe)**

# Research Process Questions

# The Research Process

<p><u>Defining the Task</u></p> <p>What is the problem I have to solve?</p>		<p>What are the <b>main ideas</b> or key concepts?            What do I already know about the topic?            What information do I need to find out?            What <b>questions</b> will help guide my research?            What is the best <b>questioning</b> framework to use?            What <b>KEY WORDS</b> will guide my research?</p>
<p><u>Locating your resources</u></p> <p>Where can I find the information I need?</p>		<p>Which sources of information are best for my needs?            Which sources do I already have?            Where can I find those resources I don't have?            How can I tell what are <b>reliable sources</b> of information?            What are the best <b>search terms (Key Words)</b> for me to use in my searches?            What are the best <b>databases / search engines</b> for me to use in my search?</p>
<p><u>Selecting</u></p> <p>How will I select the information I need?</p>		<p>What structures in the resource can I use to help me find what I am looking for? (Table of Contents, Menu)            What <b>reading techniques</b> will I use to help me select my information? (Skimming, Scanning, SQ3R)            How do I know if this is an <b>authoritative source of information</b>?            How will I know whether this information is recent, relevant, accurate and unbiased?            How will I <b>record the information</b> I find?            How will I cite (credit) my sources? What bibliography format will I use?</p>
<p><u>Processing and Organising</u></p> <p>How can I organise this information so that I can understand it better?</p>		<p>How will I <b>organise</b> the information I find?            What is the best way for me to <b>take notes</b>?            Will it help me to use a <b>graphic organiser</b> or <b>mindmap</b>?            How will I <b>combine information</b> from more than one source?            How will I check that I have all the information I need to solve my <b>original</b> problem or answer my research question?</p>
<p><u>Presenting</u></p> <p>How can I best share this information with other people?</p>		<p>Who will be my <b>audience</b>?            How will I <b>present my information</b>?            What is the <b>purpose of my presentation</b>?            What is the best <b>format</b> to suit my needs?            Do I need to learn any skills for my chosen <b>presentation format</b>?            How will I demonstrate my understanding?</p>
<p><u>Evaluating</u></p> <p>What have I learned as a result of this process?</p>		<p>Did I answer my <b>focus question(s)</b>?            Did I <b>manage my time</b> well?            How will I be <b>assessed</b>?            What did I do well?            What do I need to <b>improve</b>?            How will I <b>apply this knowledge</b>?</p>

# Defining your research task

Answer the questions here to become clear about where you are heading with your research task.

## Why am I doing this task?

Suggestions: Major assessment? Portfolio item? Group presentation? Public presentation? Published online? Collaborative online community?

## What do I want to produce at the end of the task?

Suggestions: Report? Debate? Blog? Multimedia presentation (ppt etc)? Digital Story? Poster? News report? Movie? Animation? Oral presentation? Brochure? Model? Diorama, Board game? E-book? Comic Strip? Play?

## What do I really want to find out?

Deep learning? Broad but superficial look at the topic? Both sides of the story (balanced viewpoint)? Factual or emotive look at a topic? Persuasive argument for one side of a topic? Key points only?

## What am I going to be assessed on?

Assessment rubric provided? Checklist provided? The quality of the product? Demonstration of knowledge of content and concepts? The process?

## What difference will this learning make?

How will doing this assignment inform my future learning? Will I be able to build on this knowledge for future tasks? What skills will I be learning that I can use in the future?

## What is the time frame in which I must complete this task?

When is the assignment due? Do I have other assignments due at the same time? How should I plan my time for early completion of the task?

## Other questions

## Developing your focus questions

The type of question you ask will determine the kind of information you look for and find. If you ask a CLOSED question (one that only needs a YES or NO answer you are limiting the information you find. Try to ask OPEN-ENDED questions. Use the *Five Ws and H* to develop your questions.

<b>Question starters</b>	<b>Write your questions here</b>
<b>Who?</b>	
<b>What?</b>	
<b>Where?</b>	
<b>When?</b>	
<b>Why?</b>	
<b>How?</b>	

## Evaluating your research task

Answer the questions here to identify the strengths and weaknesses of your research task.

Did you complete the task in a timely manner? Did you pace yourself throughout the process or were you rushing at the end?

Did you answer your original question or complete the task according to the assessment criteria?

How easy was it to find the information that you needed? What was the most useful resource for the purpose of your task?

Did you present a clear, well edited, quality product for assessment?

Did you have a clear understanding about what you were researching? Could you have represented this information in another format?

What do you want to congratulate yourself on for this task?

What was one thing that you think you can improve for your next assignment?

How confident were you in completing this assignment? Rate yourself from (0-10)

# Question Guides



# Information Process Question Guide

Use the Information Process to guide your research then these questions will help you decide on your 'course of action'

## Defining

- What do I need to find out about this topic?
- What do I already know about this topic?
- What is my focus question asking me to do?
- What product do I need to create?
- Who is my target audience?
- How long do I have for this task?
- How will I be assessed?

## Locating

- What type of information will I need?
- What is the best source for this information?
- Which search engines and databases will I use?
- What key words will I use when doing my search?
- What bibliography format will I use?

## Selecting

- How will I select the information I need for this task?
- What reading techniques will I use?
- What cues in the information help to find what I am looking for?
- What notemaking format will I use to record my information?
- How do I know if this is an authoritative source of information?

## Organising

- How should I best organise my information?
- Would a graphic organiser help me to organise my information? Which one?
- Should I use **Key Word** headings and paragraphs?
- How should I best order / sequence the information?
- Does the presentation format help me organise my information?
- Have I answered all of my focus questions?
- Have I collected the relevant information for my reference list?

## Presenting

- Can I choose the presentation format for my task?
- If so, what is the best presentation format for my task?
- Does the presentation format suit the audience?
- Have I included all relevant information in my presentation?
- Is my presentation dynamic and interesting?
- Is there a WOW factor to my presentation?
- Does my presentation clearly show my understanding about the topic?

## Evaluating

- Did I answer my focus questions and address the task?
- Did I use the assessment rubric or marking key to help me to complete the task?
- What did I do well?
- What do I need to improve for my next assignment?
- Has my understanding of the topic increased as a result of my research?
- How have I benefited from this learning experience?

# Socratic Questions

## Clarifying Questions

- What do you mean by.....?
- What is your main point?
- How does \_\_\_ relate to \_\_\_\_?
- Could you put that another way?
- What do you think is the main issue?
- How does this relate to our discussion/problem/issue?
- Can you summarise what you have read or heard?
- Can you give an example?
- Could you explain that further?

## Assumption Questions

- What is the assumption you are making?
- What assumption is being made here?
- Why have you made that assumption?
- What could we assume instead?
- How do you justify the assumption you have made?
- What evidence does the author provided to justify his / her assumption(s)?
- Can you give the reasons why you have made that assumption?

## Reasoning Questions

- What would be an example of this?
- Why do you say that?
- Why do you think that is right?
- What led you to that belief?
- How does that apply to this case?
- What would convince you otherwise?
- How could we go about finding out if that is true?
- By what reasoning did you come to that conclusion?
- Who is in a position to know if that is the case?
- Are those reasons adequate?
- Could you explain the reasons for your statement?

## **Perspective / Viewpoint Questions**

- What are the viewpoints being provided here?
- Does one viewpoint have a stronger argument than the other? If so in what way?
- Which viewpoint or perspective do you agree with? Why?
- What is an alternative viewpoint / perspective?
- How do the two viewpoints differ in their argument?
- What would be the opposing viewpoint?

## **Consequence / Implication Questions**

- What are the consequences / implications of this action?
- What are you implying by that?
- What can you imply from this information?
- What else could also happen as a result of this action / decision? Why?

## **Questions about Questions**

- Is / are the question(s) being asked answerable within the parameters of the task?
- Have you formulated appropriate questions to respond to the task / problem?
- Do your questions cover all aspects of the topic (to provide a balanced answer)?
- Are these questions open or closed?
- Are these questions convergent or divergent?
- Is this question easy or hard to answer? Why?

# The WHO? WHAT? WHERE? WHEN? And WHY?

Questions you need to ask when you are doing a research assignment.

## WHO?

- Who is this work / assignment for?
- Who is the most knowledgeable person I can get help from for this assignment?
- Who will I be working with?
- Who can I ask for help if I need it?
- Who will be marking this assignment?
- Who will I share this information with?
- Who needs to know about this information?

## WHAT?

- What do I already know about this topic / subject?
- What do I want / need to find out?
- What skills do I need to learn to help me have success?
- What is (are) the best source(s) of information for this task?
- What format does my presentation need to be in?
- What referencing standard do I need to use?
- What are the key questions I want to find answers to?
- What notemaking format / tools will I use?
- What am I going to be assessed on?
- What assessment format is going to be used to mark my work?

## WHERE?

- Where will I get my information?
- Where can I find expert knowledge about my topic?
- Where can I get help if I need it?
- Where is the best place to store my information as I am collecting it?
- Where will I share/showcase my understanding?

## **WHEN?**

- When is this assignment due?
- When should I ask for help?
- When will I know that I have enough information to complete my task?

## **WHY?**

- Why am I doing this task?
- Why will learning about this topic be of benefit to me?
- Why do I have to learn these skills?
- Why have I chosen this presentation format?

## **HOW?**

- How will I expand my understanding about this topic?
- How will I organise my information as I collect my notes?
- How will I make sure I acknowledge all of the sources of information I use?
- How will I know if I have enough information?
- How is this work going to be assessed?
- How will I present this information to showcase my knowledge?
- How will learning this information benefit me?

# Question Frameworks

## Developing your focus questions

The type of question you ask will determine the kind of information you look for and find. If you ask a CLOSED question (one that only needs a YES or NO answer you are limiting the information you find. Try to ask OPEN-ENDED questions. Use the *Five Ws and H* to develop your questions.

<b>Question starters</b>	<b>Write your questions here</b>
<b>Who?</b>	
<b>What?</b>	
<b>Where?</b>	
<b>When?</b>	
<b>Why?</b>	
<b>How?</b>	



## Developing Higher Order Questions

You can extend your thinking by developing some higher-level questions. Use this framework to help you get started.

Topic: \_\_\_\_\_

QUESTION STARTER	+	EXAMPLE	YOUR QUESTIONS
<b>Who</b> <b>What</b> <b>When</b> <b>Where</b> <b>Why</b> <b>How</b>	<b>WILL</b>	How will global warming be reduced in the next 10 years?	
<b>Who</b> <b>What</b> <b>When</b> <b>Where</b> <b>Why</b> <b>How</b>	<b>WOULD</b>	What would be the impact of removing all coins from our monetary system?	
<b>Who</b> <b>What</b> <b>When</b> <b>Where</b> <b>Why</b> <b>How</b>	<b>CAN</b>	Where can salinity best be reversed in Western Australia?	
<b>Who</b> <b>What</b> <b>When</b> <b>Where</b> <b>Why</b> <b>How</b>	<b>MIGHT</b>	When might we see a reversal of global warming if we halve carbon emissions?	

# My KWL Chart

What is my topic?

What I already KNOW	What I WANT to find out?	What I LEARNED
<p>In this column brainstorm all of the things you know about the topic. If you are sure about the information put an <b>F</b> for <b>FACT</b> next to it. If you <b>THINK</b> it is true but you are not sure then put a <b>M</b> for <b>MAYBE</b> next to it.</p>	<p>Use one or more of the <b>Question</b> frameworks to formulate your questions? These will form the basis of your research</p>	<p>Make list here of all the <b>NEW</b> facts you found about your topic as a result of your research. Use <b>****</b> to indicate which information you found to be most interesting. Use a scale from <b>*</b> - <b>*****</b>.</p>



# The Question Matrix

What is your topic?

	<b>EVENT</b>	<b>SITUATION</b>	<b>CHOICE</b>	<b>PERSON</b>	<b>REASON</b>	<b>MEANS</b>
<b>Present</b>	What is?	Where / when is?	Which is?	Who is?	Why is?	How is?
<b>Past</b>	What did?	Where / when did?	Which did?	Who did?	Why did?	How did
<b>Possibility</b>	What can?	Where / when can?	Which can?	Who can?	Why can?	How can?
<b>Probability</b>	What would?	Where / when would?	Which would?	Who would?	Why would?	How would?
<b>Prediction</b>	What will?	Where / when will?	Which will?	Who will?	Why will?	How will?
<b>Imagination</b>	What might?	Where / when might?	Which might?	Who might?	Why might?	How might?

Write your questions in the boxes above.

# My Y Chart

What does it feel like?




What does it look like?



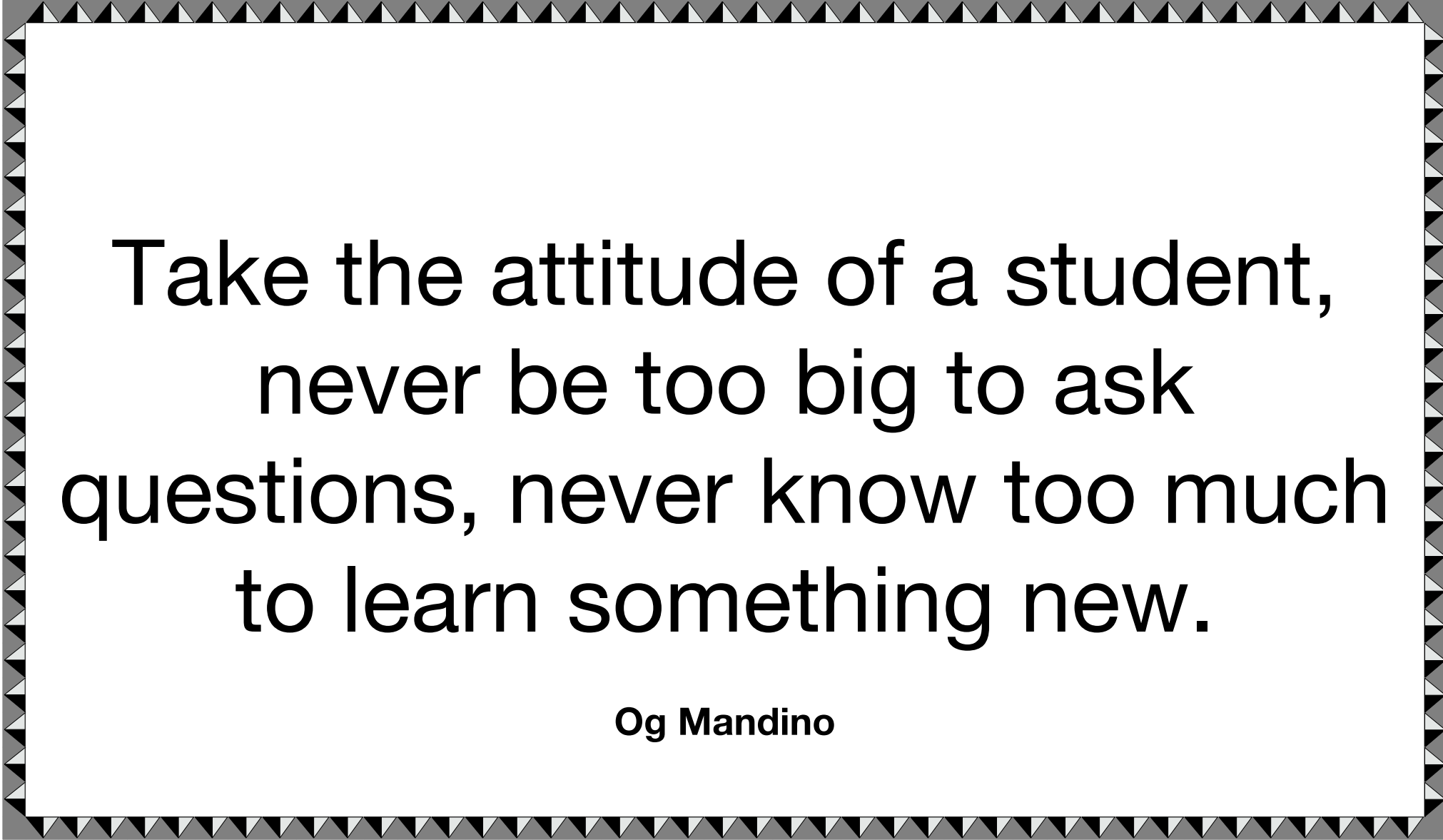
What does it sound like?

# Six Thinking Hats

<b>RED HAT</b>	<b>WHITE HAT</b>	<b>BLACK HAT</b>
 <p>How do you feel about this topic?</p>	 <p>What are the facts about this topic? What do you know or want to find out?</p>	 <p>What are the negative thoughts / disadvantages / weaknesses of this topic?</p>
<b>GREEN HAT</b>	<b>YELLOW HAT</b>	<b>BLUE HAT</b>
 <p>What new ideas have been generated? What is possible?</p>	 <p>What are the positive ideas / advantages / strengths?</p>	 <p>How has your thinking changed about this topic?</p>



# Quotes about Questions



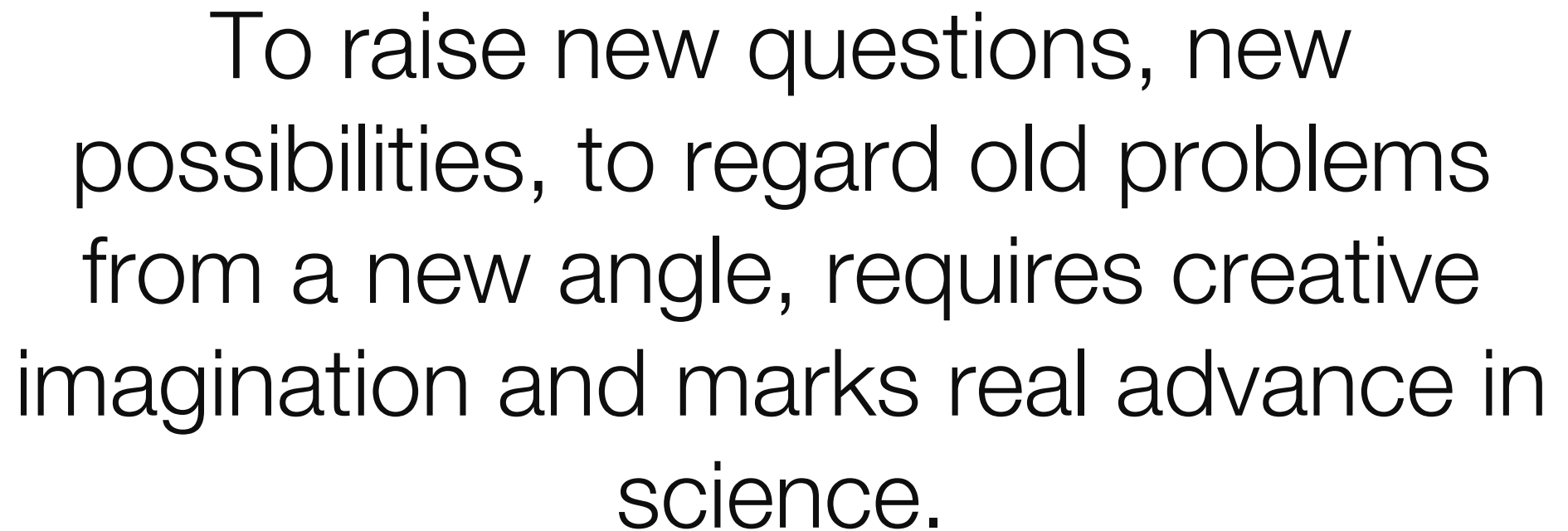
Take the attitude of a student,  
never be too big to ask  
questions, never know too much  
to learn something new.

Og Mandino

*Don't Make Assumptions.* Find the courage to ask questions and to express what you really want. Communicate with others as clearly as you can to avoid misunderstandings, sadness and drama. With just this one agreement, you can completely transform your life.

**Miguel Angel Ruiz**





To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science.

**Albert Einstein**



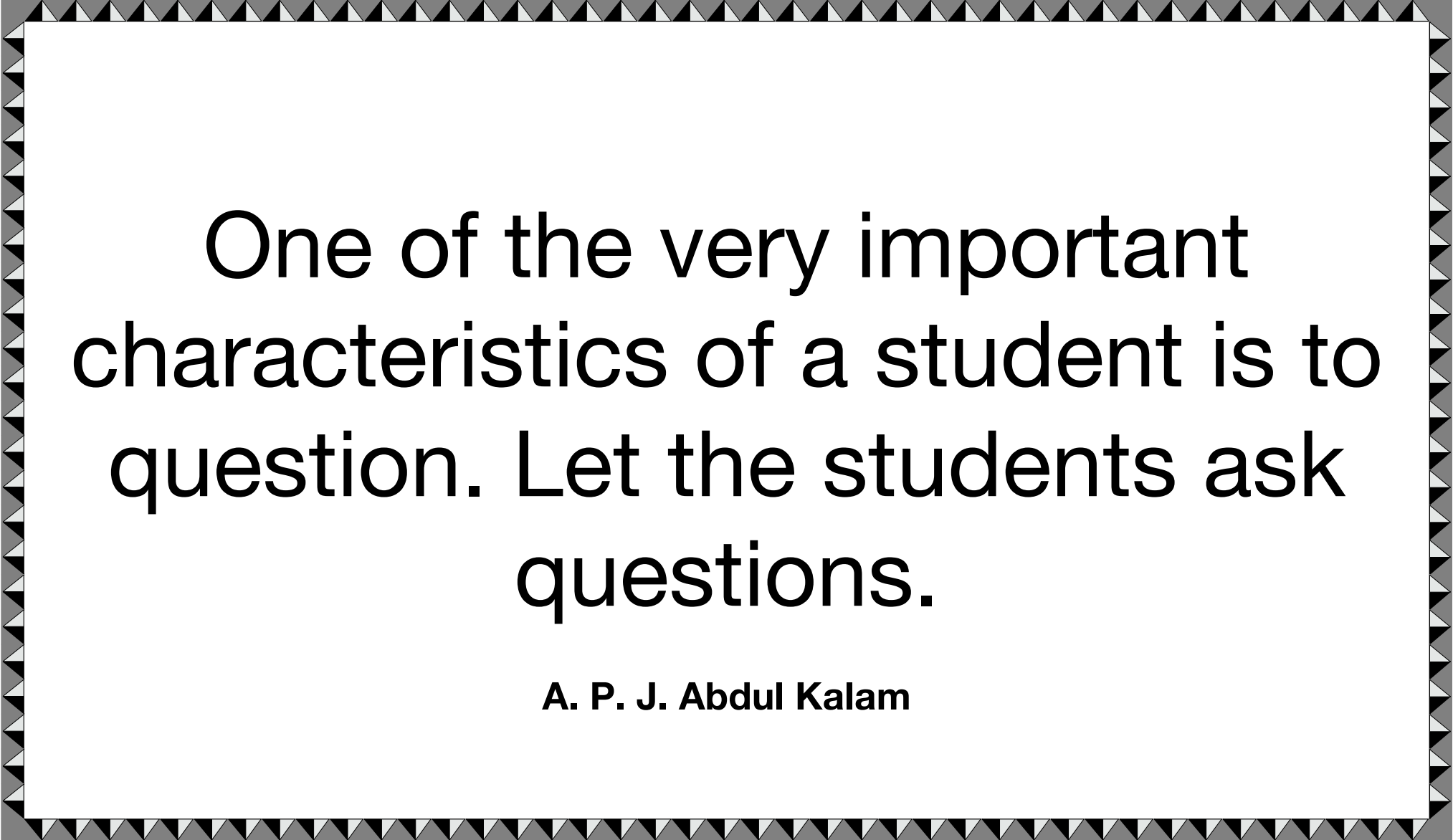
Who questions much, shall learn  
much, and retain much.

**Francis Bacon**



Judge a man by his questions  
rather than his answers.

**Voltaire**



One of the very important characteristics of a student is to question. Let the students ask questions.

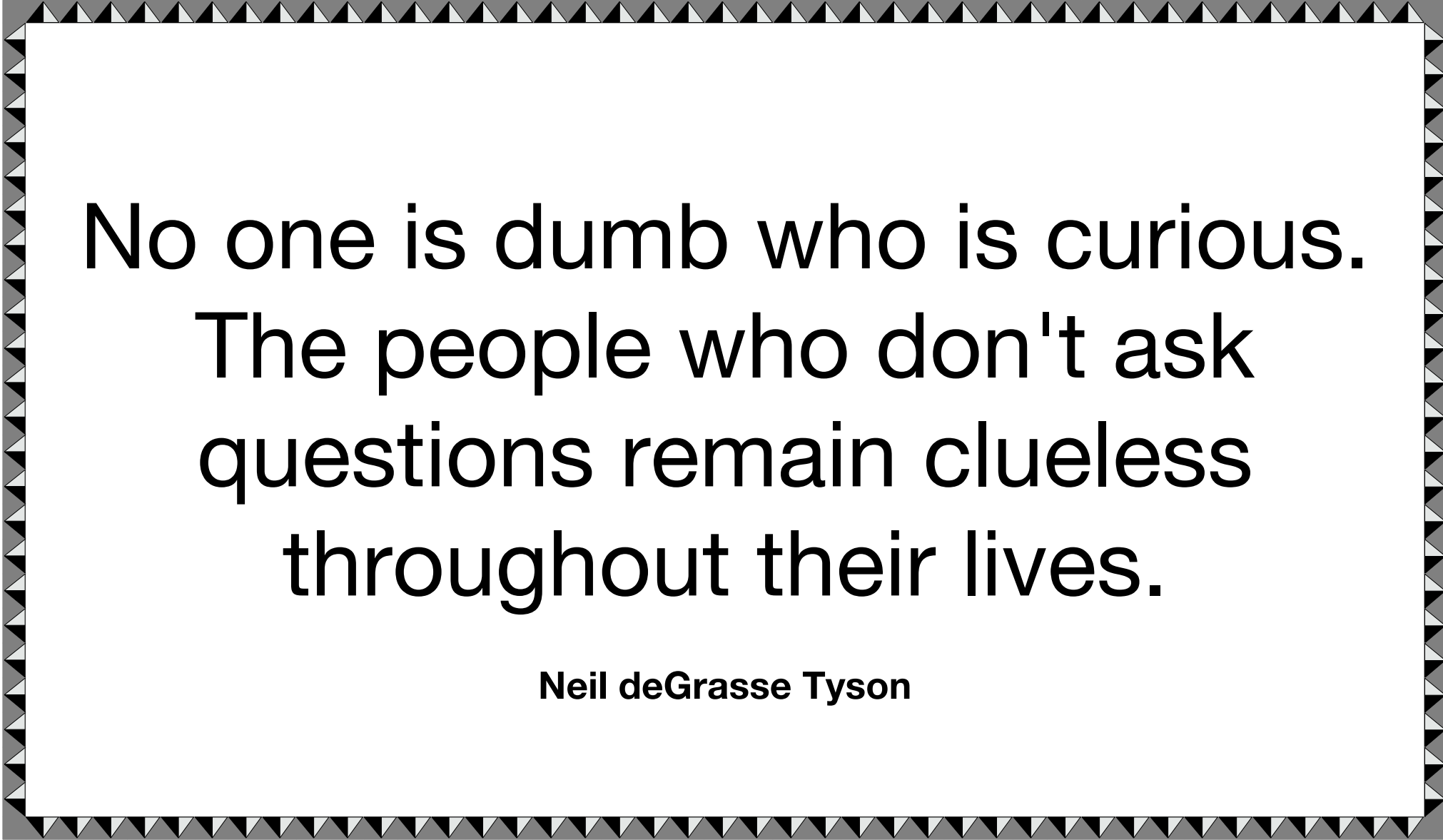
**A. P. J. Abdul Kalam**

Before you start some work, always ask yourself three questions:

- *Why am I doing it?*
- *What might the results be?*
- *Will I be successful?*

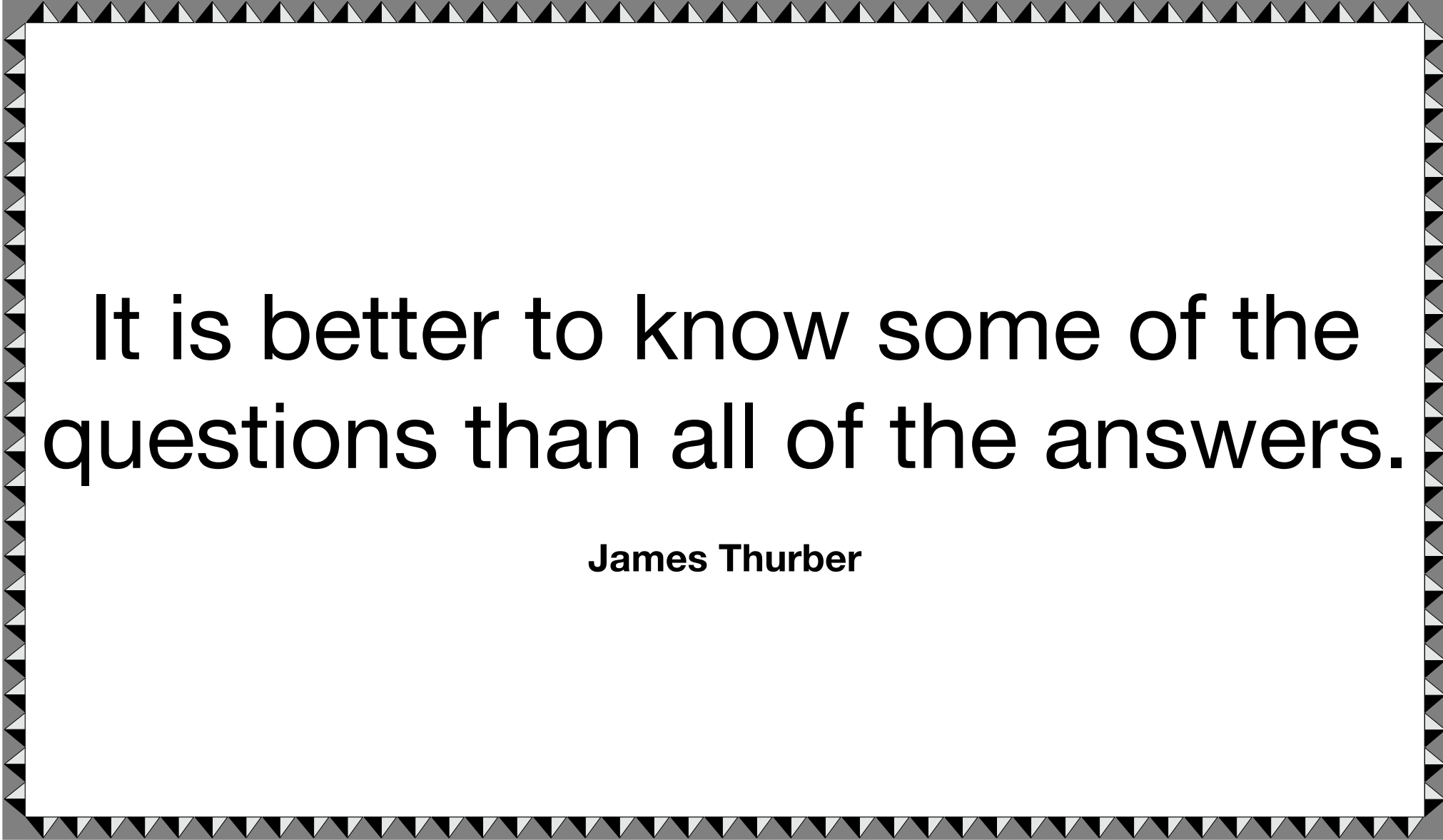
Only when you think deeply and find satisfactory answers to these questions, go ahead.

Chanakya



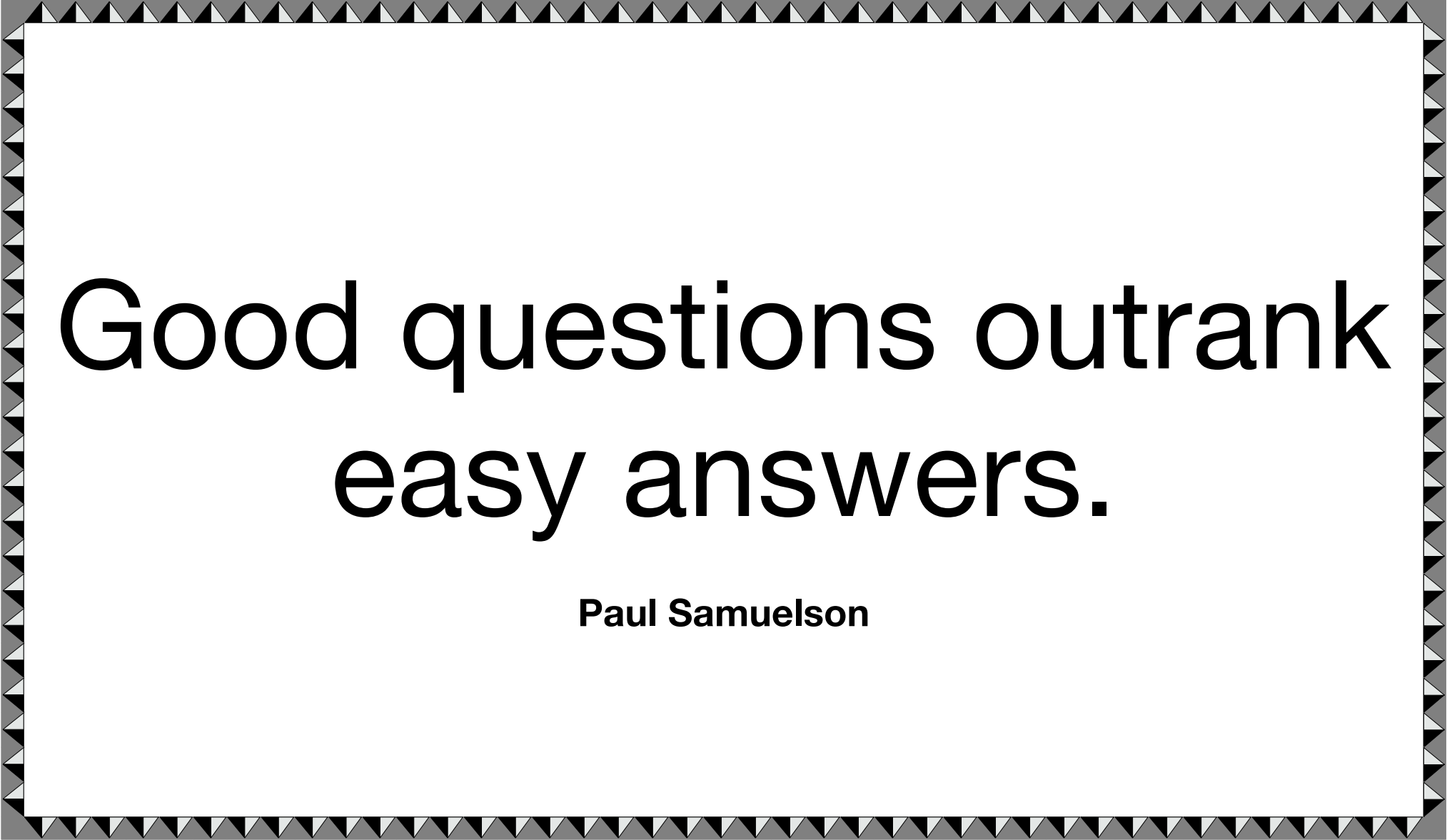
No one is dumb who is curious.  
The people who don't ask  
questions remain clueless  
throughout their lives.

**Neil deGrasse Tyson**



It is better to know some of the  
questions than all of the answers.

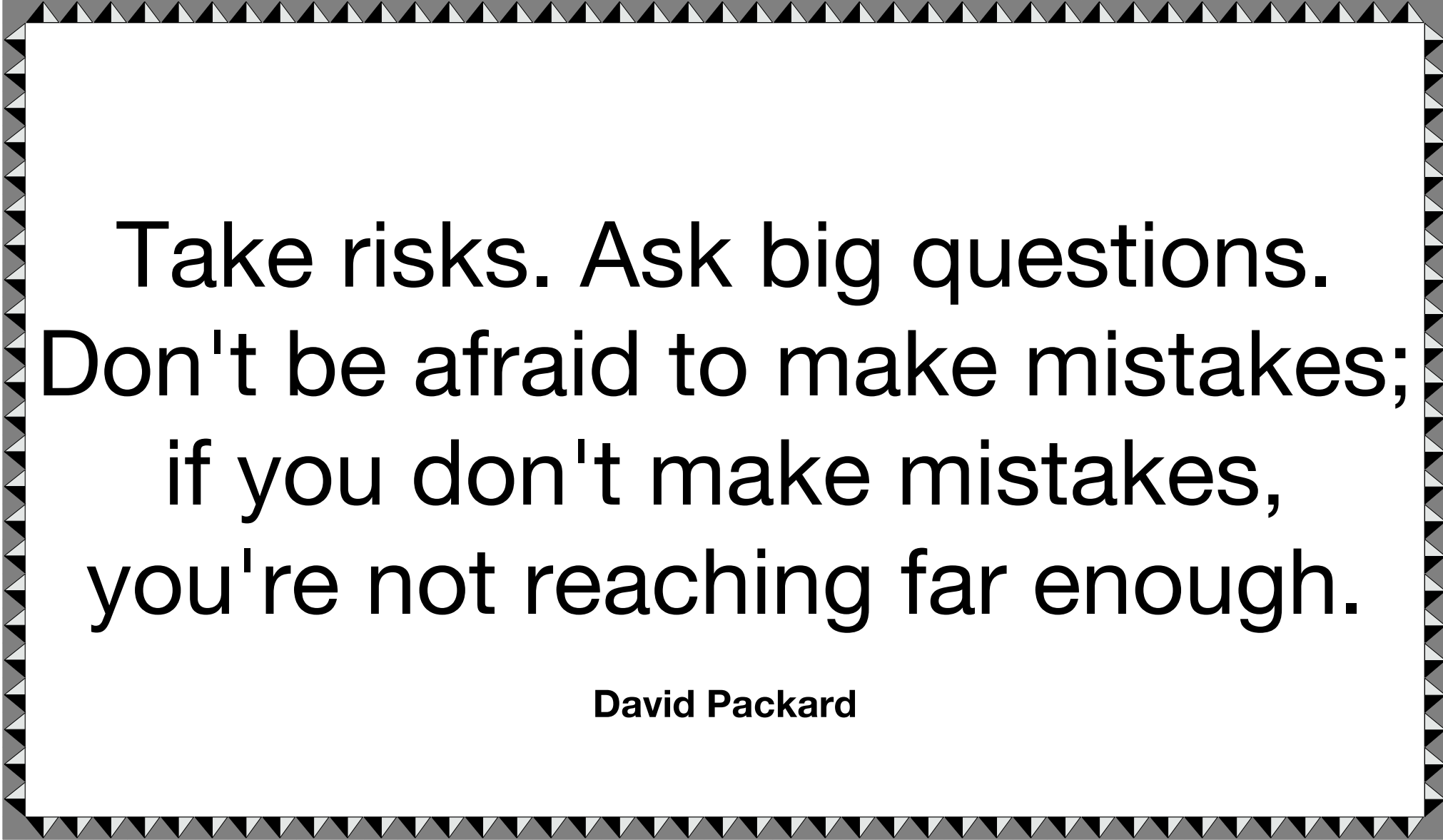
**James Thurber**



Good questions outrank  
easy answers.

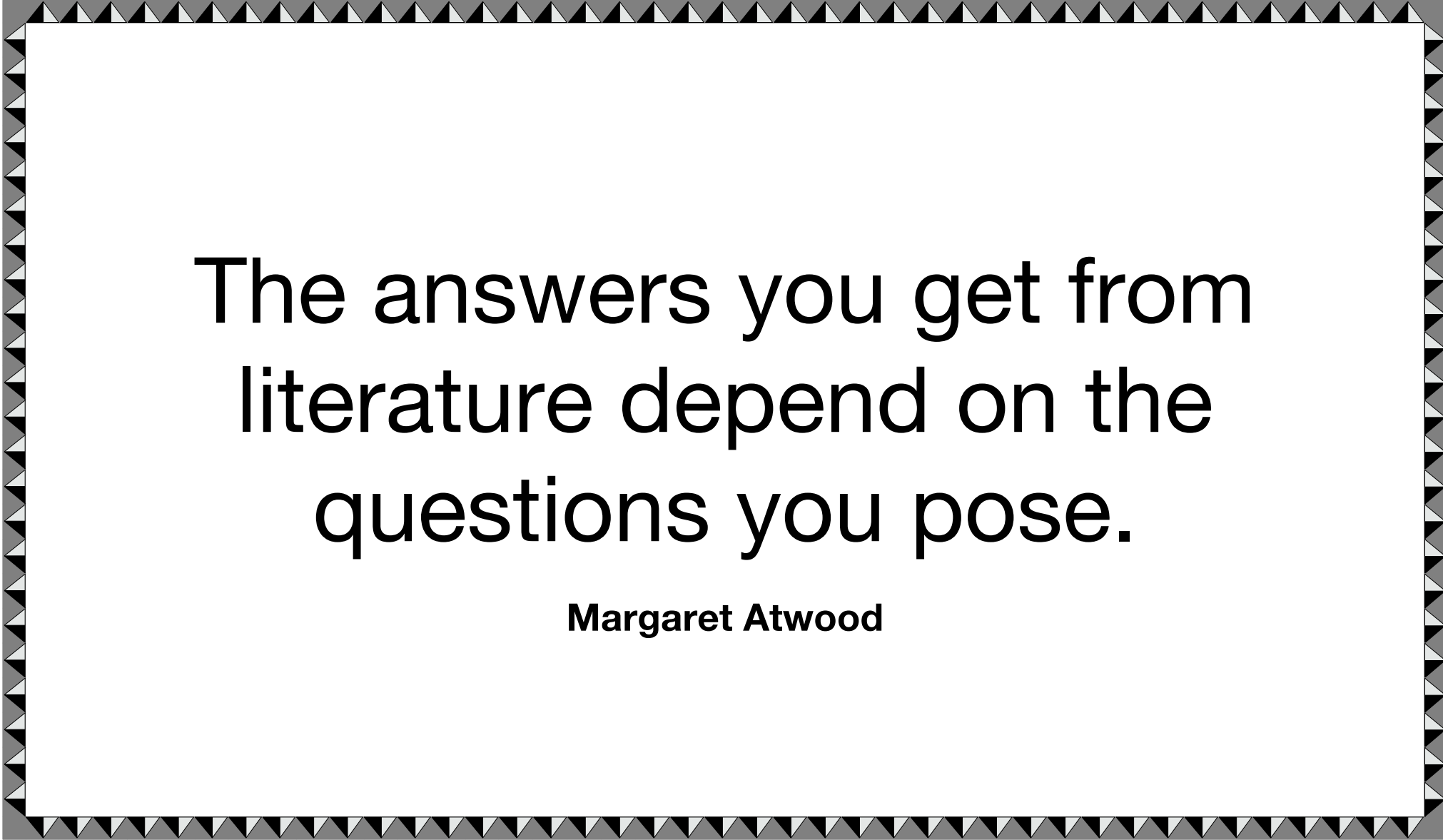
**Paul Samuelson**





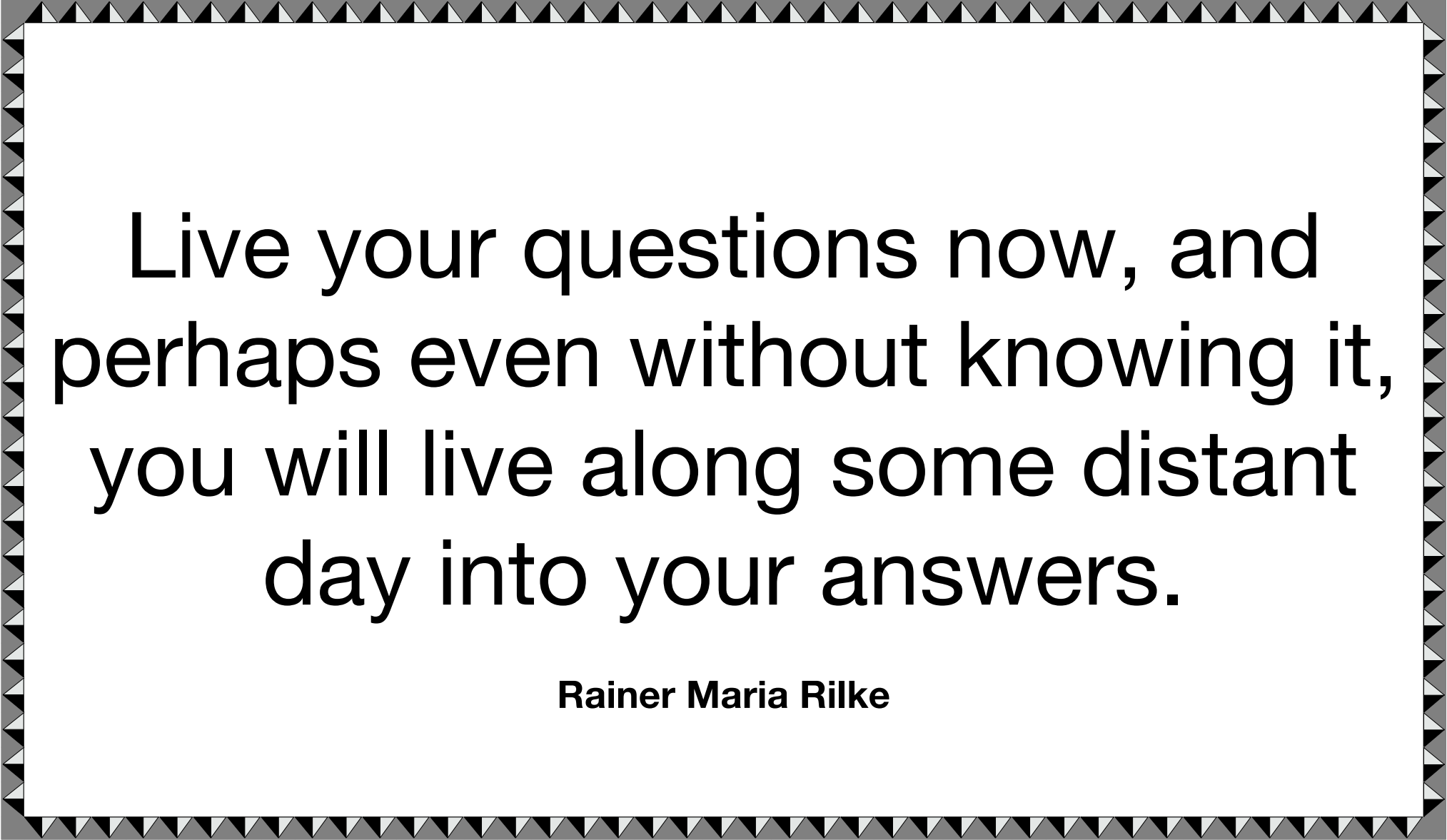
Take risks. Ask big questions.  
Don't be afraid to make mistakes;  
if you don't make mistakes,  
you're not reaching far enough.

David Packard



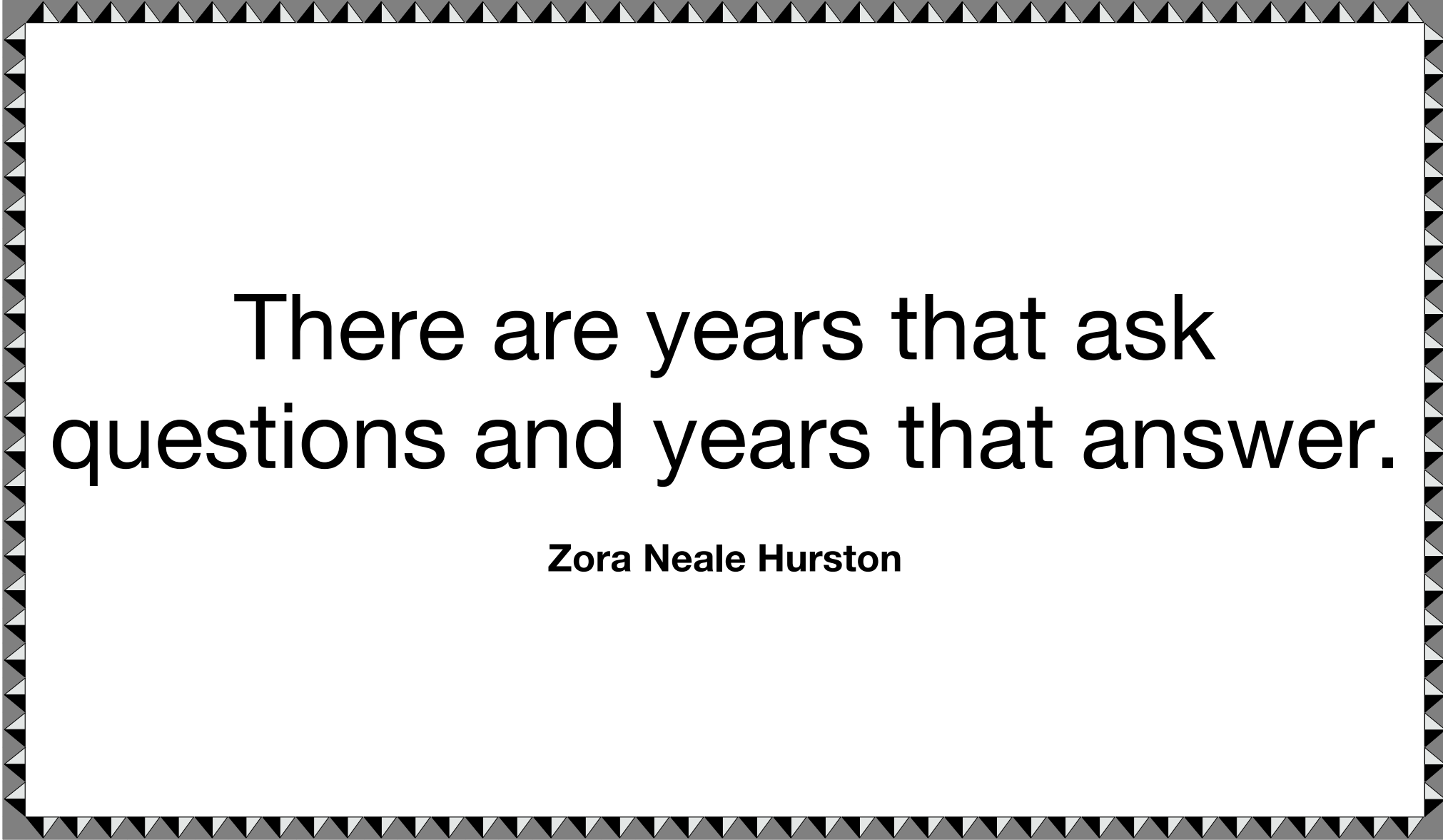
The answers you get from  
literature depend on the  
questions you pose.

**Margaret Atwood**



Live your questions now, and  
perhaps even without knowing it,  
you will live along some distant  
day into your answers.

**Rainer Maria Rilke**

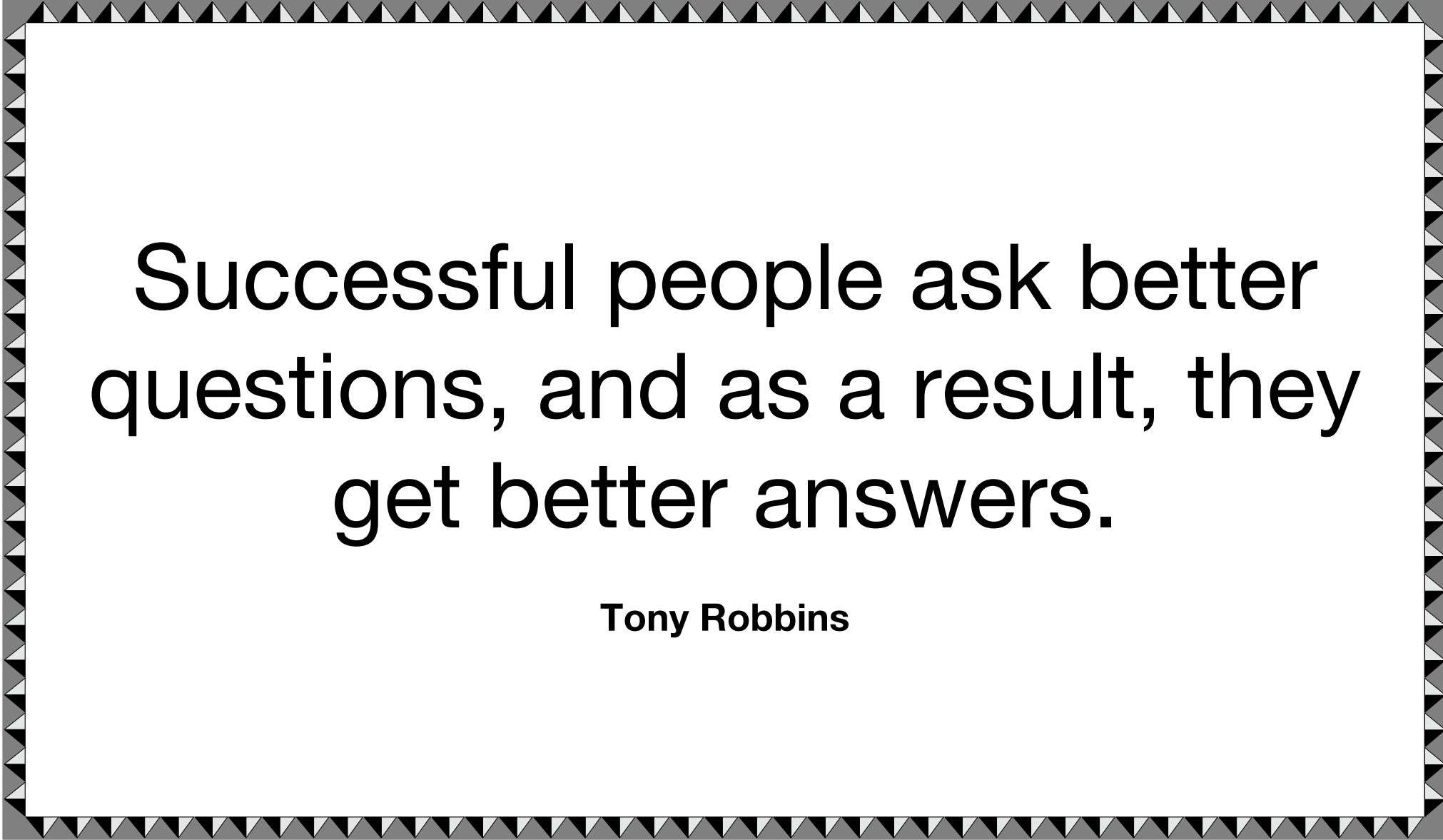


There are years that ask  
questions and years that answer.

Zora Neale Hurston

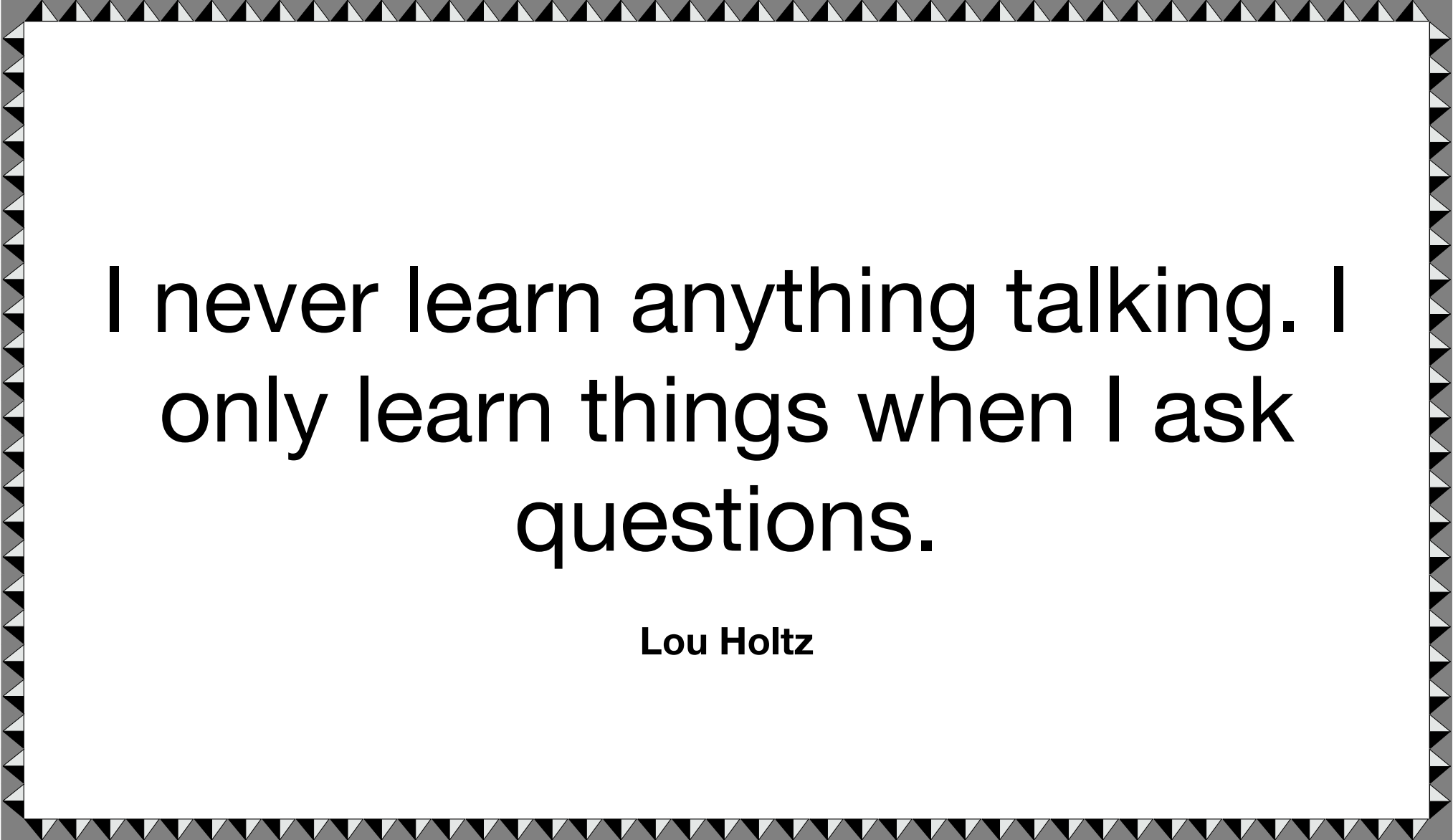
We get wise by asking questions,  
and even if these are not  
answered, we get wise, for a  
well-packed question carries its  
answer on its back as a snail  
carries its shell.

James Stephens



Successful people ask better questions, and as a result, they get better answers.

**Tony Robbins**



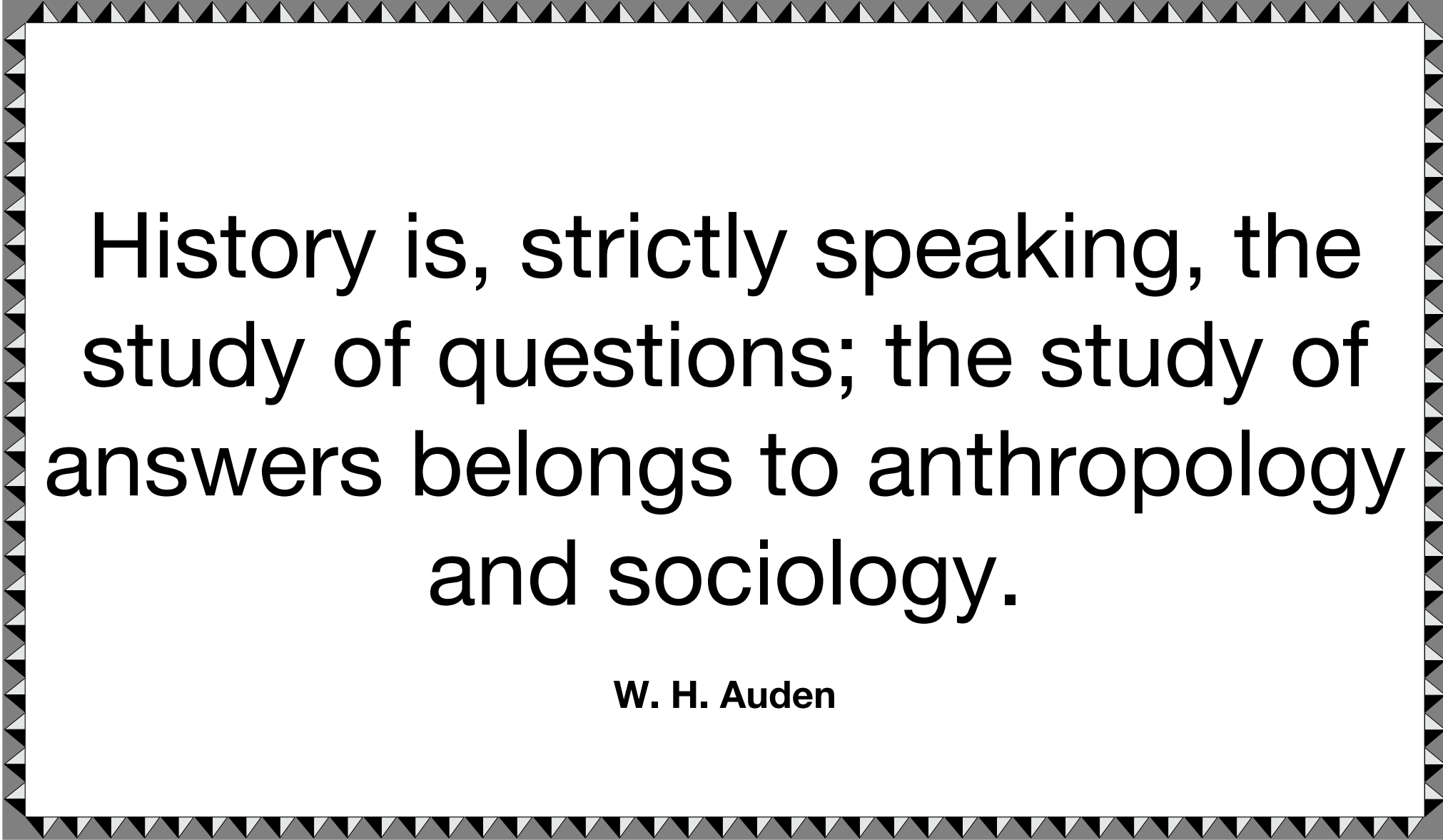
I never learn anything talking. I  
only learn things when I ask  
questions.

Lou Holtz

I am just a child who has never grown up. I still keep asking these '*how*' and '*why*' questions. Occasionally, I find an answer.

**Stephen Hawking**





History is, strictly speaking, the study of questions; the study of answers belongs to anthropology and sociology.

W. H. Auden