



# The Joy of Science

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**Take a moment to remember why  
you first wanted to work in science...**

**I'm guessing it was not for the money..**

**Go on...why did you decide to start  
working in science?**

**Probably you do not feel like that  
everyday and sometimes you may  
forget why you started this job (or  
believe it is not the dream job you  
expected)...**

**Although there are likely many unique reasons, most people work in science because it is rewarding, joyful and because they want to contribute to knowledge...**

**However, in science I often here phrases like this**

***“Academia is the survival of the fittest”***

***“It is male dominated because it is competitive”***

***“You need to play the game”***  
*(like it is rigged against you)*

***“Weekend research project”***

***“Having children will have to wait until I have tenure”***

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*“Having children will have to wait until I have tenure”*

**It does not need to be like that  
(and should not be like that)**



# **Furthermore, in science I have seen people become:**

- + Physically/emotionally ill with stress**
- + Loose self-esteem and sense of worth**
- + Aggressive**
- + Overly competitive**
- + Loose the joy of science**

**Furthermore, in science I have seen people  
become:**

- + Physically/emotionally ill with stress**
- + Loose self-esteem and sense of worth**
- + Aggressive**
- + Overly competitive**
- + Loose the joy of science**

**It does not need to be like that  
(and should not be like that)**

**Working in science really is a joy and a  
privilege!**

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privilege!**

**This discussion is to look at why we can  
lose the joy of science and steps we  
take to get it back!\***

**\*Or perhaps realise that you *can* and *want to* find equal joy elsewhere**

# SWIMMING IN THE JOY OF SCIENCE!



# SWIMMING IN THE JOY OF SCIENCE!

**Waves can keep knocking  
you down and make  
swimming harder.  
*Rejection* can feel like this.**

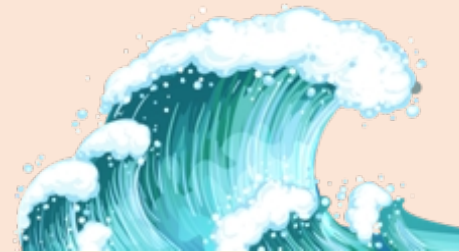


# SWIMMING IN THE JOY OF SCIENCE!

## My Waves of Rejection!



*Telescope Proposal  
/ Small Grant  
REJECTED*



*Post-doc application  
REJECTED*



*Tenured Job / Major Grant application  
REJECTED*

# SWIMMING IN THE JOY OF SCIENCE!





# SWIMMING IN THE JOY OF SCIENCE!

**Piranhas just keep biting  
away at you constantly  
and could weaken you  
drastically**



# SWIMMING IN THE JOY OF SCIENCE!

## My Career Piranhas



*Constant feeling of not writing enough papers*



*Difficult situations at home (e.g., upset children, bereavement)*



*Feeling my competitors/peers are more successful than me*



*People around me finding it all easy (imposter syndrome)*



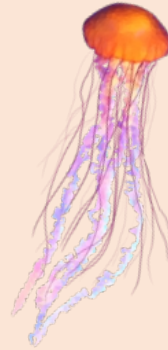
*Feeling I am "failing" as an academic*

# SWIMMING IN THE JOY OF SCIENCE!



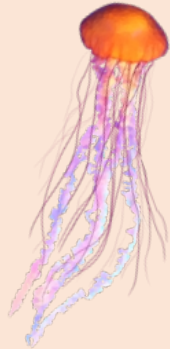
# SWIMMING IN THE JOY OF SCIENCE!

**Jellyfish can sting  
you as they pass by  
(but not necessarily  
aggressively)**

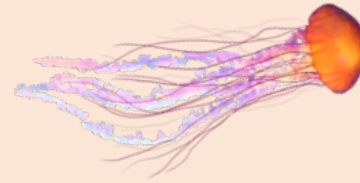


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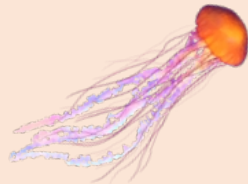
## My Career Jellyfish



*Respected scientist gives  
me a hard time in talk*

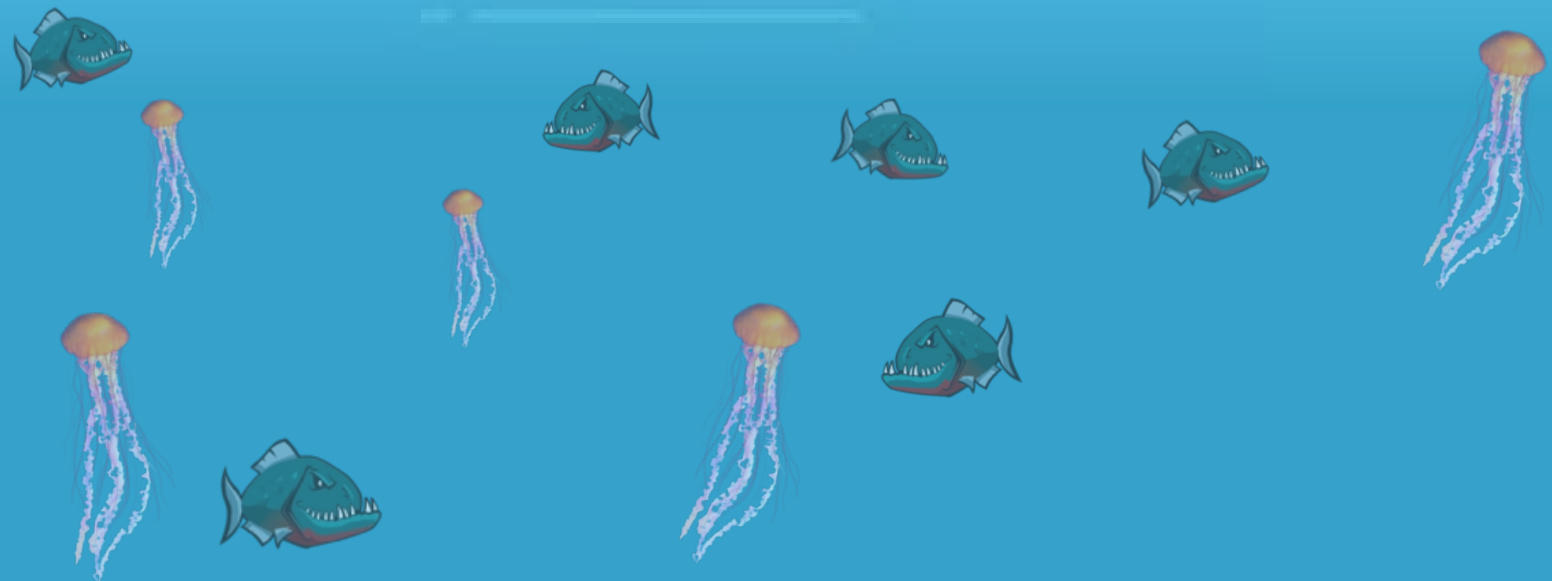


*Somebody I respect  
says that my idea will  
not work*



*Difficult/negative referee  
report*

# SWIMMING IN THE JOY OF SCIENCE!



# SWIMMING IN THE JOY OF SCIENCE!

**If you are unlucky you  
might come across an  
aggressive career  
shark which just  
wants to destroy you**



# SWIMMING IN THE JOY OF SCIENCE!

## Career Sharks



*The Bully*

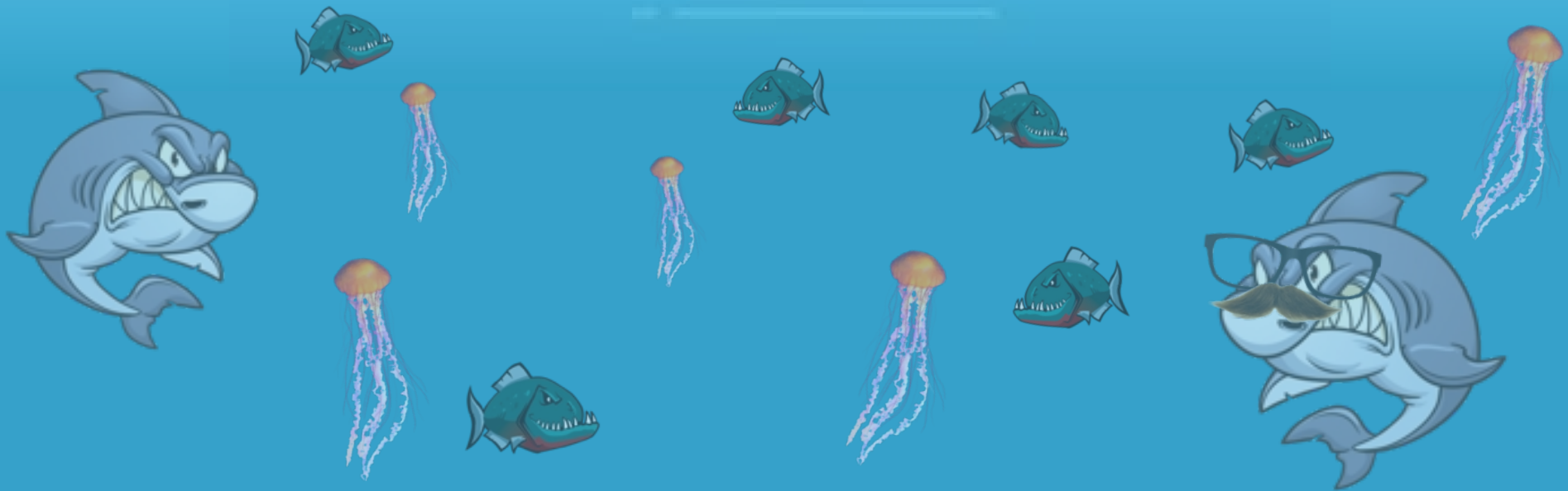


*The Harasser*

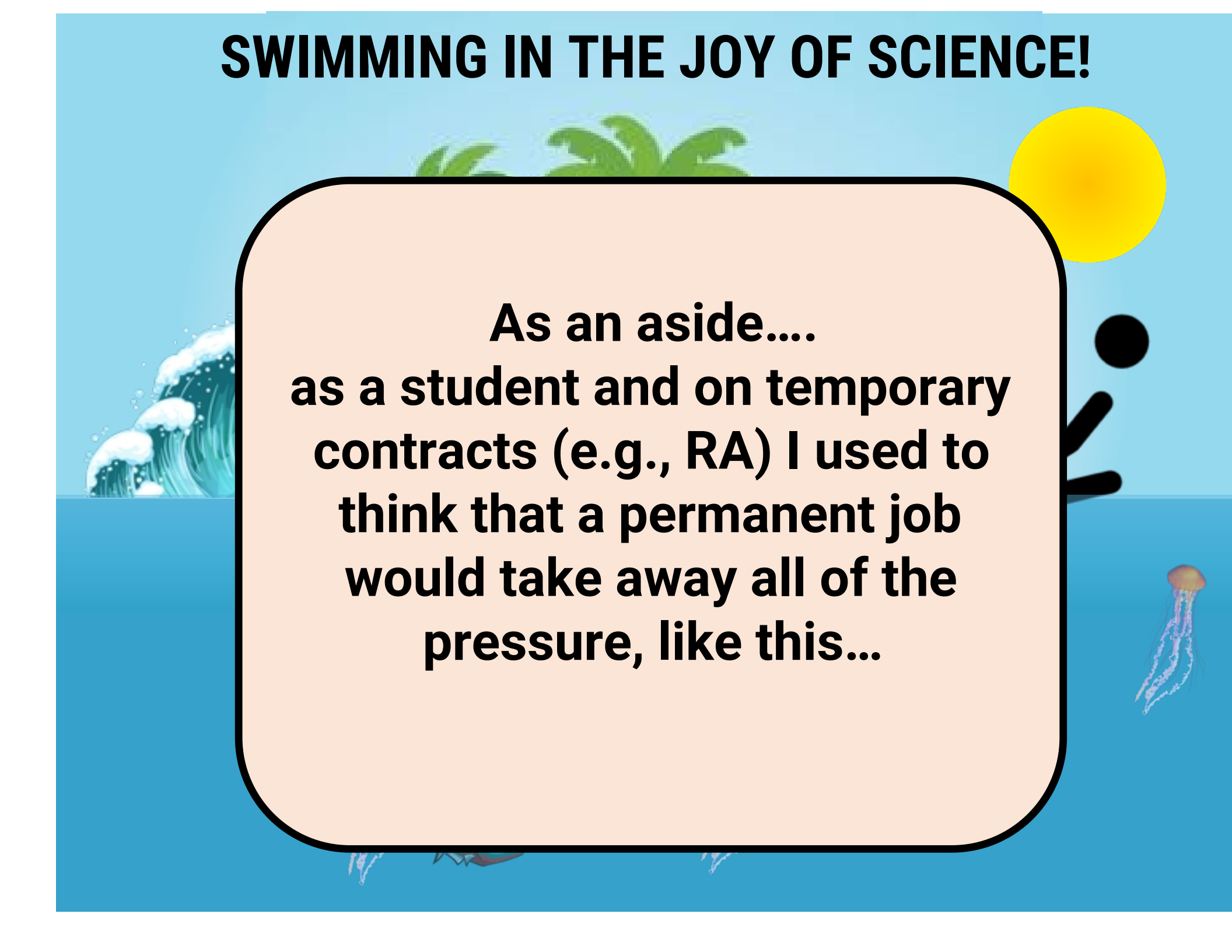
***These situations definitely need professional support beyond that considered here and help should be sought***



# SWIMMING IN THE JOY OF SCIENCE!

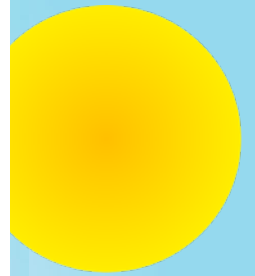
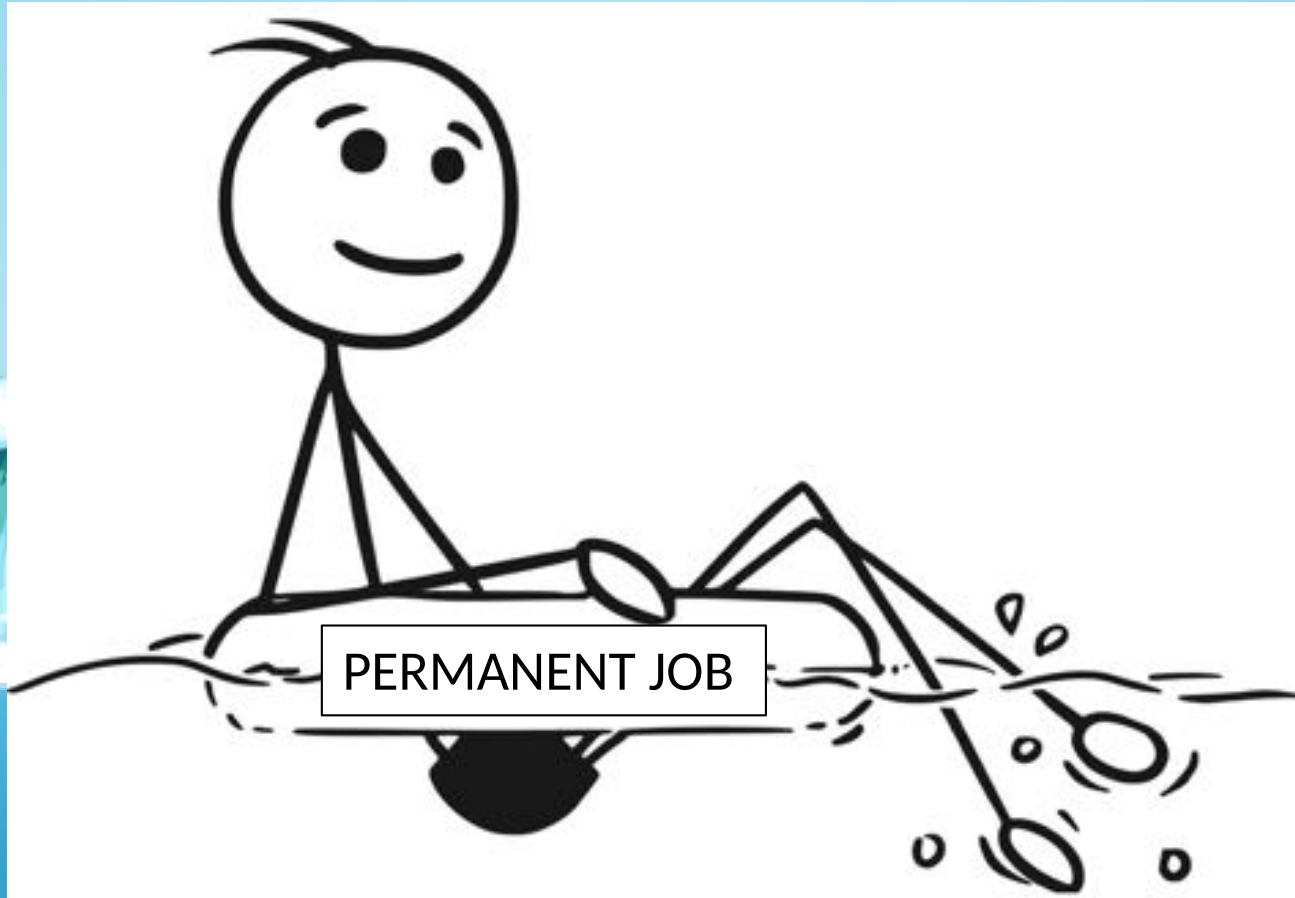


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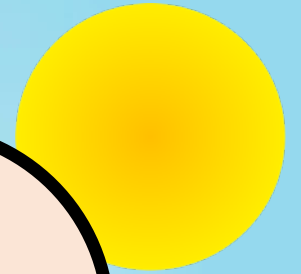
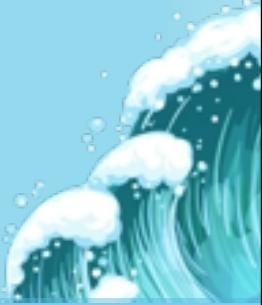
**As an aside....  
as a student and on temporary  
contracts (e.g., RA) I used to  
think that a permanent job  
would take away all of the  
pressure, like this...**

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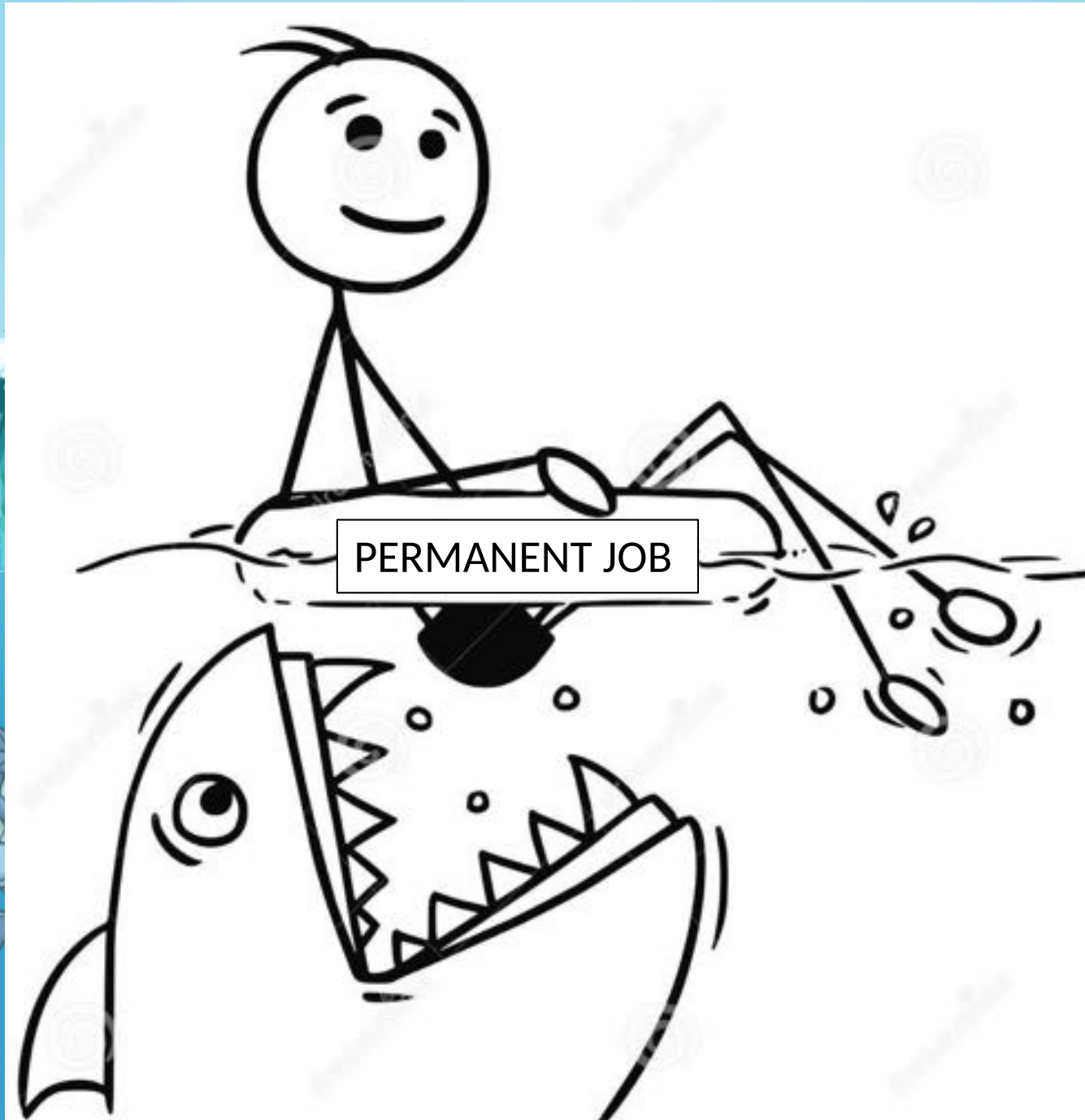


# SWIMMING IN THE JOY OF SCIENCE!

**However, of course this does not protect you completely from all of the nasties in the water (even if some pressure is off)...**



# SWIMMING IN THE JOY OF SCIENCE!



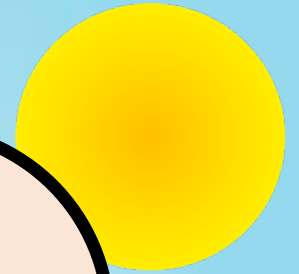
PERMANENT JOB

# SWIMMING IN THE JOY OF SCIENCE!

**Science is still paradise and  
we are privileged to work in it**

***However we all have our own  
waves of rejection, piranhas,  
and jellyfish to deal with***

**How do we keep the joy?**



# SWIMMING IN THE JOY OF SCIENCE!

There are things we can do..



*As an institution*

# SWIMMING IN THE JOY OF SCIENCE!

There are things we can do..



*As an institution*

*As a support network  
(mentor, friend, etc.)*





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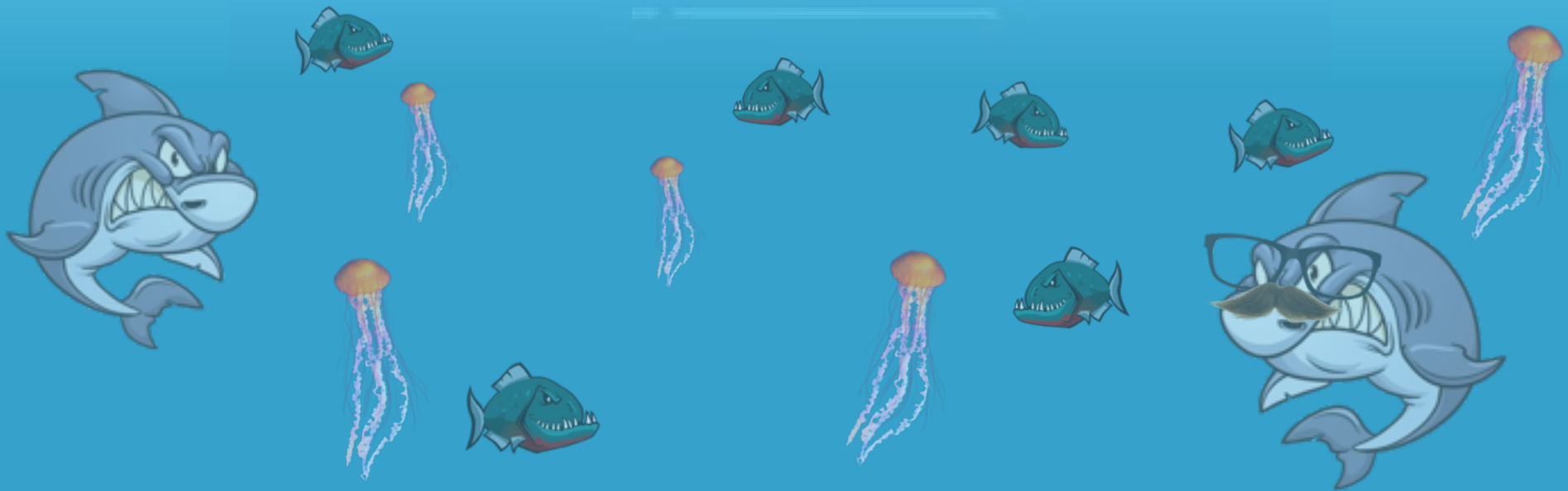


*For ourselves!*

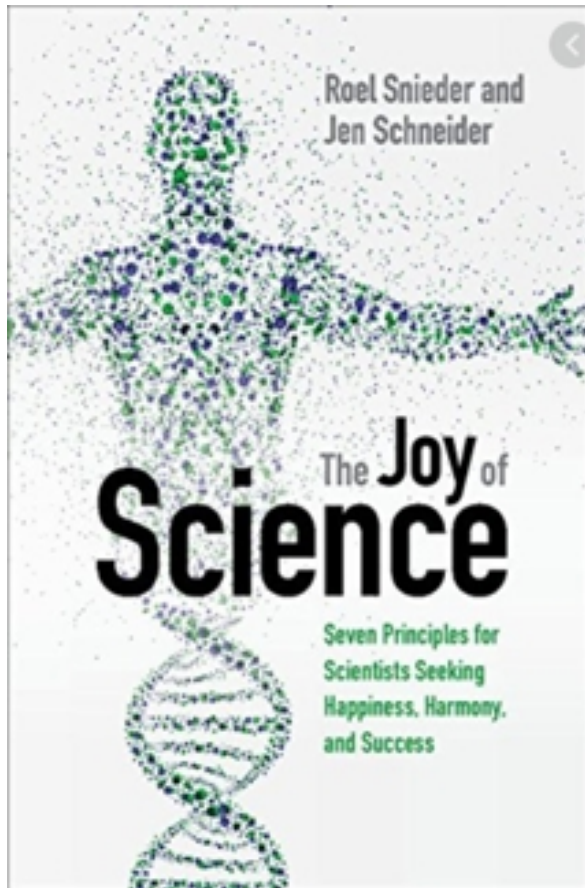


**FOCUS OF THIS SESSION**

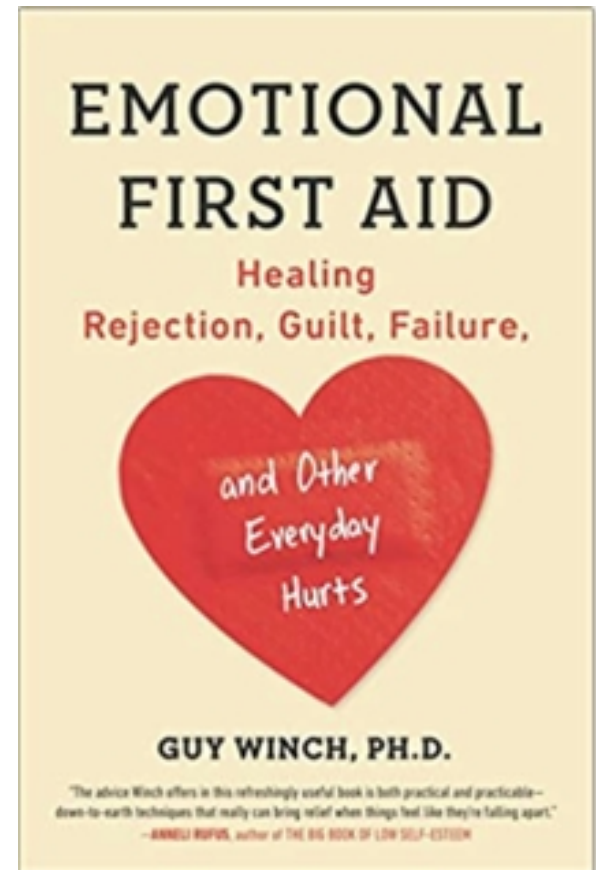
# SWIMMING IN THE JOY OF SCIENCE!



# Books I recommend...



**Helps keep things in perspective and not lose sight of what is important**



**Some tips on how to prevent feelings of guilt, failure, rejection and low self-esteem overwhelming you**

**I will focus on three of my favourite topics and corresponding ideas from “The Joy of Science”**

**A. Experience un-contaminated thoughts and be present**

**B. Establish a positive and diverse support network**

**C. Align your goals with your vision/ambitions and practise saying no!**

A. Experience **un-contaminated thoughts** and be present

**SWIMMING IN THE JOY OF SCIENCE!**



# A. Experience **un-contaminated thoughts** and be present

## SWIMMING IN THE JOY OF SCIENCE!

Be in the moment

Don't dwell on what  
happened earlier



Focus on one thing at a time

If you are with  
somebody give them  
your complete  
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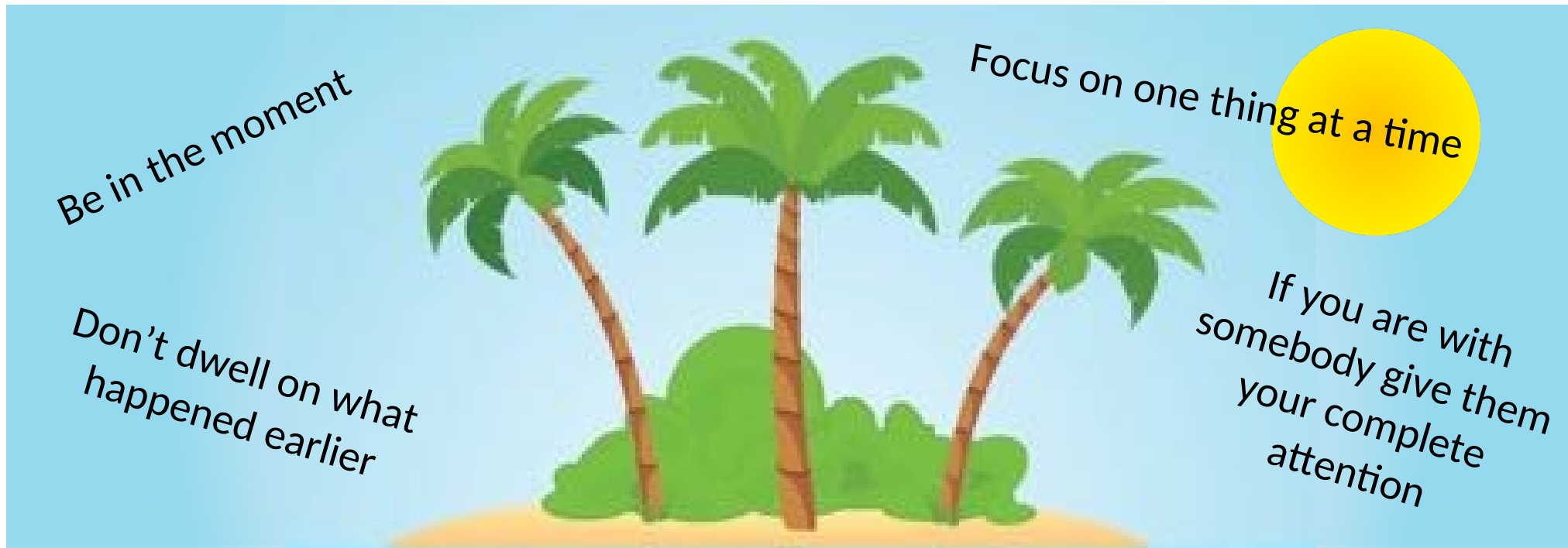


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**This applies to your work and your home life!**

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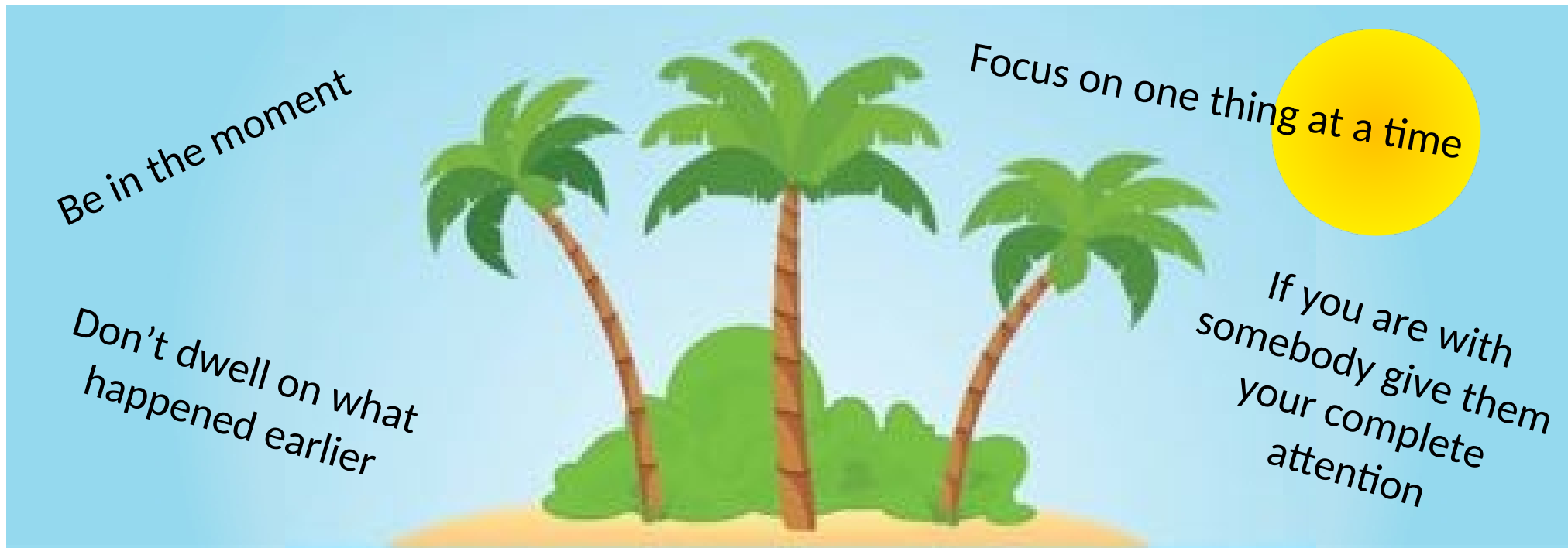
**This applies to your work and your home life!**

Examples:

- Do not check work emails at the dinner table
- When in a meeting do not be thinking about/doing something else
- Do not dwell on a deadline/bad day when you get home
- Try not to be distracted at work by world affairs/what happened at



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**To Try:** Assess your habits (e.g., are you checking Facebook/news at work? Are you checking work email at

A. Experience un-contaminated thoughts and be present

**SWIMMING IN THE JOY OF SCIENCE!**



# A. Experience un-contaminated thoughts and be present

## SWIMMING IN THE JOY OF SCIENCE!

Do not forget to enjoy  
your successes (no matter  
how small)

Remember you can learn  
something from all  
situations (bad and good)



Take joy in other  
peoples' successes  
(push envy away)

Be curious about  
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**To Try:** Reflect on successes you, and those around you, had recently (small or large) and take time to enjoy/congratulate

**B. Establish a positive and diverse support network**

**SWIMMING IN THE JOY OF SCIENCE!**



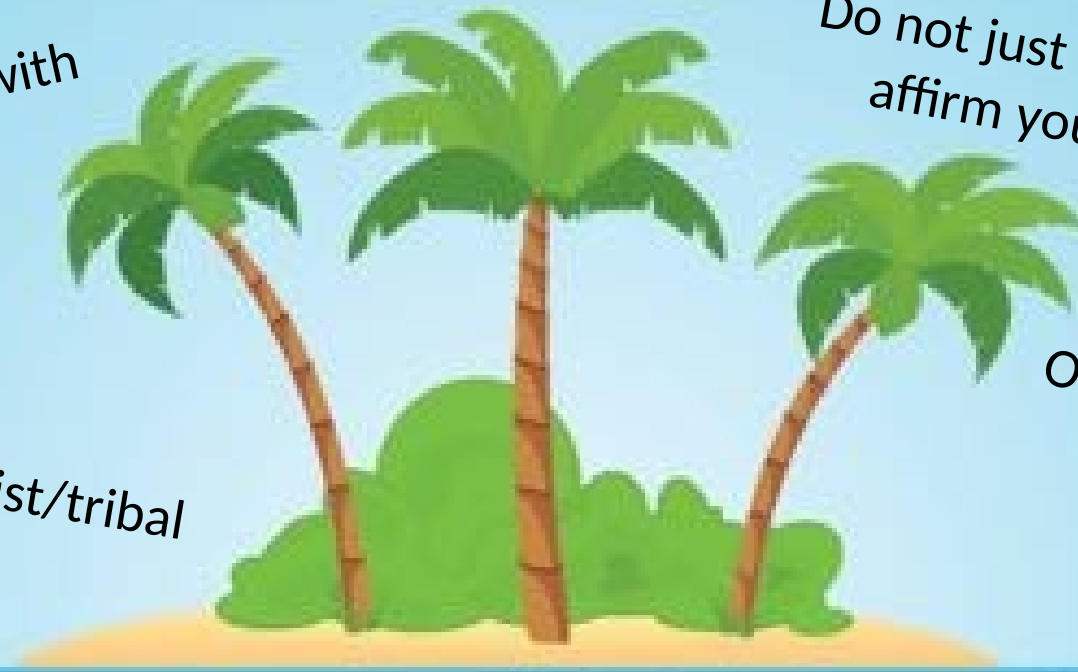
## B. Establish a positive and diverse support network

Surround yourself with positive people

Avoid negative/defeatist/tribal groups

Do not just look to people to affirm your own beliefs

Obtain a diverse range of perspectives





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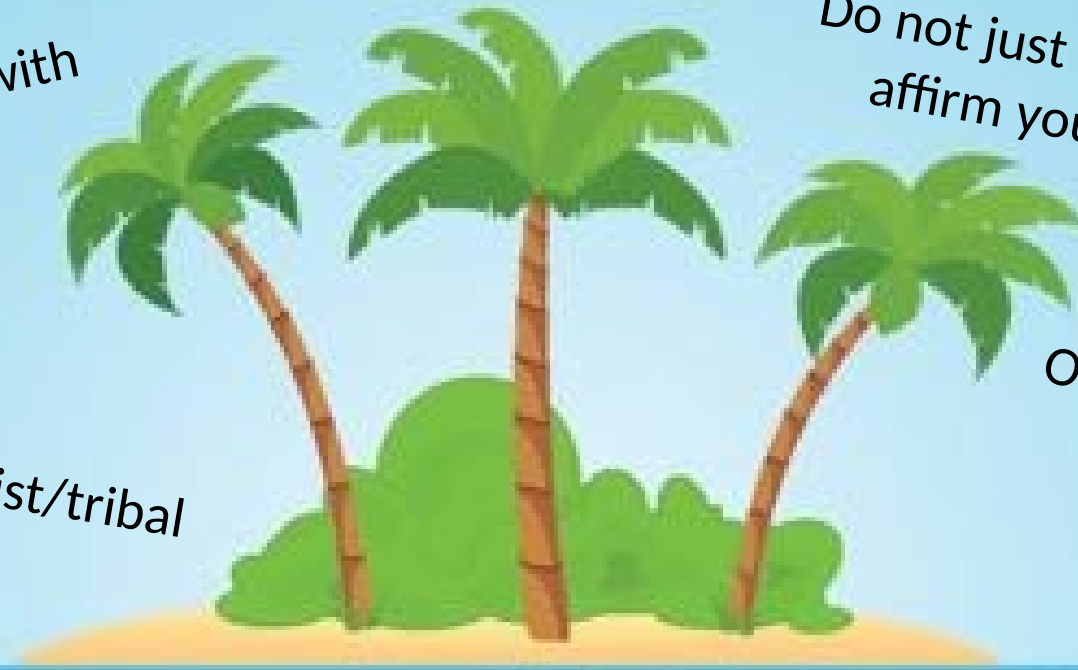
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### Examples:

- Your PhD advisor might have great career advice but your (e.g.) grandmother is more likely to check if you are truly happy in this career
- Imposter syndrome often stems from not talking to enough people to understand that others are going through similar struggles
- It is easy to fall into groups who share your discontent but just exacerbate negativity and encourage conflict: look for groups with positive solutions

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**To Try:** Assess if you have a diverse and positive support network. If not, create one!

C. Align your goals with your vision (& practise saying no)

**SWIMMING IN THE JOY OF SCIENCE!**



# C. Align your goals with your vision (& practise saying no)

## SWIMMING IN THE JOY OF SCIENCE!

Avoid pursuing  
uninspiring objectives

Keep in touch with your  
big dreams and  
aspirations

It is okay to say no for  
the good reasons



## C. Align your goals with your vision (& practise saying no)

# SWIMMING IN THE JOY OF SCIENCE!

Avoid pursuing uninspiring objectives



Stay connected with your big dreams and aspirations



It is okay to say no for the good reasons

### Examples:

- Ask yourself if you are making decisions based upon what **other people** deem important: are you passionate about these choices?
- Take a step back to see if you are pursuing with uninspiring objectives (e.g., more papers, more grants) and lost sight of your bigger vision
- Ask yourself if you are saying **yes** to requests for the right reasons, or you being taken advantage of and/or having a negative impact on you (and should say no!)?

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**To Try:** Write down your big vision/dreams and set goals to achieve these (but **do not** consider this a to-do list, just a goal)

# An extract from my list...

Vision/Dream	Goals (a guide, not to do list)	Consequences
Promote rigorous scientific method and realistic uncertainties		
Experience the world's cultures with my children		
Make science accessible to everyone		
Support/train early-career scientists		

Start here

# An extract from my list...

Vision/Dream	Goals (a guide, not to do list)	Consequences
Promote rigorous scientific method and realistic uncertainties	Write a review article on calculating galactic gas outflow properties (done)	
Experience the world's cultures with my children	Big road trip in between jobs (done)  Take my children camping in Africa	
Make science accessible to everyone	Create an astronomy show for blind people (done)	
Support/train early-career scientists	Help my Masters student obtain the PhD he wants (done)  Prepare my future students for life careers outside of academia	



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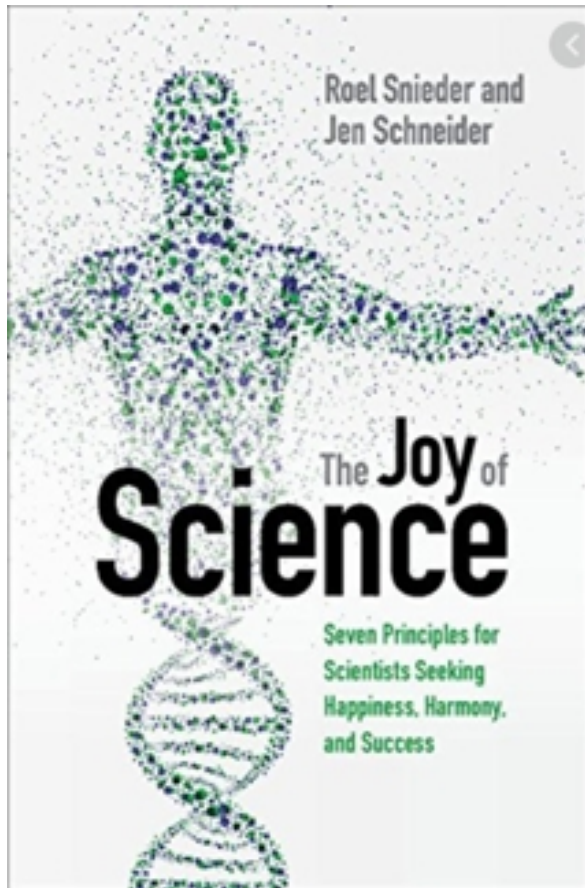
Vision/Dream	Goals (a guide, not to do list)	Consequences
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Experience the world's cultures with my children	Big road trip in between jobs (done)	Fond memories
	Take my children camping in Africa	TBA
Make science accessible to everyone	Create an astronomy show for blind people (done)	Resulted in a new research area and amazing set of collaborators
Support/train early-career scientists	Help my Masters student obtain the PhD he wants (done)	A set of collaborators in a different institute
	Prepare my future students for careers outside of academia	TBA

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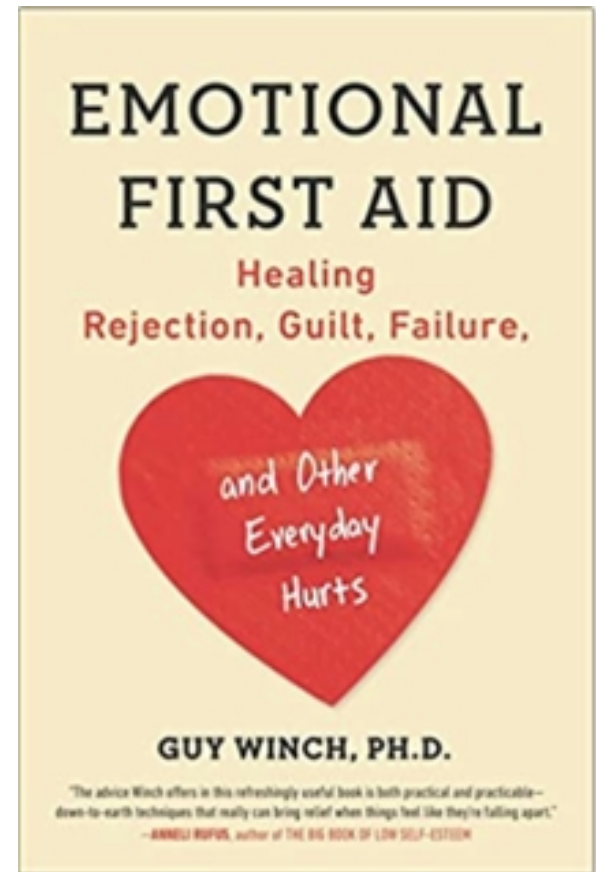
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This is not an inspiring dream / a reason to go to work. This is something that could be a consequence of pursuing exciting science

# Books I recommend....



**Helps keep things in perspective and not lose sight of what is important**



**Some tips on how to prevent feelings of guilt, failure, rejection and low self-esteem overwhelming you**