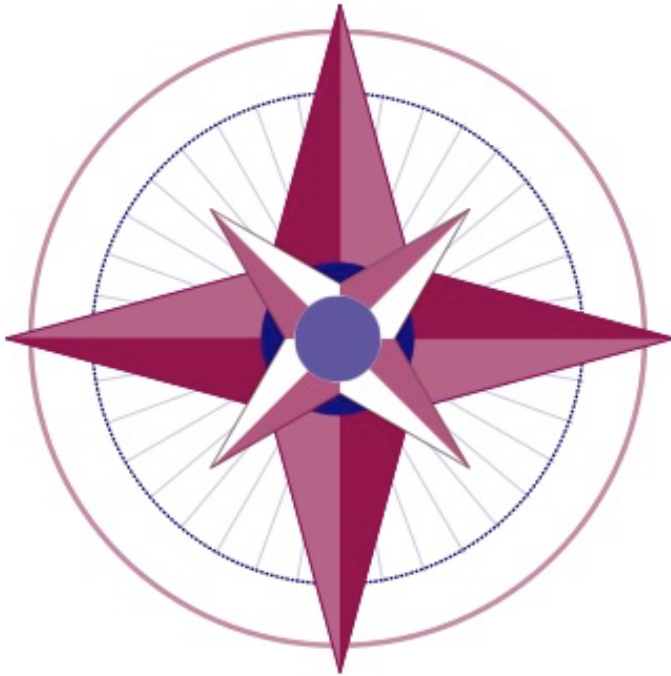


# Practical Skills for Emerging Scholars I: Setting Personal Boundaries to Support Excellence in Science



## Abstract:

Scientific research demands us to be resilient, creative, effective communicators, and skilled at establishing and navigating boundaries with our colleagues and with ourselves. The most important of these skills is boundary setting, which is the art of clearly articulating what is acceptable in interpersonal interactions, learning when to say yes and when to say no, and distinguishing between your own versus others' values. Mastering boundaries helps scientists create professional environments that foster resiliency, creativity, and effective communication. In this practical workshop, you will learn why boundaries are so important, practice recognizing when you need to set them, and practice setting them. You will develop your own personalized toolkit using techniques that draw from both peer-reviewed psychology and pedagogy research as well as tried-and-true methods.

## About the speaker:

Dr. Melodie Kao is a radio astronomer who studies substellar magnetism, including the magnetic dynamos operating in brown dwarfs and exoplanets as well as the physics of extrasolar aurorae. Dr. Kao received her SB in physics at MIT, her PhD in astrophysics at Caltech, and held a NASA Hubble Postdoctoral Fellowship at Arizona State University. She is currently a Heising-Simons 51 Pegasi b Fellow at UC Santa Cruz. As a graduate student, Dr. Kao identified a set of key personal skills for every emerging scholar to hone that helped her and her peers thrive scientifically. She nicknamed these skills the “Scientist’s Personal Toolkit” and aims to integrate the intentional development of the Toolkit skills into formal scientific training programs for all emerging scholars.

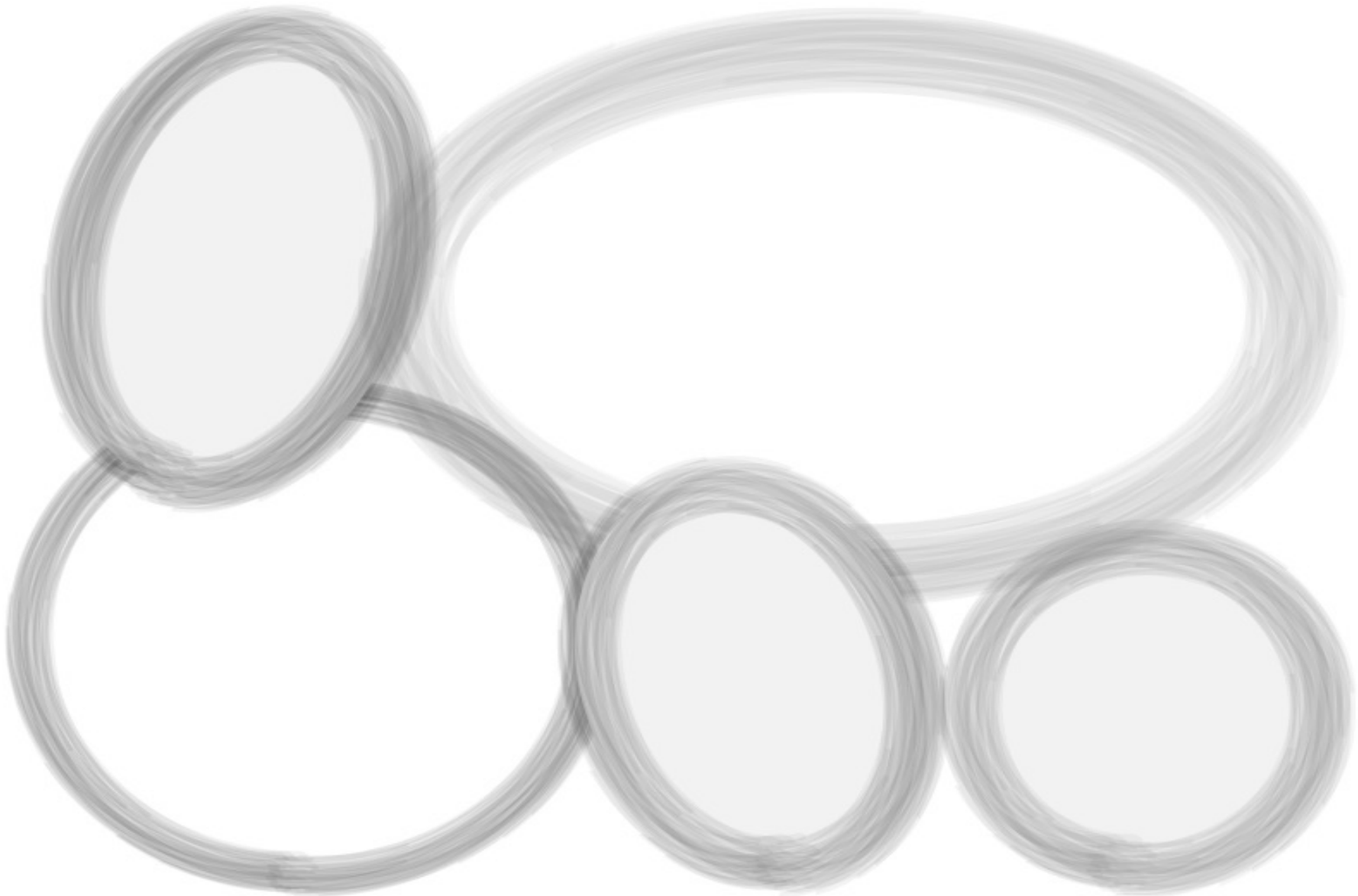
Worksheets from workshop will be available at: [www.melodiekao.com](http://www.melodiekao.com)

Please feel free to add to, make use of, and distribute these tools for yourself and your mentees.

If you have any feedback, I would love to hear it at: [melodie.kao@ucsc.edu](mailto:melodie.kao@ucsc.edu)

## My Garden

1. What are the parts of your life that are most important to you? Label them in the garden below as the main areas of your own life's garden.
2. In your ideal world, what do these areas of your life look like? Write down 2-3 specific things for each area.



## How well do we cultivate our life's garden?

This is a non-exhaustive list of common situations that people tolerate in school and as early career researchers.

1. Circle the statements that resonate with you and note how that situation makes you feel.
2. Then, label the rightmost columns with your garden areas and check if that toleration negatively impacts that part of your garden.

Which parts of my garden are negatively impacted?

What am I currently tolerating?

How do I feel?

1. I'm worried that my professor doesn't like me / think I'm good enough.	Great	Neutral	Crappy					
2. I'm worried that I'm not creative / smart / productive / <u>fill in the blank</u> enough.	Great	Neutral	Crappy					
3. I'm not sleeping/resting enough.	Great	Neutral	Crappy					
4. Urgent tasks keep crowding out high priority but non-urgent tasks.	Great	Neutral	Crappy					
5. I put myself down with negative self-talk.	Great	Neutral	Crappy					
6. I worry that if my work isn't perfect, then it's not good enough.	Great	Neutral	Crappy					
7. I'm scared of making the wrong decision.	Great	Neutral	Crappy					
8. I'm getting pulled in many directions by others' needs.	Great	Neutral	Crappy					
9. I'm worried about failing.	Great	Neutral	Crappy					
10. I compare myself a lot to other people.	Great	Neutral	Crappy					
11. I'm worried that people will laugh at me or put me down if I say what I really think.	Great	Neutral	Crappy					

## When you say no to one thing, what are you saying yes to?

For each situation that you're tolerating, fill in the following sentence: If I stop tolerating \_\_\_\_\_, then I'll be available to \_\_\_\_\_.

Examples:

1. *I'm worried that my professor doesn't like me / think I'm good enough.*

If I stop tolerating worrying about whether or not my advisor likes me or thinks I'm good enough, then I make myself available to asking my advisor for what will help me the most.

2. *I put myself down with negative self-talk.*

If I stop tolerating negative self-talk, then I make myself available to capitalizing on critical feedback, being more patient with my current learning skillset, and freeing up mental/emotional space to focus on what's actually important to me.

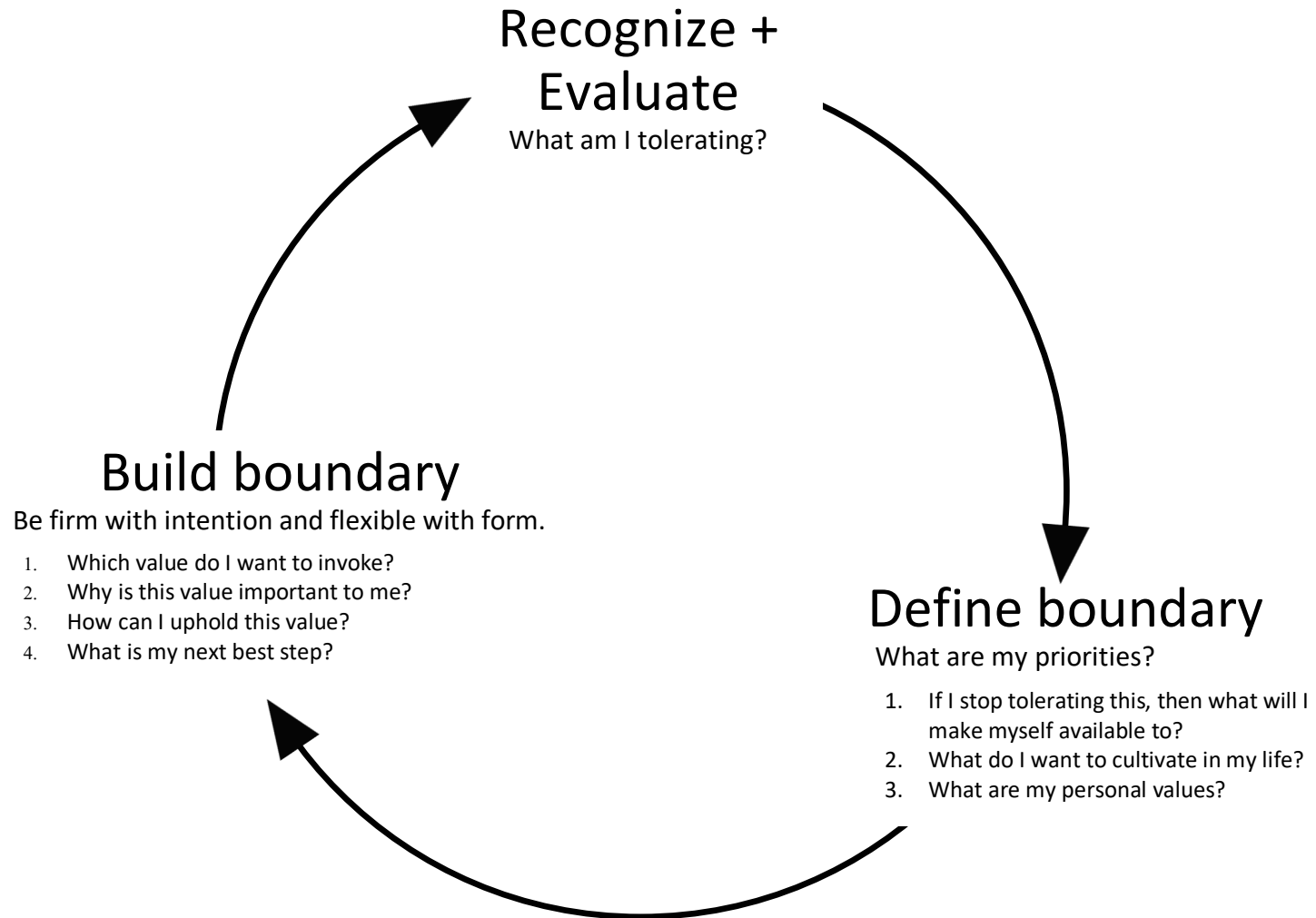
3. *I'm worried that people will laugh at me or put me down if I say what I really think.*

If I stop tolerating people putting me down and/or dismissing me, then I make myself available to identifying and seeking out the people who can give me the kind of support that I need to do my best work.

4. *I compare myself a lot to other people.*

If I stop tolerating comparing myself to other people, then I make myself available to acknowledging what I'm awesome at and leveraging my strengths!

# The Boundaries Cycle

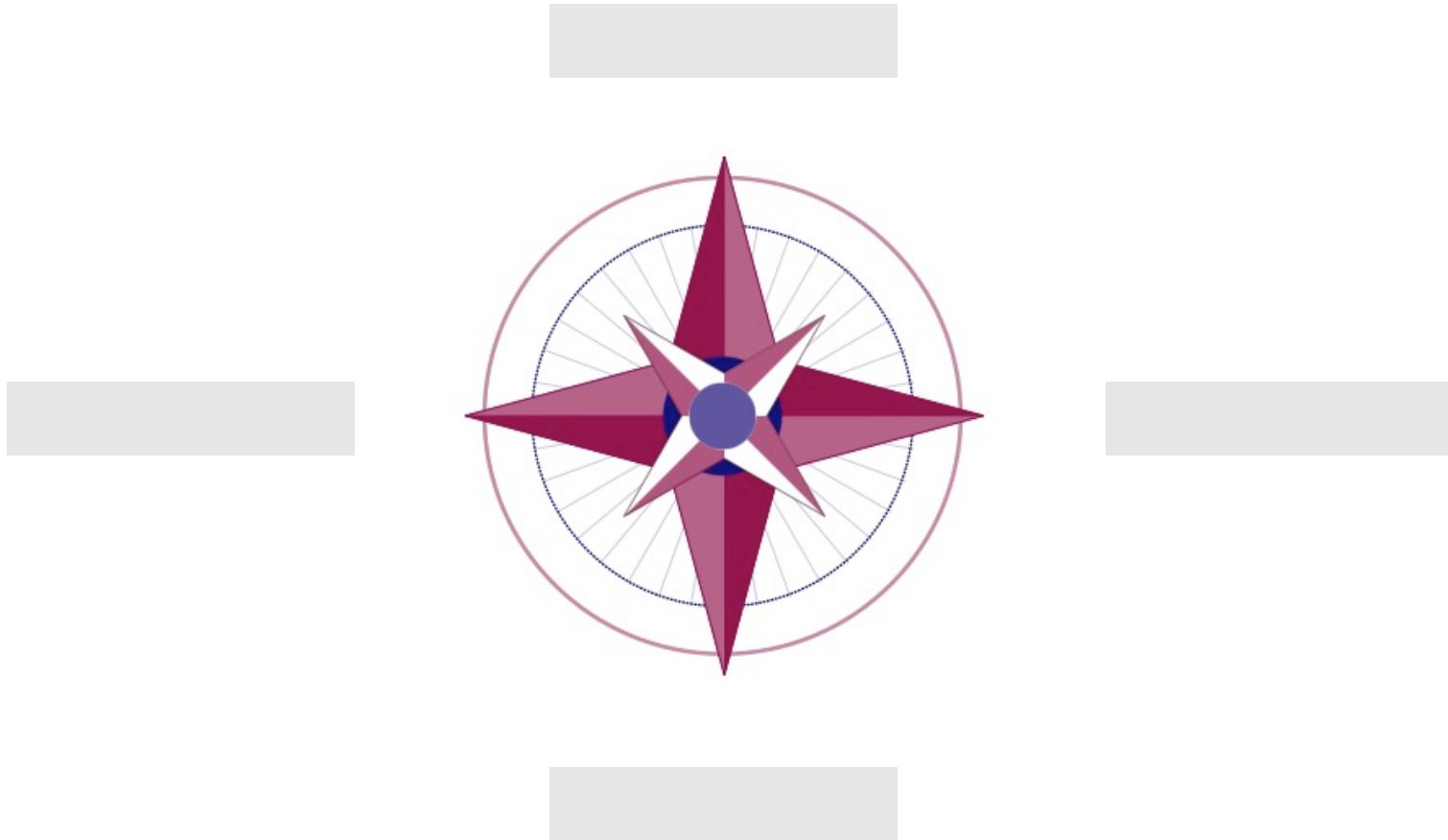


## List of Values

Acceptance	Courage	Fluency	Love	Security
Accountability	Courtesy	Focus	Loyalty	Self-actualization
Accuracy	Creativity	Followership	Making a difference	Self-control
Achievement	Curiosity	Forgiveness	Mastery	Self-reliance
Adventurousness	Daring	Freedom	Mercy	Selflessness
Agility	Decisiveness	Fun	Merit	Sensitivity
Altruism	Democracy	Generosity	Moderation	Serenity
Ambition	Dependability	Goodness	Morality	Service
Artistry	Determination	Grace	Novelty	Shrewdness
Assertiveness	Devoutness	Gratitude	Obedience	Simplicity
Authority	Diligence	Growth	Openness	Soundness
Balance	Discipline	Happiness	Optimism	Spaciousness
Beauty	Discretion	Hard work	Order	Speed
Being right	Diversity	Health	Originality	Spontaneity
Being the best	Dynamism	Helping	Patience	Stability
Belonging	Economy	Honesty	Patriotism	Status
Boldness	Effectiveness	Honor	Peace	Strategic
Boundary-pushing	Efficiency	Humility	Perfection	Strength
Bravery	Elegance	Imagination	Piety	Structure
Calmness	Empathy	Inclusion	Positivity	Success
Carefulness	Endurance	Independence	Practicality	Support
Challenge	Enjoyment	Individuality	Preparedness	Teamwork
Cheerfulness	Enthusiasm	Ingenuity	Professionalism	Temperance
Clear-mindedness	Equality	Inner Harmony	Prudence	Thankfulness
Commitment	Equity	Inquisitiveness	Quality-orientation	Thoroughness
Community	Excellence	Insightfulness	Quiet	Thoughtfulness
Compassion	Excitement	Integrity	Reliability	Timeliness
Competitiveness	Expertise	Intelligence	Resourcefulness	Tolerance
Conservatism	Exploration	Interdependence	Respect	Traditionalism
Consideration	Expressiveness	Interiority	Restraint	Trustworthiness
Consistency	Fairness	Intuition	Results-oriented	Truth-seeking
Contentment	Faith	Joy	Reverence	Understanding
Contribution	Family	Justice	Rigor	Uniqueness
Control	Fidelity	Leadership	Risk	Unity
Cooperation	Fitness	Legacy	Sacredness	Usefulness
Correctness	Flexibility	Logic	Safety	Vision

## My Personal Values Compass

Once you have identified your core values in this Values Compass, reflect on and write down why these values are important to you.



## Which values are you not upholding when you tolerate these situations?

Label the right columns with your personal values from your Values Compass. For each statement below, check the box under each value if tolerating that situation would not uphold that value.

My Personal Values

What am I currently tolerating?

1. I'm worried that my professor doesn't like me / think I'm good enough.				
2. I'm worried that I'm not creative / smart / productive / <u>fill in the blank</u> enough.				
3. I'm not sleeping/resting enough.				
4. Urgent tasks keep crowding out high priority but non-urgent tasks.				
5. I put myself down with negative self-talk.				
6. I worry that if my work isn't perfect, then it's not good enough.				
7. I'm scared of making the wrong decision.				
8. I'm getting pulled in many directions by others' needs.				
9. I'm worried about failing.				
10. I compare myself a lot to other people.				
11. I'm worried that people will laugh at me or put me down if I say what I really think.				



## Cultivating your garden: Be firm with your intentions and flexible with your form.

- 5 min:**
1. Select one situation that you are tolerating.
  2. **Be firm with your intention:** Identify which value you want to uphold while collaborating with yourself to improve the situation.
  3. **Be flexible with the form of your expectations:** Brainstorm at least 5 different ways that you can uphold your intention while improving the situation that you are tolerating.

I am tolerating:

My intention is to connect to this value:

## My roadmap to cultivating my garden: Taking my next best step

**5 min:** Choose one value to connect to. Imagine that you are your own biographer, and you have lived life to the utmost with respect to this value. For each of the timeframes below: What have you done? How are you like? How have you treated yourself and others? Be specific and DREAM BIG!

**1min:** Circle one item from each time frame that would have the MOST positive impact on your life.

My intention is to connect to this value:

1 year

3 months

3 years

Lifetime