

5 min



Arriving

**Close your eyes and focus
on where you are at the
present moment.**

Where did your attention go?



Presence

By engaging in a small mindfulness exercise, we are preparing you for the coming activities. We call this exercise "arriving" because it represents a conscious transition from an everyday "busy state", in which we frequently project ourselves into the past and future, to one where we arrive into the present moment. The here, the now.

Mindfulness exercises are a tool to help us become more more aware of - and attentive to - the present. In doing so, mindfulness can help us become more sensitive to incoming stimuli.

In this state, the environment (external cues) and bodily experiences (internal cues) are processed. This bridges the external environment with our inner consciousness. Indeed, 'present moment awareness' is achieved when physical and mental states interact - at the intersection of body, feelings, mind and phenomena.

5 min



I Spy

**Focus your attention outwards.
Record as many sensory
experiences in sight, hearing,
taste, touch and smell as you can.**

Were some senses harder to record?



Umwelt

The senses are a vital source of knowledge: our reality is constructed through and constrained by our senses. Our senses are experienced by sensory organs in our body which allow us to take a slice of the Umwelt (ecosystem that we pick up on) and interpret sensory load.

Some senses are more dominant than others. With experience, we learn which senses are more reliable. This can lead to an overuse of some and negligence of other senses.

By focusing on our (less dominant) senses, we can become better aware of our environment. This enables us to be more appreciative of the world around us and gives us room for imagination.

5 min



Zoom In

Use your phone camera to zoom into details in your surroundings that you normally would not pay attention to.

How does the zooming change in your visual experience?



Optical Unconscious

The renowned philosopher Walter Benjamin introduced the notion of the Optical Unconscious, as a conceptual aftermath of photography.

According to him, photography brings to awareness experiences that the naked eye alone wouldn't decipher. For example, a photograph's tools of enlargement, or special effects, can provide new insight on what one is seeing. Film can similarly provide unique experiences. With slow motion, movements that you wouldn't normally register can suddenly be scrutinized. Hence, these technologies can heighten our sensory awareness of details, and allow us to "zoom in" in a whole new way.

On the other hand, technology can take "zooming in" too far. Whether by completely absorbing our attention or having us focused on the smallest of details, it may make us neglect the bigger picture.

5 min



Flamingo

**I: Stand on one leg for the next
30 seconds**

**II: Do the same, but with your
eyes closed**

*What happens when you close your
eyes? Why?*



Balance

Today, it is recognized that our experience goes beyond the five basic senses. For example, we have a sense of body, a sense of balance, a sense of pain, a sense of temperature and a sense of speech and word.

The activity introduces you to the sense of balance. Did you know that you actually need three senses to maintain a balanced posture (i.e. the center of gravity above your feet)? These are: the vestibular sense (which gives us awareness of the body and its movements), the sense of proprioception (knowing where our body is and what space it takes up), and the sense of vision. If you take one of the three away, the other two have to compensate, which makes it more difficult to balance.

We can improve these senses with training. To improve our vestibular sense, we can jump, dance, spin and twirl. To improve our proprioception, we can push, pull, climb and lift.

5 min



Temporarily

- I: Without touching anything, find two objects you think have different temperatures.**
- II: Hold both with each hand for 30 seconds to see if your hypothesis is confirmed.**
- III. Hold a different object with both hands, again for 30 seconds.**

How did touching the first two objects affect your perceived temperature of the third object?



Temperature

Thermoception refers to temperature sensation. There are two types of thermoreceptors that signal temperature changes in our own skin: warm and cold receptors. Our sense of temperature is a result of the comparison of the signals from each of these two.

When we touch the surface of an object, we encode information such as texture, temperature, and familiarity. This helps us make perceptual decisions about that object. According to Weber, "temperature is an estimation rather than a perception, since we perceive the effect of an increase or decrease in heat".

Further, temperature is perceived to be relational. Per van Gelder, the sense of temperature is observed in relation to our own temperature and to the body surface area being exposed to cold or heat.

10 min



Inwards

For the next ten minutes, close your eyes and slowly scan your body, from head to toe. Focus on what you can sense internally.

*How do your eyeballs feel?
What can your interior sensations tell you?*



Interoception

The inner and outer worlds of the body are constantly fluctuating. Our nervous system is built to monitor these changes and respond adaptively to maintain homeostasis, and promote survival.

Interoception is a sense that tells us about the internal state of our body. It is distinguishable from exteroception (perception of the external environment) and proprioception (reflecting the body's position in space).

Interoceptive processing happens in all of our major biological systems. It tends to come to our awareness when something is out of balance (e.g. we feel thirst, hunger, muscle tension or fatigue). This encourages us to act, in order to regain our equilibrium.

Internal bodily signals not only impact behaviour, but also emotions. Individuals who are more attuned to their bodily responses (more interoceptive) are also found to experience emotions more intensely.

You can train your interoception with mindfulness techniques, breathing exercises and naming sensations and emotions.

10 min



Making Space

With a blindfold on, explore the space around you while lying down, sitting and walking.

How did the blindfolding change your sense of space?

awareness



Spatial Experience

Most of our senses are involved in representing the space around us, as our bodies and movements are in constant interaction with the environment. That being said, sight and touch are most reliably involved in our experience of space, extension, figure, and motion. Both of these senses can provide us with an adequate notion of space. Though they are distinct, sight and touch are usually regarded as "one", when it comes to the sense of space, because they are constantly experienced together.

It is thus interesting to observe what happens to our sense of space when we take away one of these key inputs. Without vision, we still have touch, but we quickly come to realize that our experience of the space around changes drastically.

Works on multi-sensory experience and design find that the spatial experience, derived from the multi-sensory interaction (e.g. hearing, sight, touch) affects people's overall impression of a place. This helps explain how those who cannot see learn to leverage other senses (like hearing) to form their impression of space.

35 min



The Banana

I: Stitch half of your banana in whatever way you like.

How was the sensory experience of stitching the banana?

II: Teach one of your peers the method that you used.

What did you learn on your own and through your peer?



Experiential and Peer Learning

Through *experiential learning*, we challenged you to solve a problem by letting you interact with your environment and the task at hand. Though this learning method can be completed in different ways, an underlying principle is that it is 'instructionless'. It encourages the learner to gain new knowledge through a self-directed process, without explicit "telling" what or how to learn.

In *peer learning*, peers help each other solve questions or tasks. This method has multiple benefits. It has been found to help with recognizing contradiction, identifying and rectifying knowledge gaps, and with developing problem solving skills.

These methods offer a point of resistance to the traditional education system.

15 min



Hello, Stranger

I: Pair up with someone you do not know well, exchange phone numbers, sit back to back and have a two minutes text conversation with your partner where you try to get to know each other.

II: Turn around, face your partner and without speaking, observe each other for a few minute.

What can words - compared to observations - teach you about a stranger?



Tele-Presence vs Tele-Absence

As he puts his things away, the conference chair, Tripp, says: "Well thanks everyone, once again." After only the briefest pause he continues "Oh, and one more thi...." But he cuts his words short as he realizes that everyone has abruptly left. The room is now silent and empty.

Media promise to make us present to each other in absence, but there are trade-offs. Tele-presence is the accessibility for people to meet when they are not in the same geographical location. Tele-absence, on the other hand, compiles the elements that one can not experience online.

The quote above represents what online meetings feel like. We miss everything that goes before, after or in between these sessions. For example, the coffee chats before the meeting begins, the sound of people whispering to each other, and the goodbyes that come with final words, facial expressions, waiting to leave through the door.

15 min



Explosion In My Soul Pt. I

Listen to "Git It In Your Soul" by
Charles Mingus.

*I. What do you hear? What makes
you say that? What else?*

*II: Using shapes, colours and
patterns, try to draw what you*



Auditory Thinking Strategy

Visual Thinking Strategy (VTS) is a method used to enhance critical thinking and communication skills. It utilizes three core questions to focus observations: 'What do you see?', 'What makes you say that?', 'What else?'. It has been successfully implemented in wide ranges of educational contexts: from elementary-school students to medical residents.

In part I of our activity, we translate the original VTS to the auditory realm, so as to demonstrate these kinds of questions can be used to train other senses too. The first question prods you to consider the sound or music in an open-ended way. The second question challenges you to support your views using evidence. The third question implies there is more to be uncovered, contemplated and discussed.

Part II prods you to communicate what you've heard using a visual medium, thus transforming an auditory interpretation into something visible. It asks you to paint an actual (not verbal) picture of what you understood.

10 min



Explosion In My Soul Pt. II

Choose a painting that reminds you of the song you just heard.

Why did you choose that painting?

What happens when you look at the painting while listening to the song?





Multisensory Integration

Multisensory integration is the process by which inputs from two or more senses are combined to form a product that is distinct from and thus cannot be easily reduced to its components. That is:

The whole (sensory perception) is greater than the sum of its parts (individual sensory inputs).

For example, if you're listening to someone in a crowded room, looking at their lips while they talk can literally help you hear better.

How does this happen? Although our sensory organs (like our eyes and ears) are different, they convey information to the brain in the same language (i.e. through the firing of neurons). Our brain can then combine the bits of information they provide in order to produce a "big picture" that helps us make sense of the world.

People with *synesthesia* link senses in a conscious and repeatable way. For example, some experience coloured hearing, or forms with specific tastes. A recurrent question among scientists is whether synesthesia is a distinct phenomenon, or simply an amplification of the normal process of multisensory integration.

5 min



The Fuse is Lit

**Observe the painting you chose
while listening to a new song:
"The Trooper", by Iron Maiden.**

*How does listening to this song
change the experience?*





Inverse Effectiveness

Sensory stimuli coming from different sensory modalities aren't always integrated. For example, if they happen too far apart in space or time, our brain won't register them as being one event.

Even when they are integrated, that doesn't necessarily result in an enhancement of the sensory experience. In fact, the principle of "inverse effectiveness" holds that the magnitude of multisensory integration is inversely proportional to the strength of stimuli being integrated.

This means that when a sensory input is overwhelming (e.g., a song is way too loud), integration of that input with another (e.g. visual) breaks down. That is why you may find it difficult to focus on details of a painting while listening to a heavy metal song.