NEURODIVERSITY SECRETS FOR INNOVATION & DESIGN

IN THIS HOUR:

START

1
10 min **Intro & Intelligence Test**

2
10 min
Ideation Task:
Guilford's Alternative Uses (1967)

3
10 min
Design for Neurodiversity

4
10 min
Guilford's Alternative Uses -- Take 2

5
10 min
What Just Happened?
(Discussion)

6
5 min
Test Results & Wrap-Up
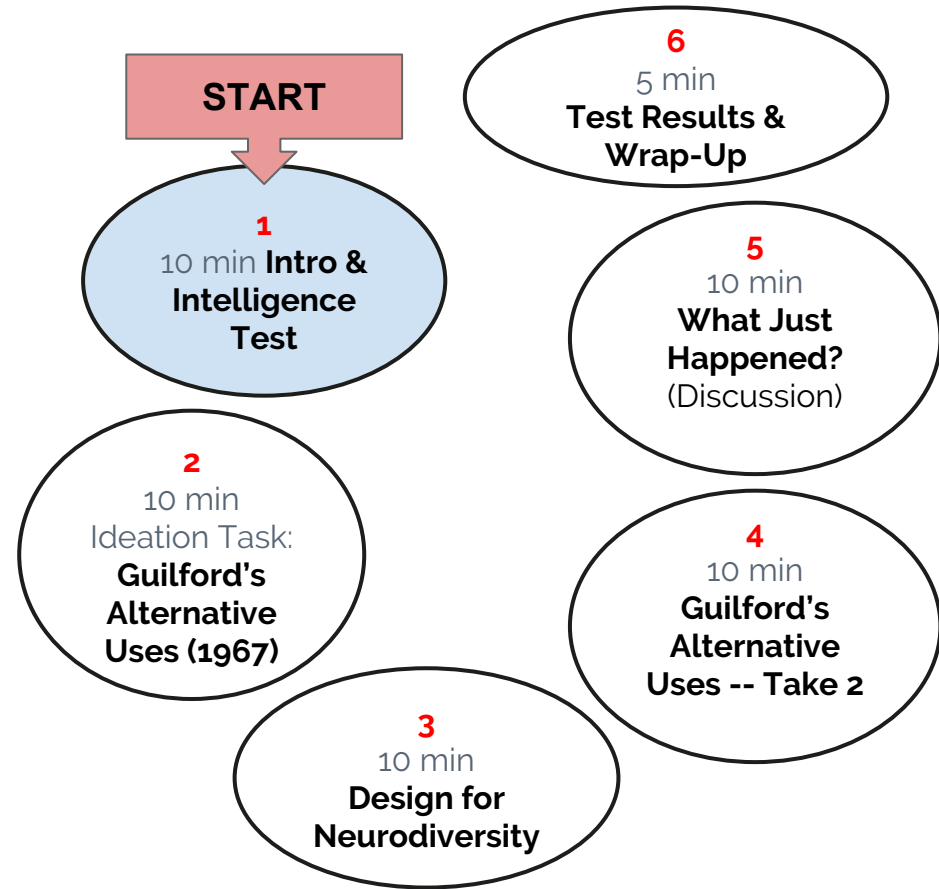
Intelligence Test: Write your answer in the TOP RIGHT of your index card.

prehend a wide rung   John Henry
an idiosyncratic manner. For example, in response to a
question on the Wechsler Intelligence Test, "What do
you do when you cut your finger?"

⬛ ~~John Henry~~ Mar 10
You know you're [____] when you read this & think: What's wrong with that? Surely it's the correct answer? 😂😂😂 pic.twitter.com/jsN2oTcNlh

↩ 7   🔁 12   ♥ 50

1

"

> **Quality** is the "totality of characteristics of an entity that bear upon its **ability to satisfy stated and implied needs**."
>
> ISO 9001:2015 § 3.1.5

1

"

Innovation is the "totality of characteristics of an entity that bear upon its ability to satisfy future needs."
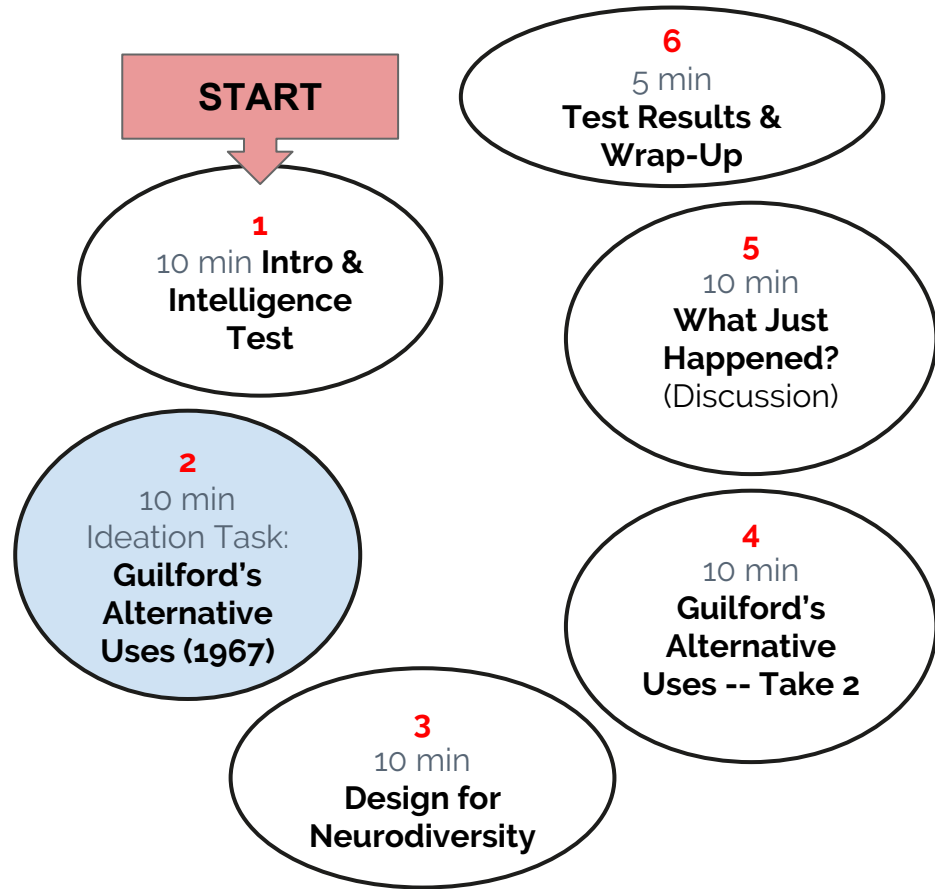
based on ISO 9001:2015 § 3.1.5

1

DESIGN

How will we satisfy stated and implied needs?

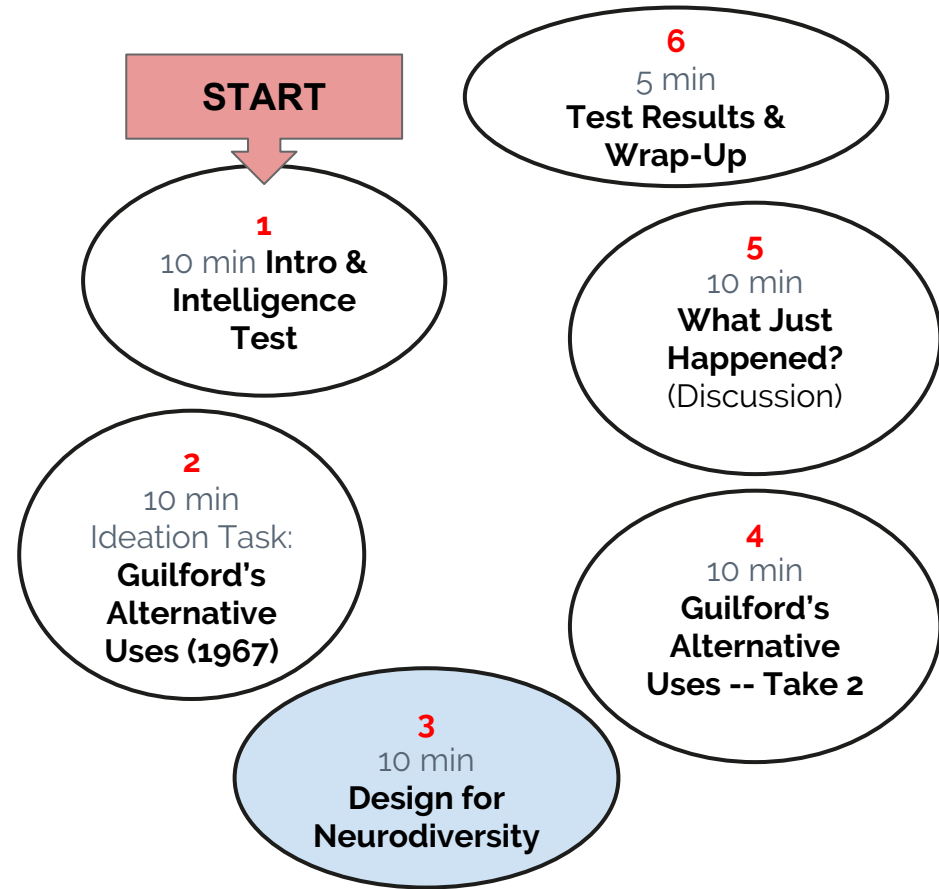Guidelines, Heuristics, Metrics, & Models

1

IN THIS HOUR:

START

1
10 min **Intro & Intelligence Test**

2
10 min
Ideation Task:
Guilford's Alternative Uses (1967)

3
10 min
Design for Neurodiversity

4
10 min
Guilford's Alternative Uses -- Take 2

5
10 min
What Just Happened?
(Discussion)

6
5 min
Test Results & Wrap-Up

DESIGN ALL THE THINGS!

HEAR EVERYONE'S VOICES!!

Guilford's Alternative Uses Task (1967)

2

IN THIS HOUR:

START

1
10 min **Intro & Intelligence Test**

2
10 min Ideation Task: **Guilford's Alternative Uses (1967)**

3
10 min **Design for Neurodiversity**

4
10 min **Guilford's Alternative Uses -- Take 2**

5
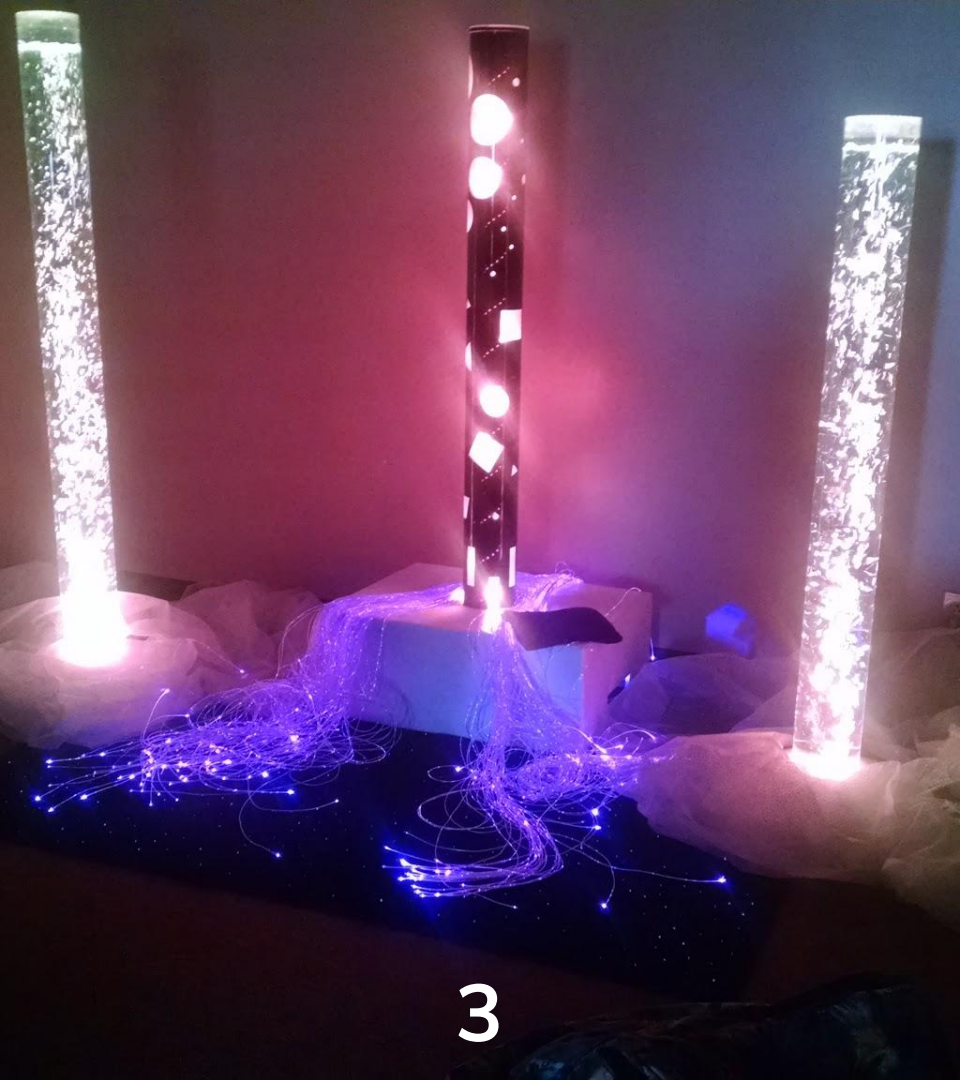10 min **What Just Happened?** (Discussion)

6
5 min **Test Results & Wrap-Up**

DESIGN FOR NEURODIVERSITY (DfN*) MODEL

1 in 68 people are on the Autism Spectrum

It's not an "epidemic" - just underdiagnosed, especially in women and adults

Sensitivity to Sensory Stimuli
Issues with Executive Function
Different Social/Relational Cognition

3

UNIVERSAL DESIGN

Create artifacts that are accessible and usable by everyone

ACCESSIBLE DESIGN

Accommodate disabilities & weak spots

NEURODESIGN

Designing for hidden, subconscious, biologically-driven preferences (e.g. Zaltman metaphor elicitation)

STRENGTHS-BASED APPROACH

PATTERN RECOGNITION

ANOMALY DETECTION

CATALOGUING (SEEMINGLY IRRELEVANT) DETAILS

SYSTEMATIZING

+ **TIME & COMMUNICATION CHANNELS**
+ **UNEVENNESS BUFFER**
+ **SIGNAL TO NOISE**
    - Reduce Ambiguity
    - Optimize Sensory Density
    - Manage Information Flow:
        - Provide Scaffolding, Choice Architecture
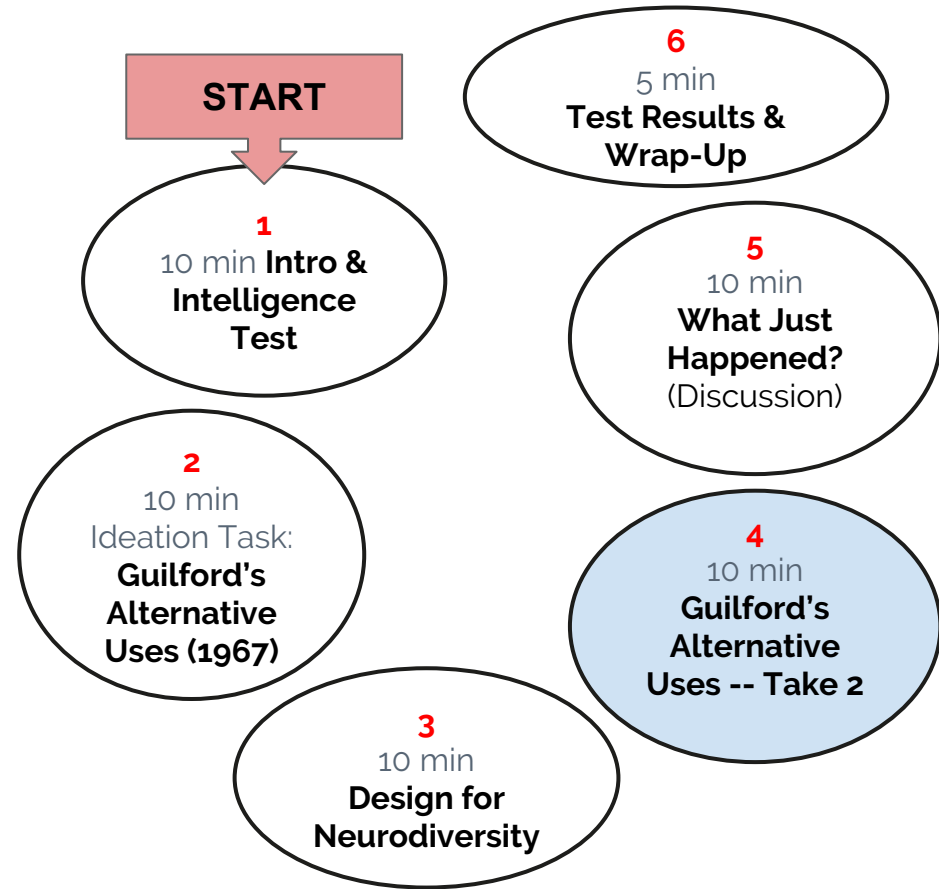
3

DESIGN FOR NEURODIVERSITY
(DfN*) MODEL

+

Sensory

−

+

Ambiguity

−

**Engagement &
Expectations**

3

START HERE!

+

Low Sensory Information

–

Engagement & Expectations

+

High Ambiguity

–

3

& LET THE PROCESS MOVE YOU TO HERE:

+

High Sensory Information

−

Engagement & Expectations

+

Low Ambiguity

−

3

IN THIS HOUR:

START

1 10 min **Intro & Intelligence Test**

2 10 min Ideation Task: **Guilford's Alternative Uses (1967)**

3 10 min **Design for Neurodiversity**

4 10 min **Guilford's Alternative Uses -- Take 2**

5 10 min **What Just Happened?** (Discussion)

6 5 min **Test Results & Wrap-Up**

DESIGN ALL THE THINGS!

HEAR EVERYONE'S VOICES!!

DO IT AGAIN:
APPLY DfN Concepts

4

DfN Concepts:

PATTERNS

PERCEPTS

ANOMALIES

ACTIONS

CATALOGS

GOALS

SYSTEMS/
STRUCTURES

SENSORY
ENVIRONMENT

4

IN THIS HOUR:

START

1
10 min **Intro & Intelligence Test**

2
10 min
Ideation Task:
Guilford's Alternative Uses (1967)

3
10 min
Design for Neurodiversity

4
10 min
Guilford's Alternative Uses -- Take 2

5
10 min
What Just Happened?
(Discussion)

6
5 min
Test Results & Wrap-Up

What just happened?

5

- **Reduce Ambiguity** - Provide conceptual framework for each experience prior to engagement, convey messages in multiple ways, repeat and remind often (or use design affordances liberally), ask for confirmation and clarification.
- **Optimize Sensory Density** - Provide multimodal, multichannel access to information, provide physical (body) space and refractory time, provide signals for upcoming breakpoints, aim to underwhelm.
- **Increase Information Flow** - Reduce face time, increase required response times, reduce the number of choices for navigation and decision making, increase opportunities for demonstrating competency or making points.

HOW WE APPLIED DfN

Reduce Ambiguity:

- Clear expectations on task, times
- Provided a conceptual framework for activities
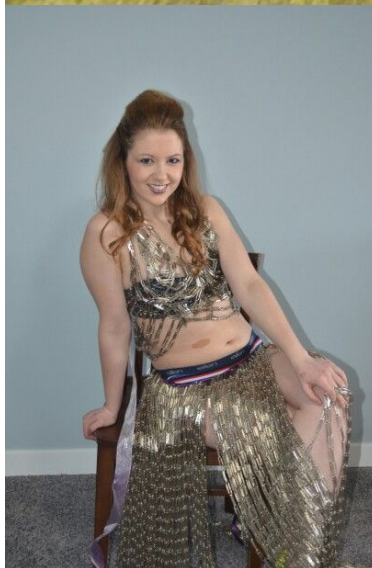
Optimize Sensory Density:

- Signals for breakpoints & transitions
- Brought a racehorse buddy

Increase Information Flow:

- Multiple channels of communication
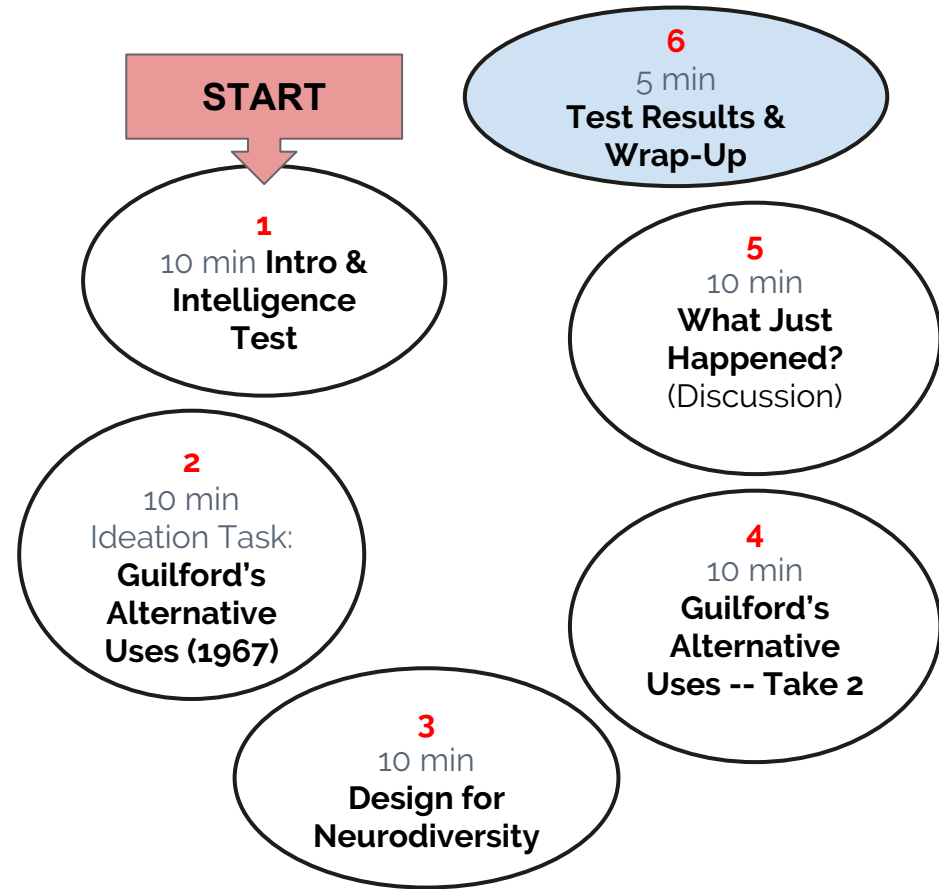- Provided different ways to report out results

5

5

IN THIS HOUR:

START

1 10 min **Intro & Intelligence Test**

2 10 min Ideation Task: **Guilford's Alternative Uses (1967)**

3 10 min **Design for Neurodiversity**

4 10 min **Guilford's Alternative Uses -- Take 2**

5 10 min **What Just Happened?** (Discussion)

6 5 min **Test Results & Wrap-Up**

prehend a wide ~~range~~ John Henry ~~so in~~ an idiosyncratic manner. For example, in response to a question on the Wechsler Intelligence Test, "What do you do when you cut your finger?" autistic children commonly say "bleed."[48] This answer implies an unusual interpretation of what the questioner has in mind.

6

👍

We make decisions about what ideas get integrated by how we design the information gathering.

- Adapting the design process to better involve different neurotypes can help you catalyze innovation
- Developing products, processes, & environments that help neurodiverse people can help *everyone*

@morphatic   **@nicoleradziwill**

6