



Orientation games that double as analogies for learning

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Overview: This collection of dual-purpose activities is designed to both engage interns in fun activities that build group cohesion, while also serving as analogies that activate and facilitate learning about the internship/research process.

Game 1: Pick-up Sticks (Knowledge/Decision Making)

Learning Goal: The goal of this activity is to convey that “Knowledge is Power.”

Materials:

15 small items (e.g. pencils)

Procedure:

1. Place all 15 items on the table
2. Explain the rules to the group
 - a. Each player removes 1, 2, or 3 of the items (their choice)
 - b. Person to remove the last stick loses
3. Challenge one intern to the game and allow them to decide if they want to go first or if they want you to go first (it doesn't matter)
4. Continue to challenge others in the group until there are no more challengers or one of the group members figures out the patterns and beats you. .
5. If someone figures out the pattern and beats you, allow them to keep playing others until there are no more challengers.



To win: Winning this challenge is simple if you have a bit of knowledge. When picking up the items you must pick them up amounts that allow you to pick up the 2nd, 6th, and especially the 10th item in order to win.

Using with Interns: While this game only involves two people at a time, the challenging fast-paced nature always makes it exciting for others to watch! Interns are very keen to try to solve this puzzle, as they quickly understand that there is a pattern just from observing one round. However, most have difficulty figuring out the “trick” to winning. This makes the interns highly engaged in both the activity and the learning that follows.

Once everyone in the group has had a chance to participate in the game, build the analogy by asking the interns “How hard was the game?” “What made it so challenging?” Build on student responses and lead the group to see that a lack of knowledge was holding them back from being successful. Ask the group for examples of where they might have had a similar, but not game, experience in life.

Next, if at least one student hasn't already figured out how to win the game, share “the knowledge” with someone and play that person again. Ask them how the game was different after they knew the solution? Ask the group for examples of past experiences where knowledge

gained had benefited them. Be sure to use follow-up probes to make the role of the knowledge explicit. Then ask the group to predict places they think knowledge gained from or during the internship might benefit them in the future. Examples might include, but are not limited to, knowledge of the graduate school application process, knowledge of what the research process is like, and perhaps most importantly knowledge of themselves as they transition to becoming independent learners/researchers.

Game 2: Mind Power (Goal-setting/Metacognition)

Learning: The goal of this activity is “you can do anything you set your mind to”. The demo and quote by Ben Franklin is intended to engage interns in a session on setting SMART goals and actively monitor them.

Materials:

- 1 String, roughly 12” long, for each person
- 1 #2 Split shot (or other mass) per string

Before instruction: Attach one split shot to each string



Procedure:

- Tell participants each of their brains are so powerful. In fact, by visualizing something happening can make it so! You will demonstrate the power of the mind to them.
- Give each participant a string with a mass.
- Ask each participant to hold the string, with the mass at the bottom, at arms length.
- Ask them to concentrate on the mass.
- Next, command the mass to begin moving back and forth.
- Increase the emphasis and continue to commanding them to see the string rocking back and forth “Right – Left – Right – Left – Right – Left”
- You should begin to see some/many of the washers start to move back and forth as you continue this “Right – Left – Right” cadence.

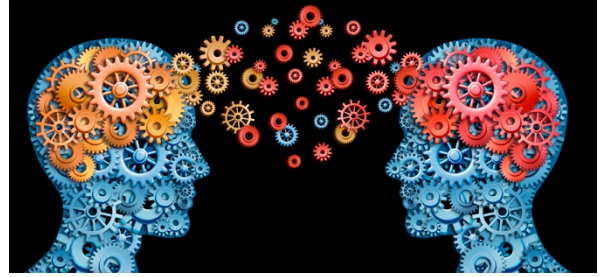
Using with Interns:

This discrepant event demonstration draws interns’ attention to the “power of the mind” and serves as an analogy for to frame a discussion on goal setting and active monitoring of goals. Debrief the activity by asking students what they saw? What did they experience? Ask if it was the power of your mind that made the mass move on the string. Explain that the mass actually moved as a result of the power of their own minds and your suggestions for the mass to move, rather than your mind acting on the mass. Ask students how this demonstration might be analogy to their internship experience. Accept all answers but lead students towards a discussion on the well-documented power of setting SMART Goals (Specific, Measurable, Achievable, Relevant, Time-bound) and active monitoring of those goals (e.g. an increased sense of agency and intrinsic motivation, which in turn foster greater persistence, creativity, and risk-taking in their achievement of those goals).

“If you fail to prepare, you are preparing to fail!” Ben Franklin.

Game 3: Inquiring Minds (Communication)

Learning: The goal of this activity is to illustrate that communication is a critical component of an internship. It involves both active listening and effort (and personal risk) when responding, especially during virtual communication.



Materials: (per person)

- 1 Sticky note and pencil

Procedure:

- 1) On their sticky note, each person should write an open-ended question that they will ask someone else. (*An open-ended question encourages a full, meaningful answer using the subject's own knowledge and/or feelings. In short, it is a question that requires more than a short yes or no type response.*)
- 2) Participants find a partner they don't know.
- 3) Collectively, the shorter partner asks the taller partner the question on their sticky note while adhering to the following rules.
 - a. The respondent must talk for at least 45 seconds (*the group leader will time this*)
- 4) The taller partner should now ask the shorter partner their question following the same rules (timed again by the group leader).
- 5) Partners should trade sticky notes and find a new partner.
- 6) Collectively, the shorter partner asks the taller partner the question on their sticky note while adhering to the following rules.
 - a. The respondent must talk for at least 45 seconds with their eyes closed (*the group leader will time this*)
- 7) The taller partner should now ask the shorter partner their question following the same rules (timed again by the group leader).
- 8) Partners should trade sticky notes and find a new partner.
- 9) Collectively, the shorter partner asks the taller partner the question on their sticky note while adhering to the following rules.
 - a. The respondent must talk for at least 45 seconds (*the group leader will time this*)
 - b. The listener must remain silent and expressionless (no nodding, smiling, etc.)
- 10) The taller partner should now ask the shorter partner their question following the same rules (timed again by the group leader).
- 11) Partners should trade sticky notes and find a new partner.
- 12) Collectively, the shorter partner asks the taller partner the question on their sticky note while adhering to the following rules.
 - a. The respondent must talk for at least 45 seconds (*the group leader will time this*)
 - b. The listener must remain silent (*facial expressions and nodding now allowed*).
- 13) The taller partner should now ask the shorter partner their question following the same rules (*timed again by the group leader*).
- 14) Partners should trade sticky notes and find a new partner.
- 15) Collectively, the shorter partner asks the taller partner the question on their sticky note while adhering to the following rules.
 - a. The respondent must talk for at least seconds (*the group leader will time this*).
 - b. The listener may engage fully (*but not take over talking*) with the respondent.
- 16) The taller partner should now ask the shorter partner their question following the same rules (*timed again by the group leader*).

17) Bring the entire group back together and debrief using the following questions as a guide.

- a. Which questions were really interesting? Why?
- b. Do you feel like you know people better than before the activity?
- c. Was it hard to answer the questions you were asked? Why? How did this change throughout the game?
- d. Was it hard to listen to the answers to the questions? Why? How this change throughout the game?
- e. How can the lessons learned from this game help us this summer? *(Discussion will vary based on each REU site but may include; Communication with mentors and peers, Knowing more about topics than one initially thinks, Effort is required to both listen and respond, Responding can involve risk taking, Different types of communication may require different approaches, especially if virtual communication is particularly important.*