1. Introduction:
"In any environment, both the degree of inventiveness and creativity, and the possibility of discovery, are directly proportional to the number and kind of variables in it." Simon Nicholson, 1971 Theory of Loose Parts

These objects (loose parts) invite conversation and interaction, and they encourage collaboration and cooperation. Daly & Bologlovsky, 2015 Loose Parts: inspiring play in young children

2. We wondered...
If loose parts would be an effective strategy for helping children to develop executive functioning skill?

3. So we reviewed the literature which revealed...
• Why executive functioning is important?
• How executive functioning is important?
• How loose parts might support the kind of play that would promote executive functioning?

4. Open-ended Play & Executive Functioning:
- Kids with more free time & autonomy develop higher levels of EF & self-direction: Barker et.al, 2014 (University of Colorado)
- Traditional psycho-metric testing (IQ) doesn't measure EF skills (Ardilla, Pineda & Rosselli, 2000; Blair et al., in progress @ Penn State)
- Free play promotes decision-making and problem-solving (Gray, 2013)
- Curricula that promote scaffolding & include play promote higher levels of EF (e.g., Tools of the Mind, Montessori, Reggio Emilia, etc.)

5. How did the children’s play change
Children's play has gradually become highly integrated, with "parts" from different areas being used for elaborate and extended scenarios.

- Once play develops sufficiently, they won’t choose to play in the “scripted” areas anymore (e.g., playhouses)
- Loose parts facilitate transition to “games with rules” stage
- Decomposition of natural materials has inspired a whole category of play - “science of the rotting log...”

Literature Review:
Importance of Executive Functioning
- Research increasingly points to EF levels as important predictor of future academic & life success Bailey, 2007;
Blair & Razza, 2007, Borella et al., 2010, Brody et al., 2003, Denson et al., 2011 Duncan et al., 2007;
Gathercole et al., 2004, Morrison et al., 2010
- Physical activity also proves to promote brain development: Tomporowski, Davis, Miller & Naglieri (2007);
Chornitz et al. (2009); Prosser & Jiang (2008)

Open-ended Play & Executive Functioning:
- Kids with more free time & autonomy develop higher levels of EF & self-direction: Barker et.al, 2014 (University of Colorado)
- Traditional psycho-metric testing (IQ) doesn’t measure EF skills (Ardilla, Pineda & Rosselli, 2000; Blair et al., in progress @ Penn State)
- Free play promotes decision-making and problem-solving (Gray, 2013)
- Curricula that promote scaffolding & include play promote higher levels of EF (e.g., Tools of the Mind, Montessori, Reggio Emilia, etc.)

Loose Parts: Re-imagining Outdoor Play Spaces from a Constructive Perspective
Candace Jaruzelsicz, Ph.D., Mary White M.Ed., Jane Hart, M.A.T
N. E. Miles Early Childhood Development Center
College of Charleston