Welcome
- Introductions: Who are we? Why are we here?

Syllabus...

Guiding questions:
- What should teachers know about development?
  - How are children’s cognitive traits, abilities, and limitations reflected in their work, play, and talk?
  - How can educational practices be “fitted” to children’s abilities and limitations?
- What should we know about the education system and its assumptions about children and learning?
What should teachers know about cognition and development?

- **Definitions:**
  - Development? Learning? Teaching?

- **Teacher (mis)conceptions:**
  - Science as “a bunch of set facts”
    - Ideas about knowledge: Can deep understanding emerge from memorizing a “bunch of facts?”

- **Guiding concepts:**
  - Scaffolding; “Zone of Proximal Development”
    - *Goal: Help stud. acquire knowledge/skills w/in capabilities*
  - What can children (of a given age) learn?
Zone of Proximal Development; Scaffolding

High (expert) Ability Level

Intermediate

Low (novice) Ability Level

Zone of Proximal Development

Scaffolded level

Unassisted level

Zone of Proximal Development

Scaffolded level

Unassisted level
Learnability: “Fitting” schooling to the child

- What can children of a given age learn? (“developmentally appropriate”)
  - Complicating factor: individual differences
- What do children “get” from instruction?
  - How do different teaching practices affect learning? Does this depend on age?
- Does schooling facilitate cognitive skills?
  - Age vs. knowledge
What a child can learn (or not)

- Example: Learnability of syntax (Braine, 1971):
  - Child (2.5 years): “Want other one spoon, daddy?”
  - Dad: “You mean, you want the other spoon?”
  - C: “Yes, I want other one spoon, please, Daddy.”
  - D: “Can you say, ‘the other spoon’?”
  - C: “other...one...spoon”
  - D: “Say ‘other’” [C: “other”]
  - D: “Spoon” [C: “spoon”]
  - D: “Other...spoon”
  - C: “Other spoon. Now give me the other one spoon.”
What is learned?

“If nothing else, school has prepared me for a lifetime of backpacking.”
Age or experience?

Pi what squared? Long John, you ought to be able to get this.”
Morrison et al: memory and word decoding in “School cutoff” study

**Moral:** It’s hard to know what is learned in vs. out of school, & whether age is critical.