

## **Patterns Workshop Summer 2014**

**June 30 - July 1, 2014**

### **June 30, 2014**

**9:00 - 9:10:** WELCOME! - Introductions

**9:10 - 9:30:** Introductory Presentation

**9:30 - 9:45:** Distribute handout packet & record dry weight of peas

**9:45 - 10:45:** Much Ado About Wrinkling Activity Using RAPT

**10:45-11:00:** short break

**11:00 - 11:50:** Benny's research

**11:50 - 12:30:** Part 1: Wrinkled Peas? Introduction to the Activities

- Human Saliva activity
- Osmosis and Dialysis Tubing Activity
- Analyzing Dry and Imbibed weights of wrinkled and smooth pea seeds
- Inquiry Lab—Putting it All Together, What makes wrinkled peas?

**12:30 – 1:30 Lunch**

**1:30 – 3:00** Part 2: Wrinkled Peas?

**3:00- 3:30** Buckling Introduction - Benny

**3:30 – 4:30** Buckling Activity - Benny

### **July 1, 2014**

**9:00 – 9:30** Buckling Analysis

**9:30 10:15** ADI Investigations

**10:15 – 10:30** Short Break

**10:30 – 12:15** ADI Investigations

**12:15 – 1:15** Lunch

**1:15 – 1:45** Branching Presentation

**1:45 – 2:45** Hands-On Branching Activities (branching is the efficient distribution and collection of materials and energy)

- Hele-Shaw Cell
- Root branching
- Brainstorm branching in disciplines

**2:45 – 3:00** Break

**3:00 – 4:30** Brainstorm and Sharing Ideas – Patterns, NGSS and your discipline.