Content First Instruction
What’s Right With What’s Wrong
Until Lions have historians, Hunters will always be HEROS!!
Vignette #1: D’Andre Hampton and The Block of Ice

Teacher: So here’s the deal. By the end of the day we will be able to provide a clear explanation of this problem. Here’s the problem. Has anyone here ever seen a marathon runner on TV (hands raise). Has anyone ever seen a fat marathon runner?

Ryland: Yeah. Oprah!

Teacher: She’s not fat. And I am talking about people who race in marathon’s all the time. Has anyone ever seen a fat marathon runner? (no response)
So here’s the question: Why is it that you will never see a fat marathon runner?
• Andre: It’s basically because the be sweat’in

Teacher: That’s good. What does sweat have to do with it?

Tanisha: It’s because they always be hot. They be hotter than everybody else. My cousin always be sweat’in.

Steve: “It’s cause they fat Blood! (laughter). They get hot and they always be sweat’in… even if they just walk’in up the stairs.”

D’Andre: “Naw! It’s like this. It’s like if you set a block of ice out. Out on the curb. The ice don’t just melt. First, it just turns into water. Then, the water it disappears into steam. It’s like that. It don’t be no fat marathon runners because when they run, they melt the fat and they body use the fat and it burns off.”
IS HE RIGHT OR WRONG?
Until Lions have historians, Hunters will always be HEROS!!
Figure 1. Image of a curveball
I do know this. I know that once I create spin, I put more pressure ... there is more pressure there is a higher pressure gradient on one side of the ball than on the other. Which if the spin is in that direction or in a north south direction, a 12 to 6 direction then I should get more pressure on top of the ball that causing the ball to dive. Now if my finger goes a little bit on the side of the ball I create a side spin as well as a down spin, I should be able to create that pressure gradient it would be greater on this side of the ball which would create what would appear to be a two point break.
When you flick the ball it cuts through the air. It has different airs under it and over it. And [the air] starts pressing it down so [the baseball] drops and the air on the bottom is more loose in the right way and it just the heavy pressure makes it drop.”
I don’t know if it’s high or low, but one of them is on the top and one of them is on the bottom the one is pushing it down in kind of an arc. The one on the bottom can’t hold up to it. I guess probably the top one is high pressure and the bottom one is low and it’s pushing it down so it looks like it’s curving, so it is curving.
Leoni wrote *Fish is Fish* (1970)
- About the fish who could walk on land.
- The fish returned to tell the story of their experience.
- All images & thoughts from the listeners were rooted in their ‘fish’ framework.
- What framework’s do your students have?
DISAGGREGATE INSTRUCTION

(1) Introduce Big Idea/Basic Tenants in everyday english

(2) Address Misconceptions

(3) Teach Correct Science Language

(4) Generate Opportunities to explain using newly acquired science language