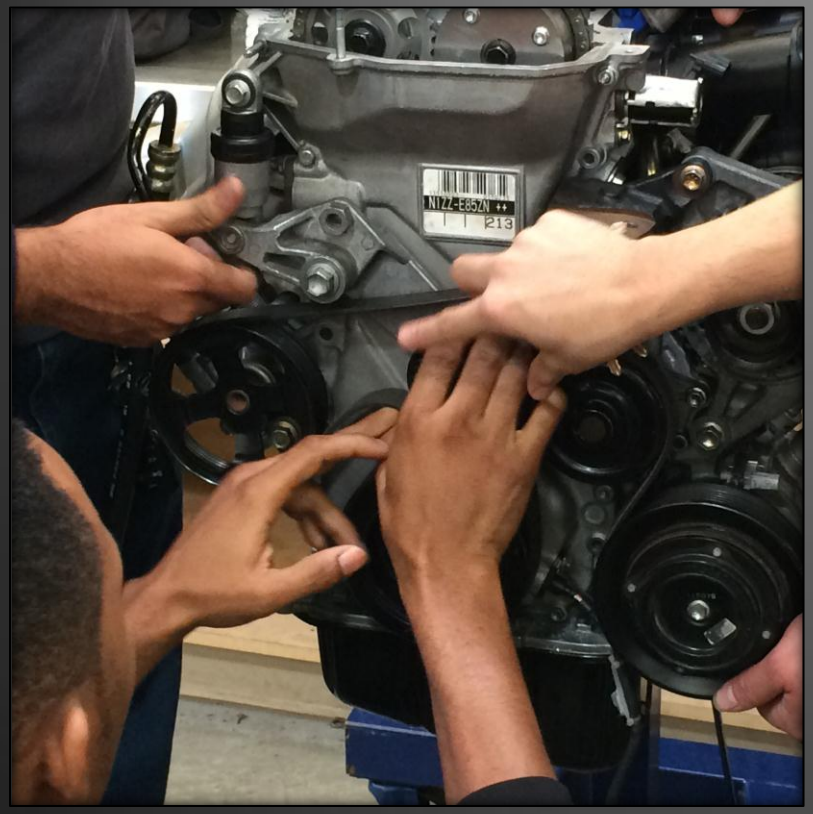


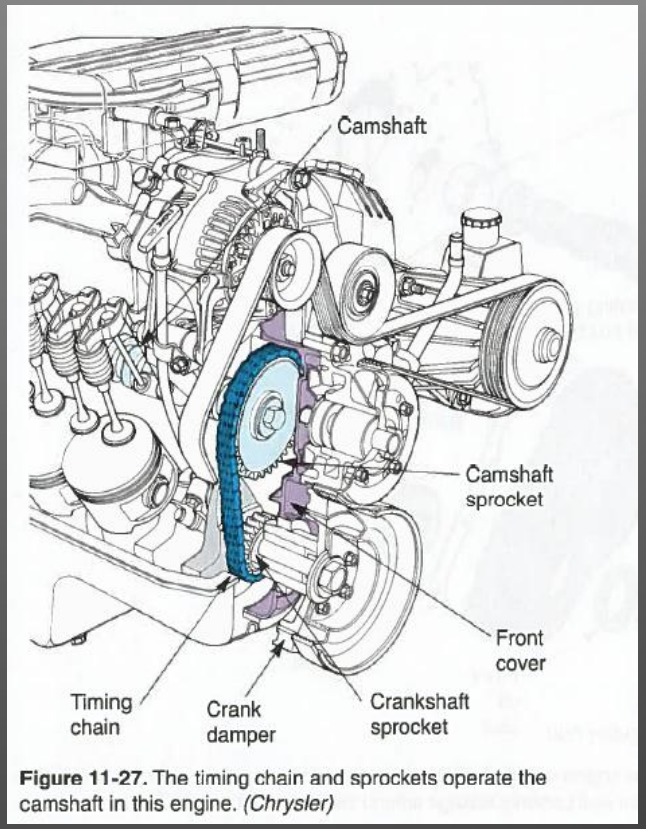


Figure 11-27. The timing chain and sprockets operate the camshaft in this engine. *(Chrysler)*

Contextualized Basic Skills In Auto Technology

Contextualized Basic Skills In Auto Technology

San Diego Continuing Education

CTE Dean: Jane Signaigo-Cox
ESL Dean: Barbara Pongsrikul
Instructors: Frank Vasquez and Carolyn McGavock

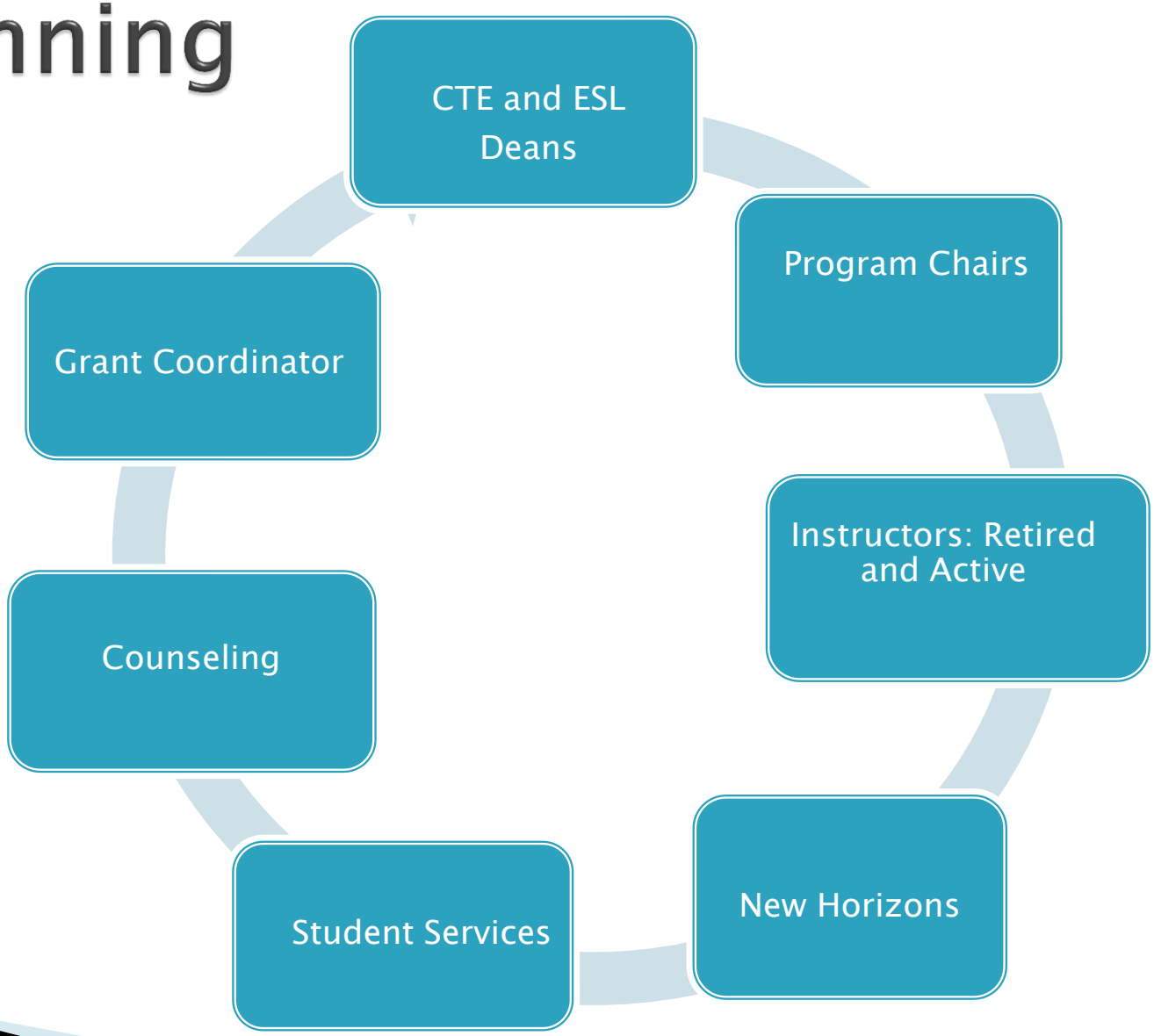
What Works In Job Training: A Synthesis of the Evidence

"*Lower-skilled individuals and those with multiple barriers to employment benefit from coordinated strategies across systems, …*

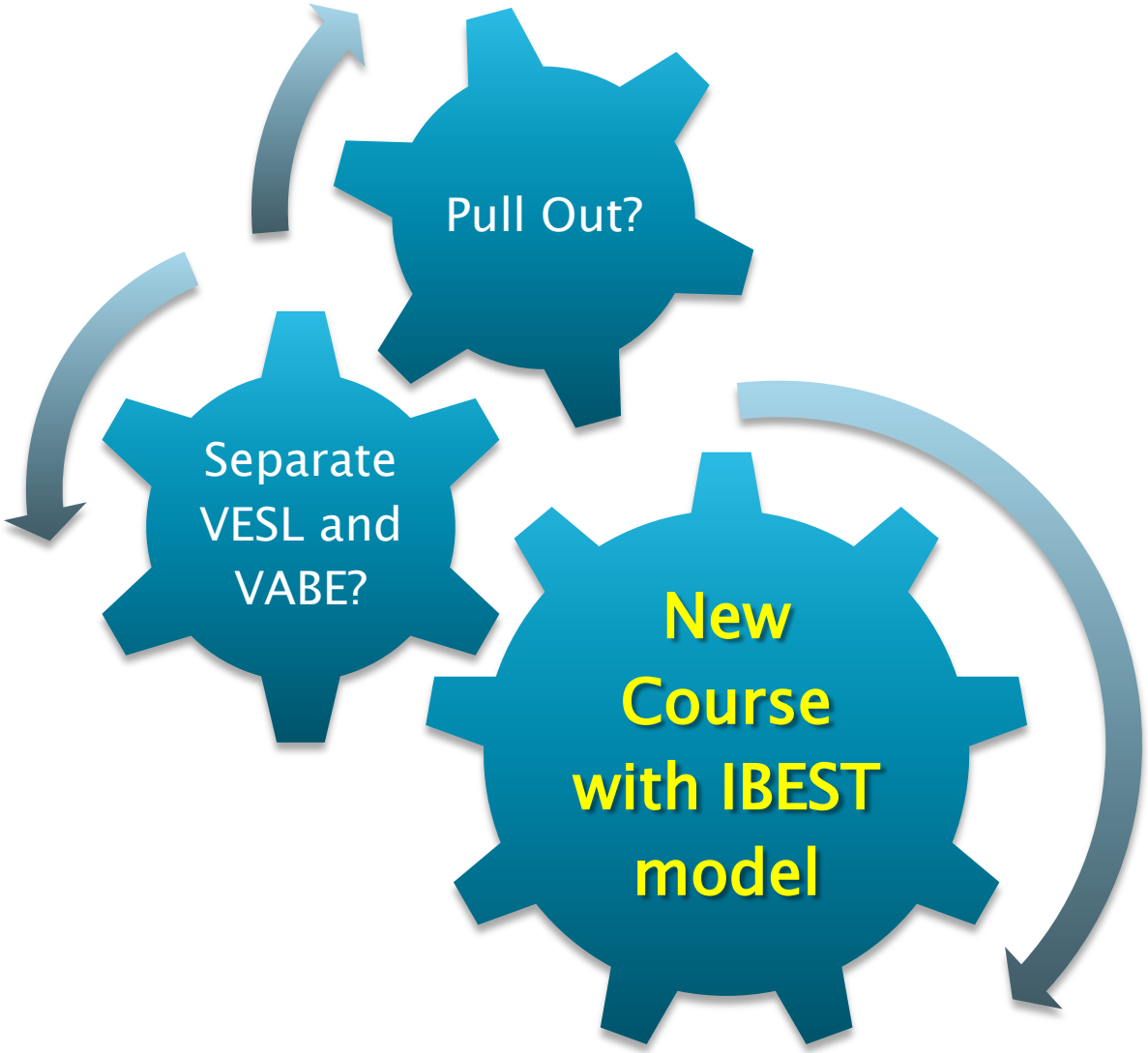
What Works In Job Training: A Synthesis of the Evidence

….and flexible, innovative training strategies that integrate the education, training, and support services they need to prepare for and succeed in the workplace."

Planning


CTE and ESL Deans
Program Chairs
Instructors: Retired and Active
New Horizons
Student Services
Counseling
Grant Coordinator

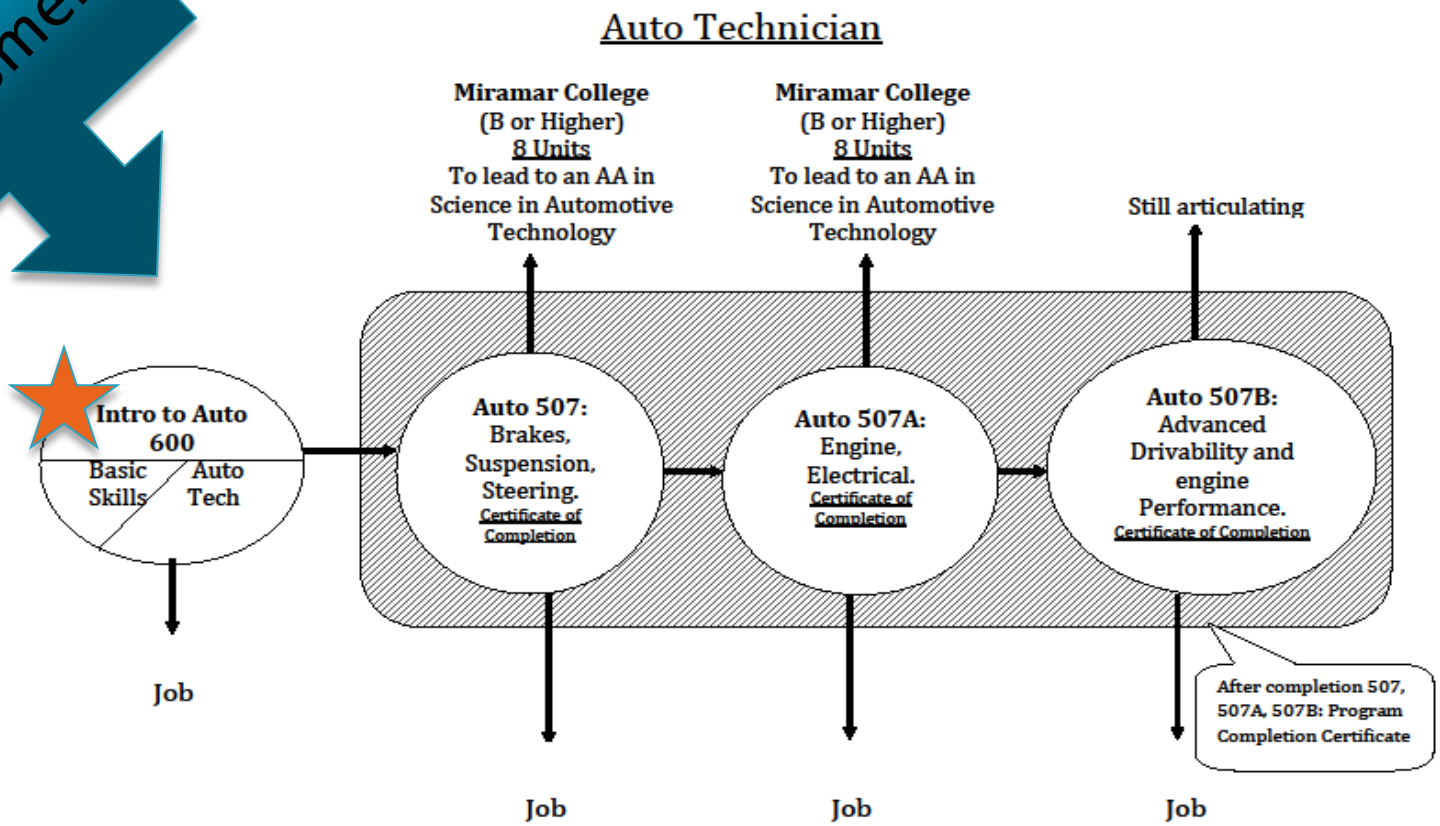
Exploration



IBEST Collaboration

- Auto 600/601 and Adv Pre-Vocational ESL
- Offered to students scoring
  - Below 8th grade math
  - Below 9th grade reading
  - English Language Learners
- Serves as introduction to core series:
  3 modules ~ 325 hours each

Orientation and Assessment



Goal: Increase Persistence

- … provide a base of technical skills and technical knowledge in English
- … reawaken mathematical thinking
- … develop ‘student habits’
- … build confidence
- … foster learning community
- … set short and long-term goals

Soft Skills

- Understand work expectations
- Prepare a resume, job interview practice
- Balance work, family and school

Course Development

- 100 hours each for instructors before and during pilot phase
  - Research, peer observations, collaborative planning
- Additional non-classroom time, post-pilot
  - Informed professional development

Instructional Strategies

- Introductions: Class community
- Hands-on presentations and practice
- Common sense approach
- YouTube and computerized simulations
- Complementary reading and math lessons
- Structure opportunities for discussion and retelling
- Variety of assessment styles

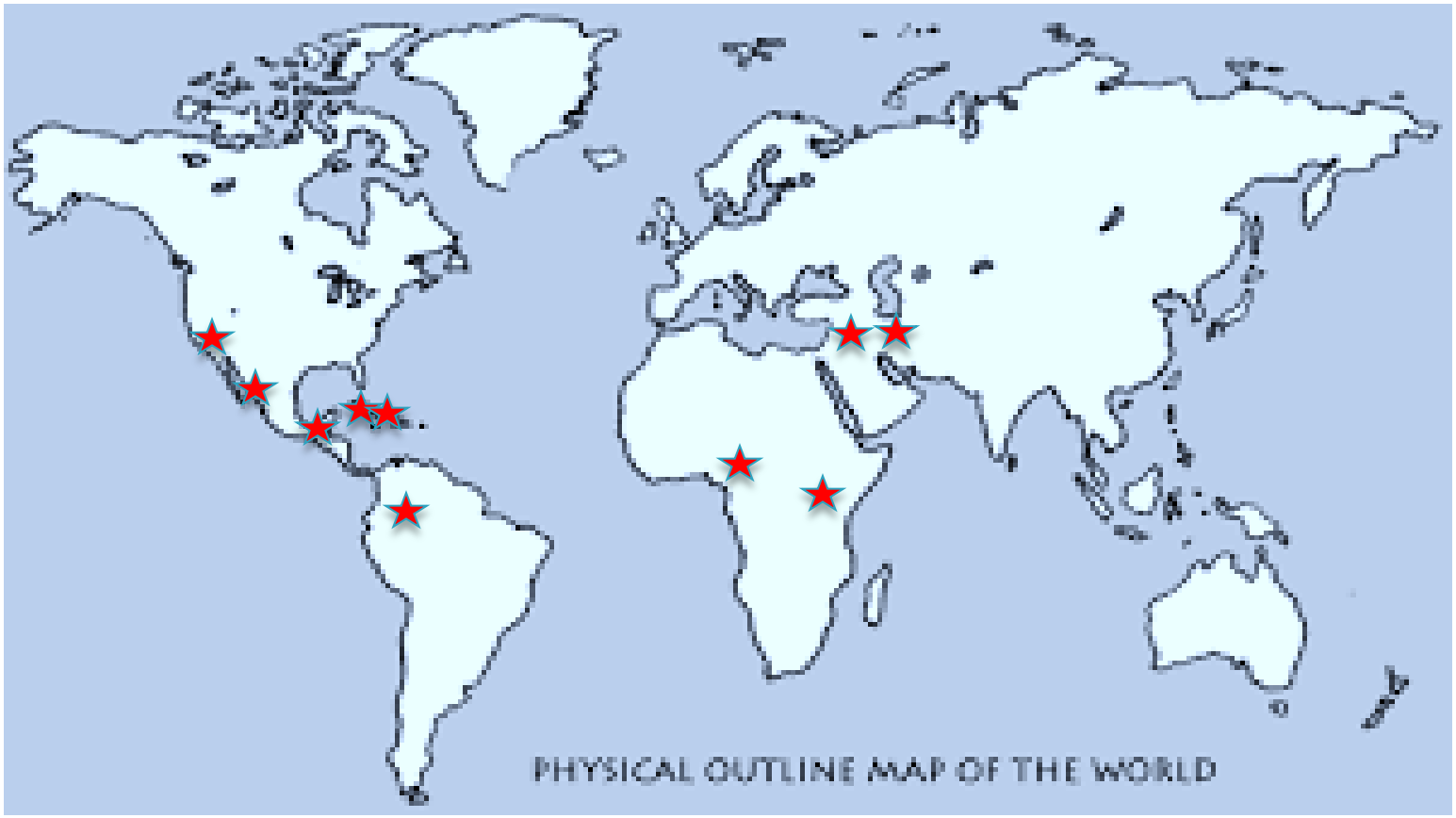
Pilot

- 20 Students – 11 weeks – 20 completed

- Pre-Post CASAS Employability Test
- 80% gains in math, 60% gains in reading

- 19 continued to 507A
- 16 currently enrolled after 10 weeks

Student Diversity



“What parts of the course were the most helpful?”

S4 Frank’s class of hands-on and the demo’s were good cause I could physically see it and not just mentally think about it. Carolyn – she helped one-on-one with math.

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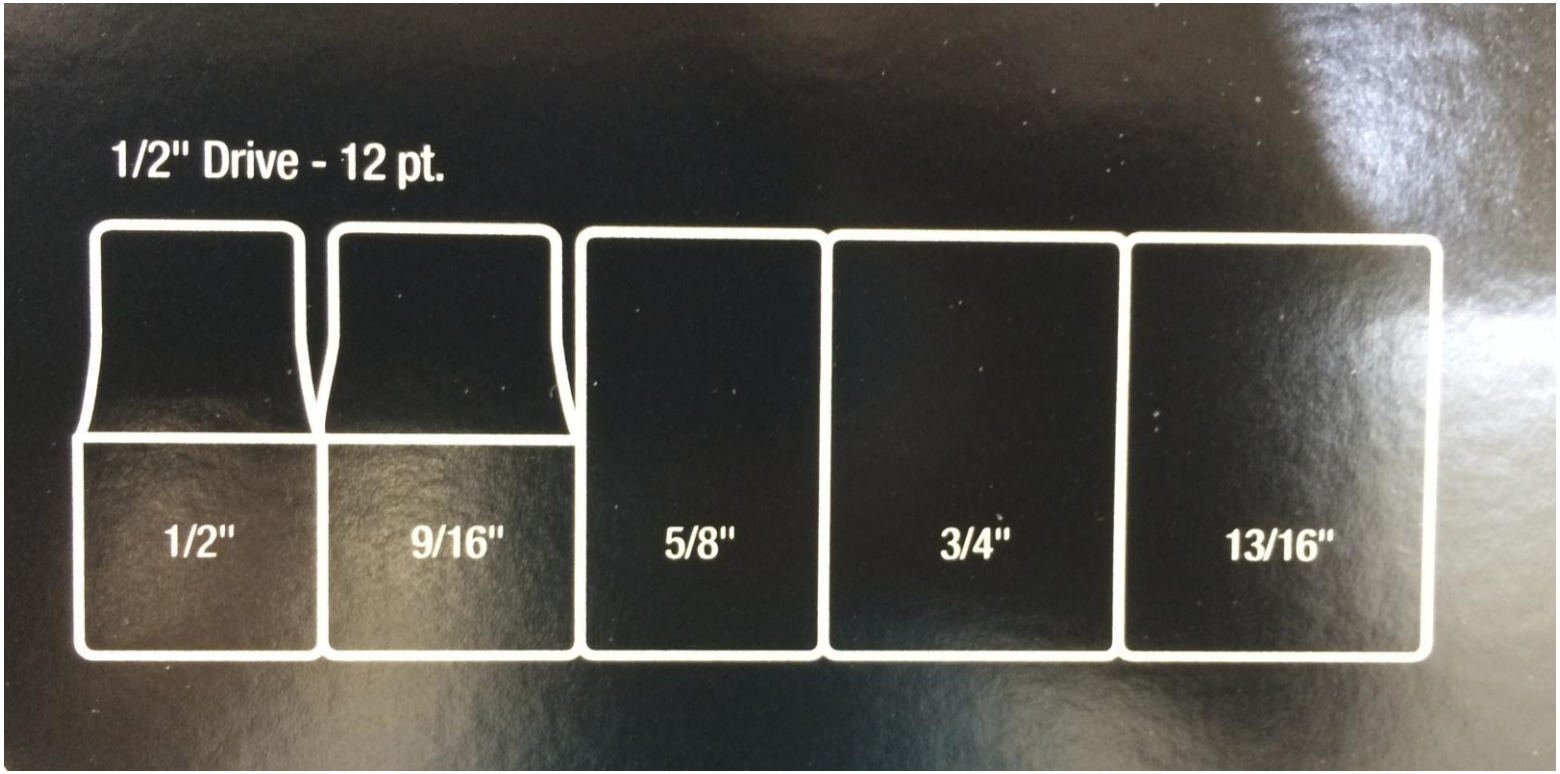
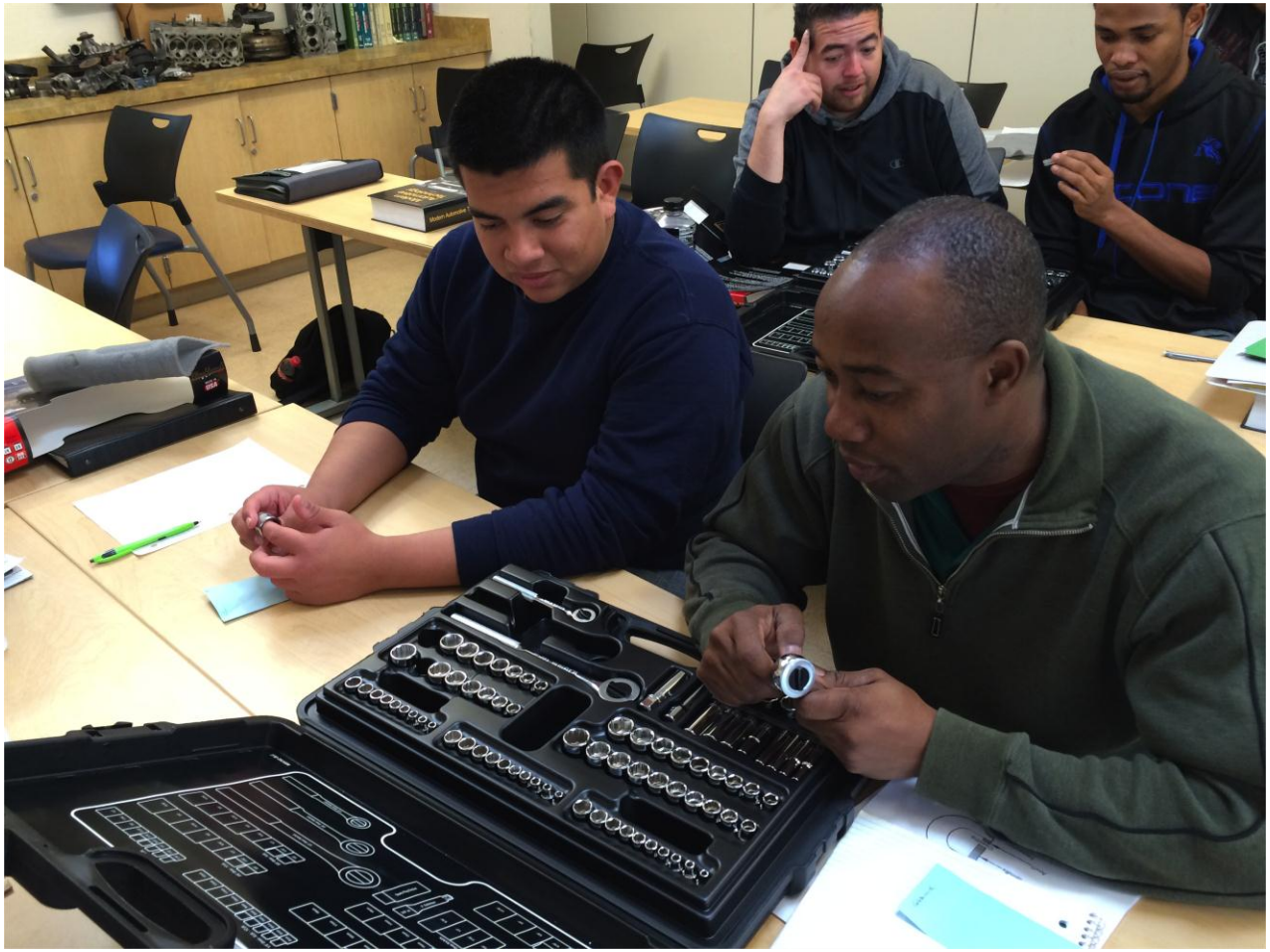
S8 Best part was Math: fractions, percentage, decimals, now math makes sense. Frank is a miracle mechanic. I learned how to use the all-data program and Mitchell-on-Demand. It teaches you every procedure and what tools to use. Also learned about pistons and seeing the inside of the engine. Now curious about how it all works.

Contextualized Mathematics



Vocational ESL/ABE



Career Technical Education

Hands on Learning

Contextualized Mathematics

Directions: For each word problem, decide which operation is needed to answer the question. (*add, subtract, multiply, divide*) Then solve the problem.

1. What size socket is 1/16" larger than a 1/4" socket?

   _____, _____

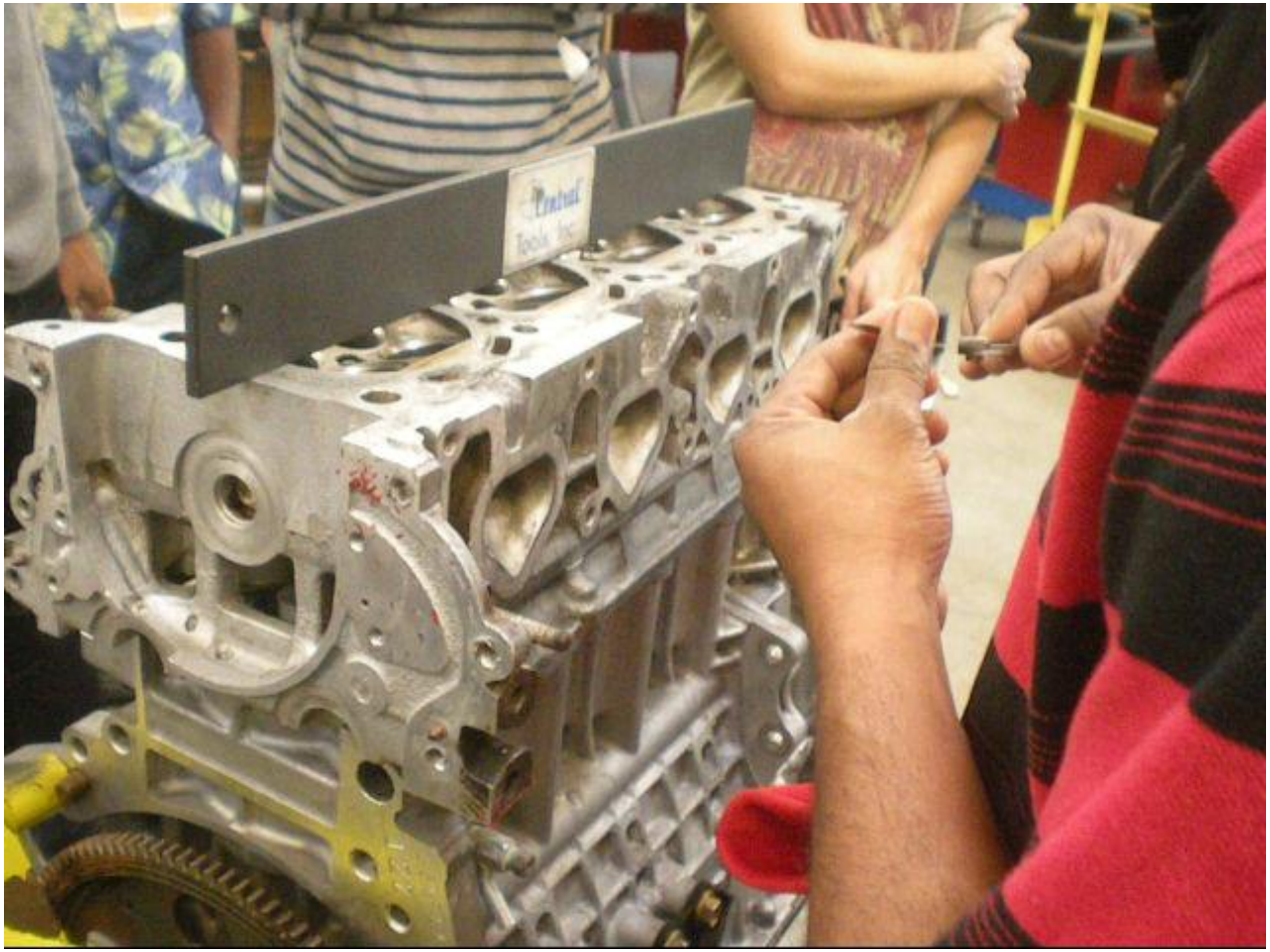
2. What size socket is 1/8" smaller than a 1/2" socket?

   _____, _____

Academic Application

2. Which of the following is *not* a common socket drive size?
   - *(A) 1/4"*
   - *(B) 3/8"*
   - *(C) 5/8"*
   - *(D) 1/2"*
3. The most commonly used and versatile socket handle is the:
   - *(A) ratchet.*
   - *(B) flex bar.*
   - *(C) breaker bar.*
   - *(D) speed handle.*

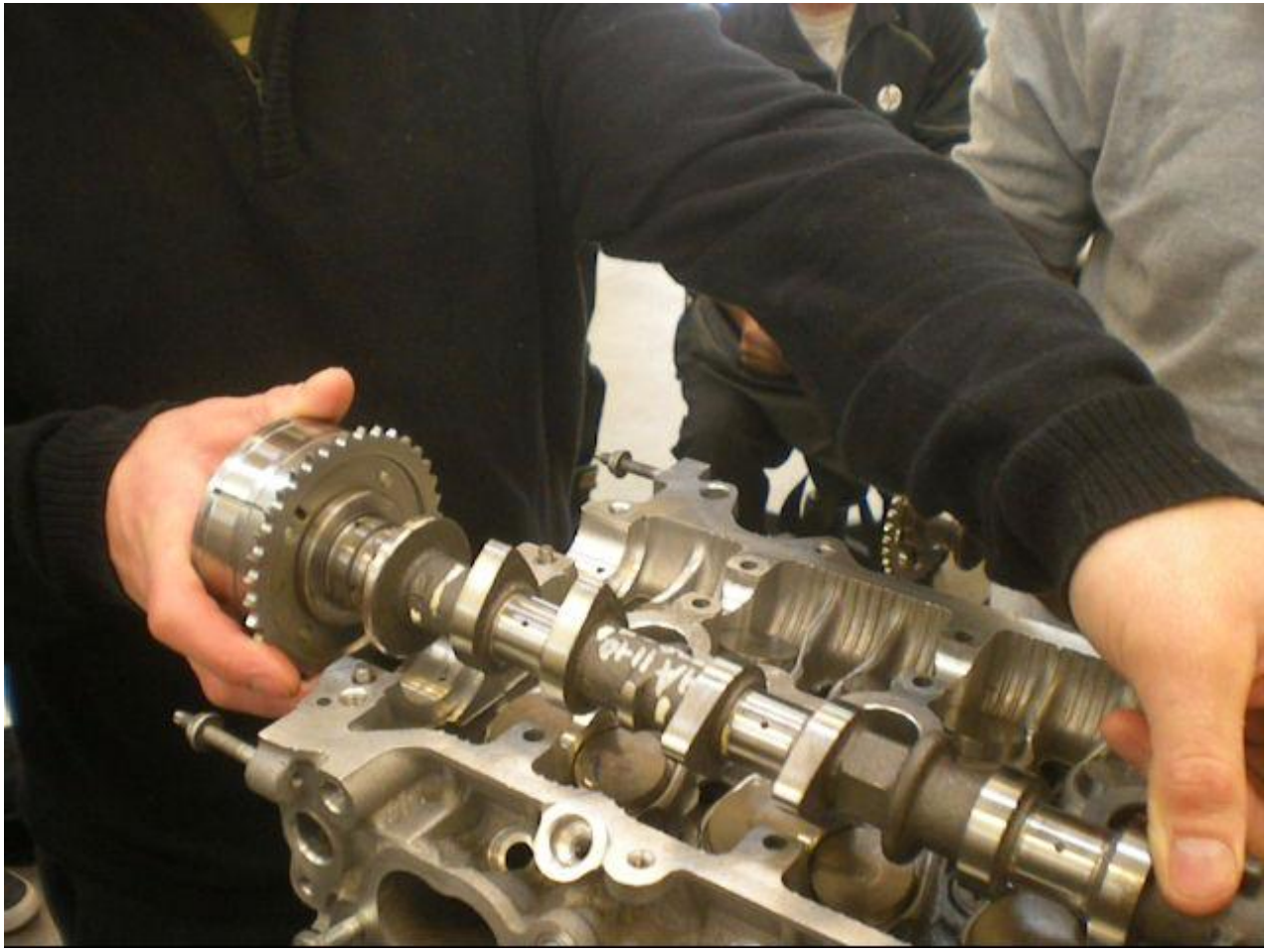
Measuring Tools and Decimals



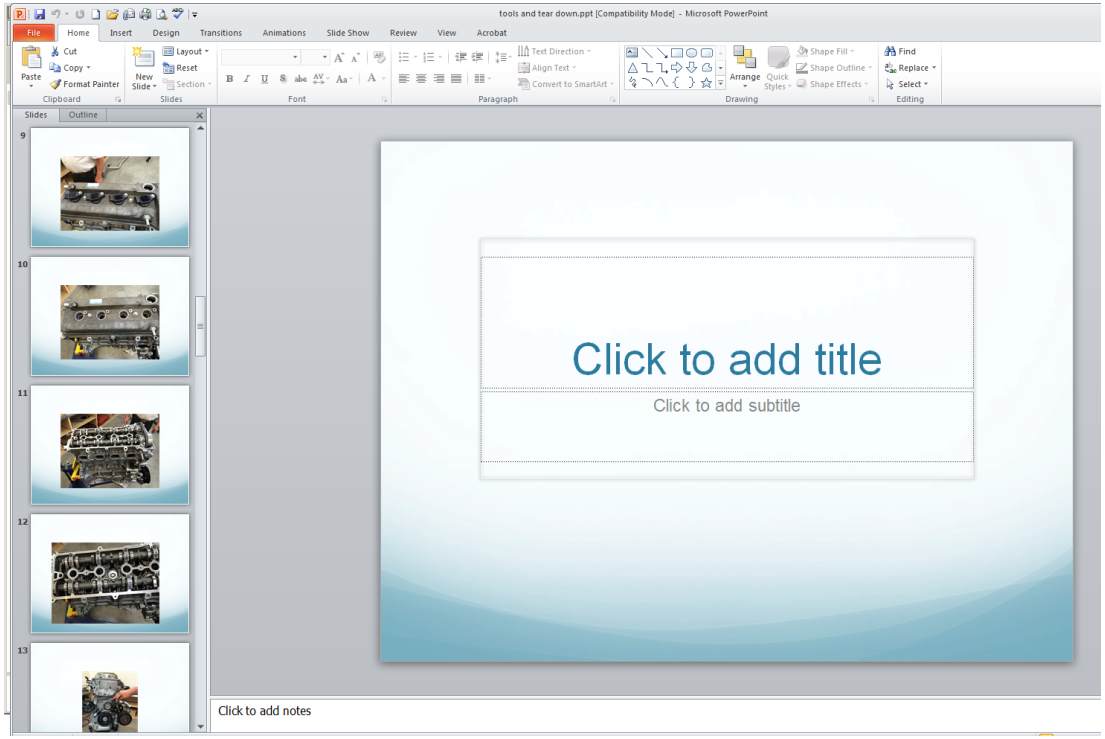
What's this measurement?

Short-Term Goals

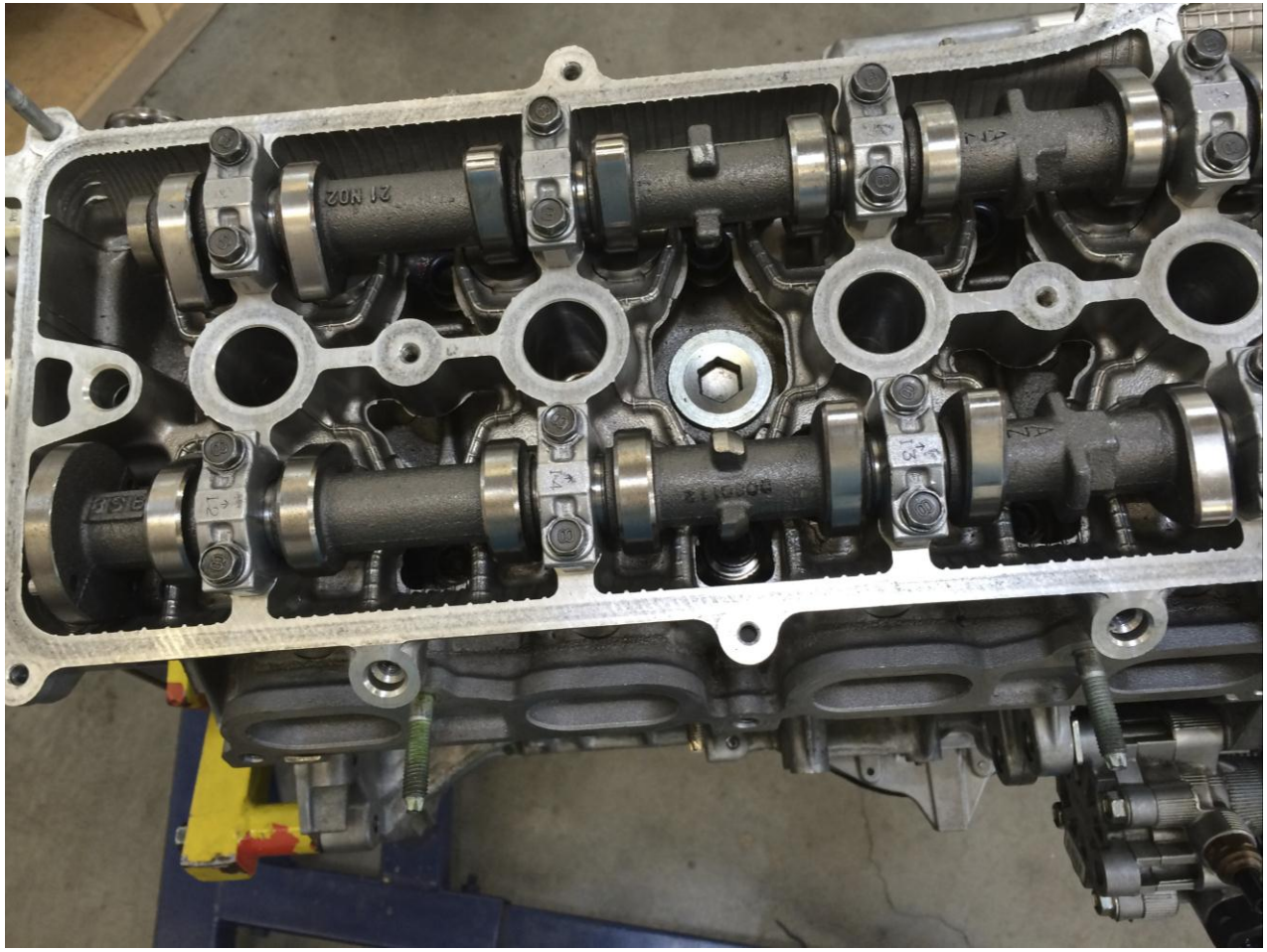
Reading on the Job



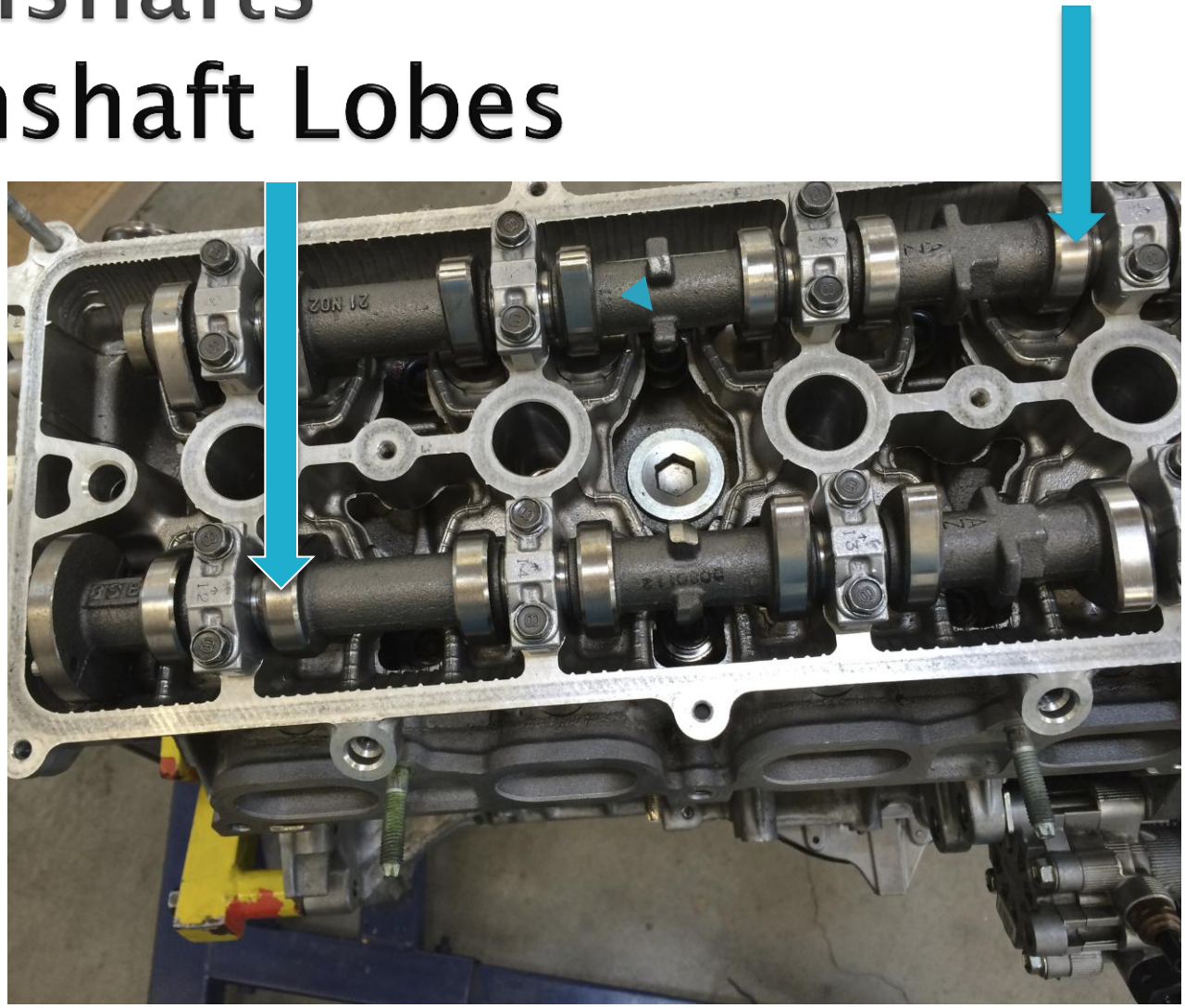
Extended Practice



- Students added text to a PowerPoint presentation of photos



Camshafts
Camshaft Lobes



Assessment

- Pairs write – VESL instructor observes
- Pairs present their PowerPoints – the CTE instructor affirms and corrects

Project Outcomes

- Increase technical vocabulary
- Involve less assertive students
- Gains in computer skills
- Foundational knowledge to apply to future courses
- Supports long-term goal of college and career readiness

Going Forward

- Continue to collect feedback from pilot group
- Continue professional development for VESL instructor
- Continue developing and refining curriculum based on lessons learned


DANGER
EYE PROTECTION
REQUIRED IN
THIS AREA