



# THINK ALOUD PROBLEM SOLVING

**Pose challenging problems then invite students to:**

- ✓ **Describe their plans and strategies for solving the problem.**
- ✓ **Share their thinking as they are implementing their plan.**
- ✓ **Reflect on/evaluate the effectiveness of their strategy**

## TEACHER RESPONSES THAT ENGAGE AND SUSTAIN METACOGNITION:

1. **POSE QUESTIONS THAT CAUSE THE STUDENT TO CHECK FOR ACCURACY.**
  - "How do you know your are right?"
  - "What other ways can you prove that you are correct?"
2. **PAUSE AND CLARIFY BUT DON'T INTERRUPT**
  - "Explain what you mean when you said you 'just figured it out'".
  - "When you said you started at the beginning, how did you know where to begin?"
3. **PROVIDE DATA, NOT ANSWERS**
  - "I think you heard it wrong; let me repeat the question....."
  - "You need to check your addition."
4. **RESIST MAKING VALUE JUDGMENTS OR AGREEING WITH STUDENTS' ANSWERS.**
  - "So, your answer is 48. Who came up with a different answer?"
  - "That's one possibility. Who solved it another way?"
5. **STAY FOCUSED ON THINKING PROCESSES**
  - "Tell us what strategies you used to solve the problem"
  - "What steps did you take in your solution?"
  - "What was going on inside your head as you solved the problem?"
6. **ENCOURAGE PERSISTENCE**
  - "C'mon, you can do it" Try it again!"

**THINKING ALOUD.....ALLOWED!**