

csteachingtips

For Tutors

1. Introduce yourself.
 2. Ask the student to describe their homework problem.
 3. Ask the student to describe what they want help with.
- **If they don't know how to get started**, ask them to describe the problem in detail:
 - What are the goals of the problem?
 - What are the inputs?
 - What are the outputs?
 - What is their relationship?
 - Can we solve a small example by hand?
 - Is there a part of the problem that they could write code for?
 - (and worry about the rest later?)
 - Can you describe the algorithm in words?
 - **If they have a syntax error**, ask them:
 - What line is the syntax error is on?
 - What does the text of the error mean?
 - What does the internet suggest about how to fix this error?
 - What have they tried to fix this error?
 - **If their code doesn't work**, ask them:
 - What evidence do we have that the code doesn't work?
 - What test case doesn't work and what incorrect behavior or output results?
 - Could we come up with a simpler example that demonstrates the error?
 - What lines of code might be producing the bug?
 - Why hypotheses do we have for what might be causing the problem?
 - How can we test these hypotheses?
 - (e.g. writing new test cases, adding print statements, using a debugger)
 - Could we walk through an example that doesn't work: by hand? with a debugger?

