Best Practices Scorecard

| Practice | Context and What To Do |
|---|--|
| Start Simple & make quick, easy-to- validate connections | At start up or when confused, 1) use small numbers 2) use simple situations |
| 1 My application (describe) | |
| 2 My application (describe) | |
| Draw a Picture or Diagram to clarify | When you can visualize the situation |

| Draw a Picture or Diagram to clarify the situation | When you can visualize the situation, 1) Include essentials 2) Minimize non-essentials |
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| 1 My application (describe) | |
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| 2 My application (describe) | |
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| Find What is Similar | Every time you start new learning, 1) List similarities 2) List what you don't know/understand |
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| 1 My application (describe) | |
| 2 My application (describe) | |

$\operatorname{Quantitative} \operatorname{Reasoning} \operatorname{\&} \operatorname{Problem} \operatorname{Solving}$

| Practice | Context and What To Do |
|--|---|
| Validate to make sure your results are 100% correct | Every time you solve a problem |
| 1 My application (describe) | |
| 2 My application (describe) | |
| Analyze an Example to tap into the expert's thinking | Once you have the basics down, 1) Find 2 or 3 examples 2) Follow the thinking 3) Compare and contrast |
| 1 My application (describe) 2 My application (describe) | |
| Analyze the Differences as a way to follow the logic | In analyzing models/examples or methodologies, 1) Find the differences 2) Explain what is going on & why |
| 1 My application <i>(describe)</i> 2 My application <i>(describe)</i> | |

| Practice | Context and What To Do |
|--|---|
| Ask "Why?" to go from just doing to understanding | Every time you are confused, 1) determine what confused you 2) determine why it confused you |
| 1 My application (describe) | |
| 2 My application (describe) | |
| Understand before Applying so you don't spin your wheels | During each learning cycle, 1) Find the key points 2) Pick examples you understand 3) Present it to another 4) Verify they understand |
| 1 My application <i>(describe)</i> 2 My application <i>(describe)</i> | |
| Apply a Methodology to help learn a process | When learning a new process, 1) Review the steps 2) Study the example 3) Read and understand the discussion using the example(s) 4) Try your own example |
| 1 My application (describe) 2 My application (describe) | |
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$\operatorname{Quantitative} \operatorname{Reasoning} \operatorname{\&} \operatorname{Problem} \operatorname{Solving}$

| Practice | Context and What To Do |
|---|--|
| Ask "What if?" as a way to identify what you understand | After completing each problem, 1) Identify variables that can change 2) Explore a range of values for variables 3) Check for limitations 4) Check for any special situations |
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| 2 My application (describe) | |
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| Generalize your understanding to | At the end of each learning cycle, |
| different contexts | 1) List how the knowledge varies 2) lest acceptable ranges |
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| 2 My application (describe) | |
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| Change Perspectives | When you're stuck and making no headway, |
| . | 1) Change or transform the representation |
| | 2) Explain to someone else 3) Ask an expert for his or her perspective |
| 1 My application (describe) | |
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| 2 My application (describe) | |
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