

## **The Art and Science of Teaching at Moreton Downs State School**

*Education Queensland's 2012–2016 agenda for improvement, United in our Pursuit of Excellence identifies teaching practice — the 'how' — as a priority.*

Moreton Downs State School has organised their pedagogical framework using The Art and Science of Teaching. The Art and Science of Teaching (ASoT) is a comprehensive model for effective instruction developed by Dr Robert Marzano. The model is built upon 60 years of research and effective implementation across the world.

The Art and Science of Teaching incorporates all main pedagogical categories; Instructional Strategies, Classroom Management Strategies, Assessment and Feedback Strategies and Curriculum. As each of these categories needs to be addressed in every lesson they are embedded in all aspects of our framework.

### **The Model is based on 10 Design Questions, 3 Lesson Segments and 41 Elements.**

The **Design Questions** are for teachers to ask themselves and reflect upon while planning, teaching and assessing.

- 1: What will I do to establish and communicate learning goals, track student progress, and celebrate success?
- 2: What will I do to help students effectively interact with new knowledge?
- 3: What will I do to help students practice and deepen their understandings of new knowledge?
- 4: What will I do to help students generate and test hypotheses about new knowledge?
- 5: What will I do to engage students?
- 6: What will I do to establish or maintain classroom rules and procedures?
- 7: What will I do recognise and acknowledge adherence and lack of adherence to classroom rules and procedures?
- 8: What will I do to establish and maintain effective relationships with students?
- 9: What will I do to communicate high expectations for all students?
- 10: What will I do to develop effective lessons organised into a cohesive unit?


Each design question is supported by a number of **Elements** (instructional strategies/ steps) for ensuring 'effectiveness' within each design question.

The Design Questions can be organised into 3 **Lesson Segments**; lesson segments that involve **routine events**, lesson segments that **address content** and lesson segments **enacted on the spot**.

The diagram below shows pedagogical priorities for Moreton Downs State School including;

- Creating Learning Goals, tracking progress, providing feedback and celebrating success.
- PBL Routines and procedures
- Higher Order Thinking Skills/ Questioning
- Understanding the Learner
- Differentiation and Enrichment

# “THE ART AND SCIENCE OF TEACHING”

Lesson Segments Involving Routine Events	Lesson Segments Addressing Content	Lesson Segments Enacted on the Spot
<p><i>Design Question 1: What will I do to establish and communicate learning goals, track student progress, and celebrate success?</i></p> <ol style="list-style-type: none"> <li>1) Providing Clear Learning Goals and Scales to Measure those Goals</li> <li>2) Tracking Student Progress</li> <li>3) Celebrating Student Success</li> </ol>	<p><i>Design Question 2: What will I do to help students effectively interact with the new knowledge?</i></p> <ol style="list-style-type: none"> <li>6) Identifying Critical Information</li> <li>7) Organizing Students to Interact with New Knowledge</li> <li>8) Previewing New Content</li> <li>9) Chunking Content into “Digestible Bites”</li> <li>10) Processing of New Information</li> <li>11) Elaborating on New Information</li> <li>12) Recording and Representing Knowledge</li> <li>13) Reflecting on Learning</li> </ol>	<p><i>Design Question 5: What will I do to engage students?</i></p> <ol style="list-style-type: none"> <li>24) Noticing and Reacting when Students are Not Engaged</li> <li>25) Using Academic Games</li> <li>26) Managing Response Rates</li> <li>27) Using Physical Movement</li> <li>28) Maintaining a Lively Pace</li> <li>29) Demonstrating Intensity and Enthusiasm</li> <li>30) Using Friendly Controversy</li> <li>31) Providing Opportunities for Students to Talk about Themselves</li> <li>32) Presenting Unusual or Intriguing Information</li> </ol>
<p><i>Design Question 6: What will I do to establish and maintain classroom rules and procedures?</i></p> <ol style="list-style-type: none"> <li>4) Establishing Classroom Routines</li> <li>5) Organizing Physical Layout of the Classroom for Learning</li> </ol>	<p><i>Design Question 3: What will I do to help students practice and deepen their understanding of new knowledge?</i></p> <ol style="list-style-type: none"> <li>14) Reviewing Content</li> <li>15) Organizing Students to Practice and Deepen Knowledge</li> <li>16) Using Homework</li> <li>17) Examining Similarities and Differences</li> <li>18) Examining Errors in Reasoning</li> <li>19) Practicing Skills, Strategies, and Processes</li> <li>20) Revising Knowledge</li> </ol>	<p><i>Design Question 7: What will I do to recognize and acknowledge adherence and lack of adherence to classroom rules and procedures?</i></p> <ol style="list-style-type: none"> <li>33) Demonstrating “Withitness”</li> <li>34) Applying Consequences</li> <li>35) Acknowledging Adherence to Rules and Procedures</li> </ol>
<div style="text-align: center;">  </div>	<p><i>Design Question 4: What will I do to help students generate and test hypotheses about new knowledge?</i></p> <ol style="list-style-type: none"> <li>21) Organizing Students for Cognitively Complex Tasks</li> <li>22) Engaging Students in Cognitively Complex Tasks Involving Hypothesis Generating and Testing</li> <li>23) Providing Resources and Guidance</li> </ol>	<p><i>Design Question 8: What will I do to establish and maintain effective relationships with students?</i></p> <ol style="list-style-type: none"> <li>36) Understanding Students’ Interests and Backgrounds</li> <li>37) Using Behaviors that Indicate Affection for Students</li> <li>38) Displaying Objectivity and Control</li> </ol>
		<p><i>Design Question 9: What will I do to communicate high expectations for all students?</i></p> <ol style="list-style-type: none"> <li>39) Demonstrating Value and Respect for Low Expectancy Students</li> <li>40) Asking Questions of Low Expectancy Students</li> <li>41) Probing Incorrect Answers with Low Expectancy Students</li> </ol>