

It all depends on who is your audience and what skill you are teaching.

Learning/Activity	Science Benchmarks
I wonder board	Substrand: Practice of Science Kindergarten - 0.1.1.2.1 “Descriptions of Observations” 2nd grade - 2.1.1.2.1 “Questions to Observations” 3rd grade - 3.1.1.2.1 “Questions for Investigations” 5th grade - 5.1.1.2.1 “Planning Investigations”
What do I know about plants?	Accessing Prior Knowledge
Magic Beans <ul style="list-style-type: none"> ● Observations ● Data collections 	<p>Substrand: Practice of Science</p> Kindergarten - 0.1.1.2.1 “Descriptions of Observations” 1st grade - 1.1.1.1.1 “Observations for Questions” 1st grade - 1.1.1.1.2 “Descriptions and Comparisons” 1st grade - 1.1.3.2.1 “Tools for solving problems” 2nd grade - 2.1.1.2.1 “Questions to Observations” 3rd grade - 3.1.1.1.1 “Evidence to support claims” 3rd grade - 3.1.1.2.1 “Questions for Investigations” 3rd grade - 3.1.1.2.2 “Repeated Investigation” 3rd grade - 3.1.1.2.3 “Observations vs. Inferences” 3rd grade - 3.1.1.2.4 “Explanations from Evidence” 5th grade - 5.1.1.1.1 “Evidence and Communication” 5th grade - 5.1.1.1.2 “Replicating Investigations” 5th grade - 5.1.1.1.3 “Differing Explanations” 5th grade - 5.1.1.2.1 “Planning Investigations” 5th grade - 5.1.1.2.2 “Collecting Relevant Evidence” 5th grade - 5.1.1.2.3 “Critiquing and Experiment” <p>Substrand: Interactions Among Science, Technology, Engineering, Mathematics and Society</p> 3rd grade - 3.1.3.4.1 “Tools to improve observations” 5th grade - 5.1.3.4.1 “Tools for Data” <p>Substrand: Matter</p> 2nd grade - 2.2.1.1.1 “Properties of objects” 4th grade - 4.2.1.1.1 “Measurement tools and units” <p>Substrand: Structure and Function in Living Systems</p> Kindergarten - 0.4.1.1.1 “Comparing plants” Kindergarten - 0.4.1.1.2 “External parts of plants” 2nd grade - 2.4.1.1.1 “Plant Characteristics” 2nd grade - 2.4.2.1.1 “Plant Needs” 2nd grade - 2.4.3.1.1 “Plant Life Cycles” 3rd grade - 3.4.1.1.1 “Structures and Functions”

	5th grade - 5.4.1.1.1 “Structures and Survival”
<p>Science Notebooks</p> <ul style="list-style-type: none"> • How did you use your notebook today? (Whole group) • What should go in a science notebook? (Whole group) <ul style="list-style-type: none"> ○ three easels/poster paper • How do you use your science notebooks with your students? (Write, then count off) <ul style="list-style-type: none"> ○ Count off (so we get groups of 3-4) 	<p>Substrand: Practice of Science 3rd grade: 3.1.1.2.3 “Observation vs Inference” 3rd grade: 3.1.1.2.4 “Explanations from Evidence” 5th grade: 5.1.1.2.2 “Collecting relevant evidence” 5th grade: 5.1.1.2.3 “Critiquing an Experiment”</p> <p>Substrand: Interactions among science, technology, engineering, math and society 3rd grade: 3.1.3.4.1 “Tools to improve observations” 5th grade: 5.1.3.4.1 “Tools for Data”</p> <p>Substrand: Matter 2nd grade: 2.2.1.2.1 “States of Water”</p> <p>Substrand: Interdependence within the earth systems 2nd grade: 2.3.2.2.1 “Recording Weather Conditions”</p>
Go back to I wonder board: Sorting questions into (Researchable vs. investigatable/scientific/te stable)	<p>Substrand: Practice of Science Kindergarten -0.1.1.2.1 “Descriptions of Observations” 2nd grade - 2.1.1.2.1 “Questions to Observations” 3rd grade - 3.1.1.2.1 “Questions for Investigations” 5th grade - 5.1.1.2.1 “Planning Investigations”</p>
Data continuum	<p>Substrand: Practice of Science 1st grade - 1.1.1.1.1 “Observations for Questions” 3rd grade - 3.1.1.1.1 “Evidence to support claims” 5th grade - 5.1.1.1.1 “Evidence and Communication”</p> <p>Substrand: Interactions Among Science, Technology, Engineering, Mathematics and Society 1st grade - 1.1.3.2.1 “Tools for solving problems” 3rd grade - 3.1.3.4.1 “Tools to improve observations” 5th grade - 5.1.3.4.1 “Tools for Data”</p>
Supermarket botany	<p>Substrand: Structure and Function in Living Systems Kindergarten - 0.4.1.1.1 “Comparing plants” Kindergarten - 0.4.1.1.2 “External parts of plants” 2nd grade - 2.4.1.1.1 “Plant Characteristics”</p>

	<p>2nd grade - 2.4.2.1.1 "Plant Needs"</p> <p>2nd grade - 2.4.3.1.1 "Plant Life Cycles"</p> <p>3rd grade - 3.4.1.1.1 "Structures and Functions"</p> <p>5th grade - 5.4.1.1.1 "Structures and Survival"</p>
<p>What is questioning? Process skills definitions and indicators</p>	<p>Substrand: Practice of Science</p> <p>Kindergarten - 0.1.1.2.1 "Descriptions of Observations"</p> <p>2nd grade - 2.1.1.2.1 "Questions to Observations"</p> <p>3rd grade - 3.1.1.2.1 "Questions for Investigations"</p> <p>5th grade - 5.1.1.2.1 "Planning Investigations"</p>
<p>How do I get my kids to ask questions? (students should write then share so they don't mimic. Do a cafe/cocktail party per Jackie -- interactive listening and speaking.) 30 mn</p>	<p>Science Pedagogy</p>
<p>Using...Bottle Biology (limited to terraquas columns or terraria)</p>	<p>Substrand: Practice of Science</p> <p>1st grade - 1.1.1.1.1 "Observations for Questions"</p> <p>1st grade - 1.1.1.1.2 "Descriptions and Comparisons"</p> <p>3rd grade - 3.1.1.2.1 "Questions for Investigations"</p> <p>3rd grade - 3.1.1.2.2 "Repeated Investigation"</p> <p>3rd grade - 3.1.1.2.3 "Observations vs. Inferences"</p> <p>3rd grade - 3.1.1.2.4 "Explanations from Evidence"</p> <p>5th grade - 5.1.1.2.1 "Planning Investigations"</p> <p>5th grade - 5.1.1.2.2 "Collecting Relevant Evidence"</p> <p>5th grade - 5.1.1.2.3 "Critiquing and Experiment"</p>
<p>Conclusion for the day's work: Observation vs Inquiry: 5 Essential Features of Inquiry" handout/card</p>	<p>Science Pedagogy</p>

- I wonder board can be your spring board to student-designed investigations
- Flag benchmarks as we go- bring them out in the discussion.