

## Backwards Design Planning

<b>Grade: 5</b>	<b>Subject Area: Science</b>	<b>Strand/Topic: Structure and Properties of Matter</b>
<b>Learning Standard:</b> 5-PS1-1. Develop a <b>model</b> to describe that <b>matter</b> is made of <b>particles</b> too small to be seen		<b>Unit Guiding Question(s):</b> How can I use a <b>model</b> to help me understand that some <b>matter</b> is made up of <b>particles</b> that are <b>too small to see</b> ?
<b>Content Vocabulary:</b> model, matter, particles, idea, bulk matter		<b>Skills Vocabulary:</b> create, build, change, solve a problem, observe
<b>Learning Goals</b>	<b>Curricular Language</b> <b>What do Students need to Know and Do?</b>	<b>Student Friendly Language</b>
<b>Science and Engineering Practices (skills)</b>	<b>Developing and Using Models</b> building and revising simple models and using models to represent events and design solutions. Use models to describe phenomena.	<ul style="list-style-type: none"> <li>• I can <b>create</b> and <b>improve</b> a <b>model</b></li> <li>• I can use a model to show an <b>idea</b></li> <li>• I can use a model to <b>solve a problem</b></li> </ul>
<b>Disciplinary Core Ideas (knowledge)</b>	<b>PS1.A: Structure and Properties of Matter</b> Matter of any type can be subdivided into particles that are too small to see matter still exists and can be detected by other means. A model showing that gases are made from matter particles that are too small to see and are moving freely around in space can explain many observations including the inflation and shape of a balloon and the effects of air on larger particles or objects.	<ul style="list-style-type: none"> <li>• I know that matter can be <b>broken apart</b> into tiny particles that are too small to see</li> <li>• I know that even if tiny <b>particles</b> are too small for my eyes to see, there are other ways to <b>observe</b> them</li> <li>• I know that a <b>model</b> is a way to <b>observe</b> tiny <b>particles</b> too small to see</li> <li>• I know some examples of <b>models</b> that can help me <b>observe</b> tiny <b>particles</b> that are too small to see</li> </ul>
<b>Crosscutting Concepts (understanding)</b>	<b>Scale, Proportion, and Quantity</b> Natural objects exist from the very small to the immensely large.	I understand that there are things that are very tiny and very large