

# Developing Big Ideas and Big Questions



This lesson comes after the IEA and the purpose is to ask students to first develop a big idea and then write out potential questions to investigate. The Big Idea should be simple and all of the content in the bundle should fit under it. For example, a 3<sup>rd</sup> grade and 7<sup>th</sup> grade force and motion bundle could have the same big idea of “Force is a push or pull that changes motion.” The details taught in 3<sup>rd</sup> grade would be different than 7<sup>th</sup> grade, but they would both fit under that simple Big Idea. After the Big Idea is established students should be asked to list questions they are interested in investigating.



## Components of Developing Big Ideas and Big Questions

|  |                                                                                                                       |  |                                                                                                         |  |                                                                                                                                                 |  |  |
|--|-----------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|  | After the IEA, the teacher should ask students to share their observations. Remind them that any detail is important. |  | Big Ideas should be simple and written in common language. Don't worry about specifics in the Big Idea. |  | After the Big Idea is established ask students to share their questions they are interested in and eventually select a question to investigate. |  |  |
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### *Things to consider when developing or teaching the Big Idea and Big Questions*

- ☐ Establish the “Big Idea” for the activity / Unit
- ☐ Questions must fit the Big Idea
- ☐ Questions must be safe to perform at school and done with available resources
- ☐ According to the Science and Engineering (SEP) practices of the NGSS students should:
  - Asking Questions and Defining Problems
  - A practice of science is to ask and refine questions that lead to descriptions and explanations of how the natural and designed world works and which can be empirically tested.
- ☐ Individual questions should align with the NGSS standards in the bundle. It is okay for the teacher to “suggest” questions or guide question towards a specific question, but attempt to have students create their own questions and as long as they are close it good practice to use the students' questions.

**Science and Engineering Practices  
(SEP):  
Asking Questions and Defining  
Problems**



NGSS  
Connection

Use the QFT resource here to help students design questions [QFT](#)