DVD Module
(Grades 6-8)

What are the essential questions for this module?

• How are DVDs different than CDs?
• How is information stored on a DVD?
• What are DVDs made of?
• How are DVDs read?
• How much can be stored on a DVD?
• What is Blu-ray?

What central concepts are discussed?

DVDs, Lasers, bytes, types of DVDs, pits and lands, storage capacity

What National Science Education Standards are addressed?

• Physical Science. Content Standard B. Transfer of Energy
• Science and Technology. Content Standard E. Abilities of Technological Design
  Understanding about Science and Technology

What do students need to know to work with this module?

Understandings

• There are different lasers for different things.
• Wavelength of light

Skills

• Familiarity with the use of computers and the internet
• Basic reading skills
• Basic understanding of bytes
• Ability to use a dictionary
<table>
<thead>
<tr>
<th>WHAT WILL STUDENTS UNDERSTAND AS A RESULT OF THEIR WORK WITH THIS MODULE?</th>
<th>HOW WILL STUDENTS COME TO THIS UNDERSTANDING? They will</th>
<th>HOW WILL STUDENTS DEMONSTRATE THIS UNDERSTANDING? They will</th>
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</table>
| DVDs have different pits and lands sizes than CDs. | • Complete a sequence of exploratory activities.  
• Read and analyze information. | • Measure the track length of a DVD and CD.  
• Compare microscopic structure of CDs and DVDs.  
• Compare DVDs and CDs’ pits sizes with real objects of the same size. |
| Wavelengths of light and light color are related. | • Complete a sequence of exploratory activities.  
• Read and analyze information | • Identify colors associated to specific colors. |
| The amount of data that is stored in CDs and DVDs is measured in bytes | • Complete a sequence of exploratory activities.  
• Read and analyze information. | • Use simulation to understand the conversion from bytes to kilobytes to megabytes. |