

**Grade:** 4

**Strand:** Physical Science

**Standard/Topic:** SCI-04.PS3.01

Use evidence to construct an explanation relating the speed of an object to the energy of that object.



|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Sample Activities                                                                                |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Score 4.0<br/>Complex</b> | In addition to Score 3.0, in-depth inferences and applications that go beyond the target content.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                  |
|                              | <b>3.5</b> In addition to target performance, in-depth inferences and applications with partial understanding                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                  |
| <b>Score 3.0<br/>Target</b>  | The student will: <ul style="list-style-type: none"><li>• <b>use evidence to construct an explanation relating the speed of an object to the energy of that object</b></li></ul> The student exhibits no major errors or omissions.                                                                                                                                                                                                                                                                                                                                                                                                          | For example, use qualitative measures of changes in speed to explain how speed relates to energy |
|                              | <b>2.5</b> No major errors or omissions regarding the simple content and partial understanding of the target content                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                  |
| <b>Score 2.0<br/>Simple</b>  | There are no major errors or omissions regarding the simpler details and processes as the student: <ul style="list-style-type: none"><li>• The student will recognize or recall specific terminology, such as:<ul style="list-style-type: none"><li>◦ <b>change, energy, relate, speed</b></li></ul></li><li>• The student will perform basic processes, such as:<ul style="list-style-type: none"><li>◦ <b>describe the qualitative relationship between the energy of an object and the speed of an object</b></li></ul></li></ul> However, the student exhibits major errors or omissions regarding the more complex ideas and processes. |                                                                                                  |
|                              | <b>1.5</b> Partial understanding of the simple, but major errors or omissions regarding the target content                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                  |
| <b>Score 1.0</b>             | With help, partial understanding of the simple and target content                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                  |
|                              | <b>0.5</b> With help, partial understanding of the simple content, but not the targeted content                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                  |